IOWA

Interim Report
Iowa Wellness Plan Evaluation

November 2023

The University of Iowa

Authors

Natoshia Askelson
Juan Bao
Aislinn Conrad
Joanne Constantin
Peter Damiano
David Friswold
Tessa Heeren
Kandyce Larson
Fadi Martinos
Brooke McInroy
Susan McKernan
Elizabeth Momany
Phuong Nguyen
Pamela Nwachukwu
Julie Reynolds
Dan Shane
Alex Sukalski

Acknowledgements

Stephanie Evett

Please address any questions regarding this report to the corresponding authors.

natoshia-askelson@uiowa.edu
peter-damiano@uiowa.edu
elizabeth-momany@uiowa.edu

Contents

Executive Summary 1
Healthy Behaviors Incentive 1
Key findings from the HBI member survey 1
Key findings from the secondary data analyses 2
Dental Wellness Plan 2
Key findings from the provider survey 2
Key progress 3
Waiver of retroactive eligibility 3
Key findings from the process evaluation 3
Key progress 3
Cost Sharing 3
Key progress 3
Cost and sustainability 4
Key progress 4
Waiver of non-emergency medical transportation 4
Key findings from the 2022 NEMT member survey 4
Key findings from the process evaluation 5
Member experiences 6
Key findings from the IHAWP member survey 6
Iowa Wellness Plan General Background Information 8
IHAWP changes 9
Previous findings 15
Related publications 15
Evaluation questions and hypotheses 16
Methodology 16
Evaluation design 16
Target and comparison populations 17
Data sources 28

Secondary data 28
Primary data collection 31
Surveys 31
Process evaluation general description 32
Analytic methods 34
Empirical strategy 35
Analyses 35
Methodological limitations 38
Primary data 38
Secondary data 38
Program selection bias 39
Study populations 39
COVID-19 considerations 39
Adjustments for COVID-19 39
Methods 39
Analytic considerations 40
Timeline 43
Healthy Behaviors Incentive (HBI) 45
Executive summary 45
Key findings 45
HBI General background information 46
Wellness Exam and Health Risk Assessment 46
Implementation of the HBI 47
HBI Previous evaluation findings 48
Findings from other State's Healthy Behavior Programs evaluations 51
HBI Goals 52
HBI Methodology 54
Evaluation design 54
Target and comparison populations 54
Evaluation period 55
Data sources 55

Analytic approach for each hypothesis and research question 58
HBI Evaluation Measures Summary 63
HBI Results 76
HBI Process evaluation 76
HBI Quantitative Results 78
Additional analyses related to the COVID-19 Pandemic 103
Dental Wellness Plan 105
DWP Executive summary 105
Key Findings 105
DWP General background information 106
DWP 1.0: May 2014 – June 2017 106
DWP 2.0: July 2017 – December 2019 106
DWP: January 2020 – present 107
DWP Evaluation questions and hypotheses 109
Member perceptions and experiences with receiving a Dental Wellness Exam to meet the Healthy Behaviors Incentive (HBI) requirements. 109
Impact of the HBI requirement on members' access to and utilization of dental care 110
Impact of the receipt of a Dental Wellness Exam on members' oral health 111
Impact of the COVID-19 Pandemic on receipt of a Dental Wellness Exam 111
DWP methodology 112
Data sources 112
Waiver of Retroactive Eligibility 115
WRE Executive Summary 115
Key findings from the process evaluation 115
Key progress 115
WRE General background information 115
WRE Goals 116
WRE Methodology 118
Evaluation design 118
Target and comparison populations 118
Data sources 119

Covid-19 Adjustments 122
WRE Evaluation Measures Summary 123
WRE Results 129
WRE Process evaluation 129
WRE Quantitative results 138
Cost Sharing 144
Executive summary 144
Key progress 144
Cost sharing general background information 144
Cost sharing goals 145
Cost sharing evaluation design 148
Cost sharing target and comparison populations 149
Data sources 149
Evaluation period 149
COVID-19 adjustments 150
Cost Sharing Evaluation Measures Summary 151
Cost Sharing Results 155
Cost sharing process evaluation 155
Cost sharing quantitative results 162
Cost and Sustainability 164
Executive Summary 164
Key progress 164
Cost and sustainability general background information 164
Cost and sustainability goals 165
Cost and Sustainability Methodology 168
Evaluation design 168
Qualitative analyses 168
Target and comparison populations 168
Data sources 169
Cost and Sustainability Evaluation Methods Summary 170
Cost and sustainability results 174

Non-Emergency Medical Transportation 176
Executive summary 176
2022 Member experience survey: Methods and results 176
Key findings from the 2022 Survey 176
NEMT general background information 178
NEMT methodology 180
Member experience survey 180
NEMT Evaluation Measures Summary 184
NEMT quantitative results 186
NEMT Process evaluation 197
Member Experiences 200
ME Executive Summary 200
2022 Consumer Survey 200
2022 CAHPS Health Plan Survey Database 200
Key findings from the IHAWP Member Survey 200
Member experiences general background information 202
Member experiences goals 202
Member experiences methodology 204
Data sources 204
Analyses 205
Evaluation measures summary 205
Member Experiences Evaluation Measures Summary – Access to Care 206
Member Experiences Evaluation Measures Summary – Coverage Continuity 211
Member Experiences Evaluation Measures Summary – Quality of Care 212
Member experiences results 217
Access to care 217
Coverage continuity 225
Quality of care 227

Tables

Table 1. Wellness Plan and Marketplace Choice Members by IowaCare Auto-Enrollment (CY 2014)....................9

Table 2. Timeline for Iowa Wellness Plan Changes and Medicaid Relevant COVID-19 13

Table 3. Comparison of Target Population with Three Medicaid Comparison Groups, pre- and post-COVID-19, Number of Members....................22

Table 4. Comparison of Target Population with Three Medicaid Comparison Groups, CY 2022, Proportion of Members 23

Table 5. IWP Survey Projects – CY 2021-2024....................32

Table 6. Anticipated Impact of COVID-19 on IWP Evaluation Plan 41

Table 7. Iowa Wellness Plan: COVID-19 State Changes Timeline, 2020 42

Table 8. Changes to the Healthy Behaviors Incentive Program....................48

Table 9. Reports and Articles Related to Healthy Behaviors Incentive Program Evaluation 49

Table 10. Measures in HBI Program Evaluation Member Survey 60

Table 11. Percentages of Members Completing a Well-Visit, an HRA, or Both Required Activities Each Year of Enrollment in HBI, Between 2014 and 2021 79

Table 12. Percentages of Members Completing a Well-Visit, an HRA, or Both Required Activities by Enrollment Duration in Months, Between 2014 and 2021 79

Table 13. Percentage of Members Completing a Well-Visit, HRA, or Both by Enrollment Duration in Months, Each Year in the Program, Between 2014 and 2021 80

Table 14. Understanding of Specific Aspects of their Health Insurance Plan as Reported by Respondents (N= 2,832)....................92

Table 15. Reported Wellness Exam Completion in Past Year by Health Insurance Plan Knowledge....................96

Table 16. Factors Associated with HBI Program Awareness in Multivariable Logistic Regression Model (N = 2,755) 97

Table 17. Factors Associated with Understanding Health Insurance Plan, Premiums, and How to Prevent Disenrollment in Multivariable Logistic Regression Model (N=2,565)....................98

Table 18. Factors Associated with Reported Wellness Exam Completion in Past Year in Multivariable Logistic Regression Model (N = 2,755) 99

Table 19. How Respondents Heard About the HBI Program (Among those Aware of the Program, N=1,044)* 100

Table 20. How Respondents Heard the HBI Program was on Pause (N = 162)*.... 101

Table 21. Barriers to Completing a Wellness Exam (Among those with No Exam, N=563)*..... 102

Table 22. Factors Associated with Reported Receipt of at Least One Dose of a COVID-19 Vaccine (N=2,503), Bivariate Associations and Multivariable Logistic Regression 103

Table 23. Factors Associated with Ever Having COVID-19 by Self-Report (N=2,523), Bivariate Associations and Multivariable Logistic Regression 104

Table 24. Iowa Dental Wellness Plan: COVID-19 State Changes Timeline 108

Table 25. Waiver of Retroactive Eligibility Significant Policy Changes 116

Table 26. State Waiver Goals 116

Table 27. State-Specified Hypotheses and Research Questions 117

Table 28. Response Rates by Program 121

Table 29. Survey Response Rates for IHAWP and Medicaid Members 181

Table 30. Survey Responses by Mode for IHAWP and Medicaid Members* 182

Table 31. Demographic Characteristics of IHAWP Respondents and Non-respondents*..... 183

Table 32. Demographic Characteristics of Medicaid Respondents and Non-respondents* 183

Figures

Figure 1. Movement of Enrollees into and out of Medicaid Programs by Quarter, First Quarter 2013 –Fourth Quarter 2021 12

Figure 2. Member Sex by Program Type by Year 24

Figure 3. Member Race/Ethnicity by Program Type and Year....24

Figure 4. Member Rural/Urban Location by Program Type and Year 25

Figure 5. Member Age by Program Type and Year 25

Figure 6. Member Demographics by Program Type, CY 2022 26

Figure 7. HBI Logic Model 53

Figure 8. Summation of Healthy Behaviors Incentive Program Process as Described by Key Stakeholders 76

Figure 9. Trends in Completion of a Well-Visit by Income Level Between 2014 and 2021 81

Figure 10. Trends in Completion of an HRA by Income Level Between 2014 and 2021 82

Figure 11. Trends in Completion of Well-Visit and HRA by Income Level Between 2014 and 2021 83

Figure 12. Trends in Completion of a Well-Visit, an HRA, Both, or Neither of the Required Activities by Income Level Between 2014 and 2021 84

Figure 13. Trends in Completion of a Well-Visit and HRA by Type of Residence Area Between 2014 and 2021 85

Figure 14. Trends in Completion of Well-Visit and HRA by Race and Ethnicity Between 2014 and 2021 86

Figure 15. Trends in Completion of Well-Visit and HRA by MCO Membership Status and Type Between 2014 and 2021 87

Figure 16. Weighted Percent of Respondents Aware of the HBI Program (N=2,832) 90

Figure 17. Percent of Respondents Aware of the HBI Program by IHAWP Enrollment Duration (N=2,832) 91

Figure 18. Percent of Respondents who Agreed or Strongly Agreed they Understood their Insurance Coverage and Benefits by IHAWP Enrollment Duration (N=2,806) 93

Figure 19. Percent of Respondents who Agreed or Strongly Agreed they Understood their Insurance Premiums by IHAWP Enrollment Duration (N=2,760) 93

Figure 20. Percent of Respondents who Agreed or Strongly Agreed they Understood How to Prevent being Disenrolled Prior to the Pandemic by IHAWP Enrollment Duration (N=2,685) 94

Figure 21. Weighted Percent of Respondents Reporting a Wellness Exam in the Past Year (N=2,832) 94

Figure 22. Percent of Respondents Reporting a Wellness Exam by HBI Program Awareness (N=2,832) 95

Figure 23. Weighted Percent of Respondents Aware of the HBI Program was on Pause (Among those Aware of the HBI Program, N=1,044)........ 100

Figure 24. WRE Logic Model 117

Figure 25. Visualization of Study Groups........ 119

Figure 26. Retroactive Eligibility and Medicaid Enrollment Process........ 129

Figure 27. Uncompensated Care as a Share of Operating Expenses by Fiscal Year for Iowa Hospitals 140

Figure 28. Charity Care as a Share of Operating Expenses per Fiscal Year 141

Figure 29. Bad Debt as a Share of Operating Expenses per Fiscal Year 141

Figure 30. Outpatient ED Rates by Program and Year 142

Figure 31. Cost Sharing Logic Model 147

Figure 32. Cost Sharing Process as Described by Key Stakeholders 155

Figure 33. Timeline of IWP Changes 165

Figure 34. Cost and Sustainability Logic Model 167

Figure 35. NEMT Logic Model 179

Figure 36. Unmet Health Care Need Due to Transportation Problems in Past 6 Months (IHAWP vs. Medicaid)........ 187

Figure 37. Transportation Problems as a Reason for Unmet Check-up or Routine Medical Care Need........ 187

Figure 38. Transportation Problems as a Reason for Unmet Preventive Medical Care Need ... 188

Figure 39. Transportation Problems as a Reason for Unmet Mental Health Care Need 188

Figure 40. Travel Distance or Transportation Problems as a Reason for Unmet Dental Care Need 189

Figure 41. Unmet Need for Transportation to Health Care Visits in Past 6 Months (IHAWP vs. Medicaid and IHAWP vs. Medicaid Aware of NEMT Benefit) 190

Figure 42. Worry about Cost of Transportation to Health Visits in Past Months (IHAWP vs. Medicaid and IHAWP vs. Medicaid Aware of NEMT Benefit) 191

Figure 43. Reported Missed Appointment(s) Due to Transportation Problems in Past 6 Months (IHAWP vs. Medicaid)........ 191

Figure 44. Thought Health Plan Provided NEMT Services (IHAWP vs. Medicaid) 192

Figure 45. Unmet Health Care Need Due to Transportation Problems in Past 6 Months (IHAWP vs. Medicaid by Rural and Non-Rural Location)........ 193

Figure 46. Unmet Need for Transportation to Health Visits in Past 6 Months (IHAWP vs. Medicaid by Rural and Non-Rural Location) 193

Figure 47. Worry about Cost of Transportation to Health Visits in Past 6 Months (IHAWP vs. Medicaid by Rural and Non-Rural Location) 194

Figure 48. Reported Missed Appointments(s) Due to Transportation Problems in Past 6 Months (IHAWP vs. Medicaid by Rural and Non-Rural Location) 194

Figure 49. Unmet Health Care Need Due to Transportation Problems in Past 6 Months (IHAWP vs. Medicaid by Activity Limitation Status)........ 195

Figure 50. Unmet Need for Transportation to Health Visits in Past 6 Months (IHAWP vs. Medicaid by Activity Limitation Status) 196

Figure 51. Worry about Cost of Transportation to Health Visits in Past 6 Months (IHAWP vs. Medicaid by Activity Limitation Status) 196

Figure 52. Missed Appointment(s) Due to Transportation Problems in Past 6 Months (IHAWP vs. Medicaid by Activity Limitation Status)........ 197

Figure 53. Iowa MCO Member Handbooks, Excerpts from Table of Contents (Amerigroup left, Iowa Total Care right)........ 198

Figure 54. Excerpt from Iowa Total Care Promotional Brochure Advertising Transportation Services 199

Figure 55. Member Experiences Logic Model 203

Figure 56. Always Got Care for Illness, Injury, or Condition as Soon as Needed in Past 6 Months 217

Figure 57. Always Got Check-up or Routine Care Appointment as Soon as Needed in Past 6 Months (IHAWP vs. CAHPS Medicaid) 218

Figure 58. Informed about After-Hours Care (IHAWP vs. Medicaid) 219

Figure 59. Always Got Appointment with Specialist as Soon as Needed in Past 6 Months (IHAWP vs. CAHPS Medicaid) 220

Figure 60. Access to and Use of Prescription Medication in Past 6 Months (IHAWP vs. Medicaid)....... 221

Figure 61. Receipt of a Flu Vaccine (IHAWP vs. CAHPS Medicaid)....... 222

Figure 62. Utilization and Unmet Need for Preventive Care in Past 6 Months (IHAWP vs. Medicaid)....... 223

Figure 63. Outpatient ED Rates by Program and Year 224

Figure 64. Has a Personal Doctor (IHAWP vs. CAHPS Medicaid) 226

Figure 65. Somewhat or Very Easy to Change Personal Doctor (IHAWP vs. Medicaid) 226

Figure 66. Receipt of Flu Vaccine (IHAWP vs. Medicaid)....... 227

Figure 67. Emergency Department Use in Past 6 Months (IHAWP vs. Medicaid)....... 228

Figure 68. Any Hospitalization in Past 6 Months (IHAWP vs. Medicaid) 229

Figure 69. 30-day Hospital Readmission Among Those with Any Hospitalization in Past 6 Months (IHAWP vs. Medicaid)....... 230

Figure 70. Personal Doctor Usually or Always Communicated Well (IHAWP vs. CAHPS Medicaid) 231

Figure 71. Receipt of Self-Management Support Among Those with a Health Visit in Past 6 Months (IHAWP vs. Medicaid)....... 232

Figure 72. Provider Paid Attention to Mental or Emotional Health Among Those with a Health Visit in Past 6 Months (IHAWP vs. Medicaid)....... 233

Figure 73. Usually or Always Received Good Care Coordination (IHAWP vs. Medicaid) 234

Figure 74. High Rating of Personal Doctor (IHAWP vs. CAHPS Medicaid) 235

Figure 75. High Rating of Overall Health Care (IHAWP vs. CAHPS Medicaid)....... 235

Figure 76. High Rating of Health Plan (IHAWP vs. Medicaid) 236

Executive Summary

The University of Iowa serves as the independent evaluator for Iowa's 1115 Waiver: Iowa Health and Wellness Plan. The demonstration originally began on January 1, 2014. It is in the second 5-year extension which will end on December 31, 2024. IHAWP continues to change and evolve, as does the evaluation plan. There are currently seven key areas of investigation within the evaluation: Health Behaviors Incentive (HBI) program, Dental Wellness Plan (DWP), waiver of retroactive eligibility (WRE), cost sharing, cost and sustainability, waiver of non-emergency medical transportation, and member experiences.

The interim evaluation report outlines the background and general methods for the evaluation. Additionally, the report contains a section for each component. Key progress and findings are listed below by evaluation component.

Healthy Behaviors Incentive

Key findings from the HBI member survey

- Survey data indicated that those who were enrolled since 2015 have the highest level of awareness at 47%. Those enrolled before the pandemic began (March 2020) report awareness of the HBI program at 35%, while 27% of those who only enrolled during the pandemic are aware of the program.
- For survey respondents, adjusted percents show higher awareness of the HBI program for White (37%) vs. Black (26%) and Hispanic members (24%) and for those with a 4-year degree (44%) vs. those with less education. Females also had higher adjusted rates than males.
- As members spend more time in the IHAWP program, the likelihood of having a well-visit during the year increases. For example, 40% of members with eight years of enrollment have a well-visit compared to 31% for members with only one year of enrollment.
- Health risk assessment completion remains low and is not as closely associated with time in the program; completion rates are between 10% and 15% for members regardless of the total number of years in the program.
- Of members enrolled for at least eleven months during the year, 41% have a well-visit while only 11% of members have a well-visit if they were enrolled six months or fewer.
- IHAWP members with higher incomes are more likely to have well-visits during the year compared to members with lower incomes.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Key findings from the secondary data analyses

- There is an overall increase in the percentage of members completing a well visit over years of enrollment, with the greatest percentage (39%) being in the 8th year of enrollment.
- A greater proportion of members belonging to the highest income group (>100% FPL) complete a well-visit, HRA or both, followed by members belonging to the middle-income group (51–100% FPL), and then by members with the lowest income level (≤50%).
- A greater proportion of members residing in small towns/rural areas tend to complete both required activities over time compared to counterparts residing in metropolitan or micropolitan areas.
- The Black population has the smallest percentage of members completing both required activities over time compared to other races/ethnicities. People with "unknown race" have the highest percentages of members completing both activities over time.
- Overall, most of the race/ethnicity populations follow broadly a similar pattern over time, with the highest percentage of members completing both required activities being in the 6th year.
- There is no regular pattern of change over time in the percentages of members completing both required activities by MCO membership status (i.e., MCO versus non-MCO beneficiary), or by MCO type (i.e., AmeriGroup, AmeriHealth, UHC, or ITC beneficiary).

Dental Wellness Plan

Key findings from the provider survey

- The proportion of general dentists who reported accepting new adult patients with DWP remained relatively stable since 2019 at approximately 28%. The proportion accepting new children declined from 49% accepting new children with Medicaid in 2019 to 40% accepting new children with DWP Kids in 2021.
- There was a substantial difference in DWP participation across the two dental carriers. For acceptance of new DWP adult patients, 7% of dentists accepted both carriers, 20% accepted only one carrier or the other, and 74% did not accept either. This was consistent with estimates from 2019. For acceptance of children, 11% accepted both carriers, 29% accepted one or the other, and 61% did not accept either.
- The proportion of dentists who had existing adult DWP patients in their practice was 67% and also varied significantly by carrier (66% for Carrier 1 and 27% for Carrier 2).

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

- Among dentists accepting new adults or children with DWP, most placed limits on new patient acceptance, such as family members of existing patients, emergencies, or a set number of patients with DWP/DWP Kids.
- Regarding DWP benefit structure, a majority of dentists had positive attitudes toward having an annual dental visit as an HBI requirement and the $3/month premium, and a majority had negative attitudes toward the $1000 annual benefit maximum and toward the DWP program overall. Attitudes were very consistent with findings from 2019.
- Nearly all participating DWP general dentists (96%) reported difficulty referring their DWP patients to specialists – especially oral surgeons and endodontists.
- Nearly one in five dentists (18%) used teledentistry during the first six months of COVID, but only 9% were still using it at the time of completing the survey in August 2021. Among dentists who utilized teledentistry in August 2021, most did so by receiving photos via email/text and conducting visits by phone. Few dentists reported conducting teledentistry visits by video. Most dentists used it for emergency consultations.

Key progress

- Completion of revised evaluation plan to address questions related to the discontinuation of the Dental Healthy Behaviors as part of the DWP.

Waiver of retroactive eligibility

Key findings from the process evaluation

- Information provided through the process evaluation indicates that providers have increased their role in initiating Medicaid applications.

Key progress

- The New Enrollee survey is currently in the field and will conclude July 31, 2024.
- Completion of enrollment file spanning 13 years of data (2010-2022).

Cost Sharing

Key progress

- Medicaid emergency department data compiled for 2010-2022 with indicators as to whether the state considers the visit emergency and ACG level assignments for emergent level.
- Synthetic control analyses used to determine comparison states for emergency department comparisons: Kansas, Nebraska, Maine, and Utah.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Cost and sustainability

Key progress

- Sources identified for administrative data related to state budgets.
- HCRIS data obtained, and preliminary analyses completed.

Waiver of non-emergency medical transportation

Key findings from the 2022 NEMT member survey

Unmet Health Care Needs Due to Transportation

- IHAWP members and Medicaid members with full access to the NEMT benefit had similar rates of having an unmet health care need (routine or preventive medical, mental health, or dental care) due to transportation problems in the past 6 months (7% IHAWP and 9% Medicaid).
  - One in five IHAWP members with an unmet check-up or routine medical care need (20%) indicated that transportation problems were a reason for their unmet need. The rate was similar for Medicaid members at 24%.
  - Similarly, about one in five members with an unmet dental health care need indicated that transportation problems were a reason for their unmet need (22% IHAWP and 21% Medicaid).

Unmet Need for Transportation and Concerns About Cost

- Reported unmet need for transportation to health visits in the past 6 months was similar for both IHAWP (7%) and Medicaid members (9%).
- Around a third of all members indicated concern about the cost of paying for transportation to health visits and the rate was higher for traditional Medicaid (40%) than IHAWP (31%) despite full access to the NEMT benefit for Medicaid members.

Missed Health Appointment Due to Transportation

- About one-tenth of members reported missing a health appointment in the past 6 months due to transportation and the rate was higher in Medicaid (11%) than IHAWP (8%).

NEMT Coverage Awareness

- Among Medicaid members with full access to the NEMT benefit, 19% reported awareness that their health plan provided NEMT services. Fewer IHAWP members indicated that their health plan offered NEMT services (11%).

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Subgroup Analyses

- Unmet need for transportation to health visit rates in the past 6 months were the same for IHAWP and Medicaid members in rural areas (7%) and similar for those in non-rural areas (8% IHAWP and 10% Medicaid).
- IHAWP members were less likely than Medicaid members to report concerns about cost of transportation to health visits in both rural areas (33% IHAWP and 41% Medicaid) and non-rural areas (30% IHAWP and 39% Medicaid).
- Missed appointment due to transportation rates were similar for IHAWP vs. Medicaid in rural areas (7% vs. 9%) but lower for IHAWP than Medicaid members in non-rural areas (8% vs. 13%).
- Reported unmet need for transportation to health visit rates were overall much higher among members with an activity limitation than those without, but IHAWP vs. Medicaid unmet need rates were similar among those with an activity limitation (15% vs. 18%) and those without (4% vs. 6%).
- IHAWP members were less likely than Medicaid members to report concerns about cost of transportation to health visits for both those with activity limitation (46% IHAWP and 57% Medicaid) and those without (24% IHAWP and 34% Medicaid).
- Missed appointment due to transportation rates were not significantly different for IHAWP vs. Medicaid among those with activity limitation (18% vs. 23%), but significantly lower for IHAWP vs. Medicaid members for those without activity limitation (3% vs. 7%).

Key findings from the process evaluation

- For IHAWP members ineligible for NEMT, interviewees described that they recommend transportation options, such as utilizing public transportation (with discounts and vouchers), connecting to resources via referral databases, applying for a medically exempt waiver, and utilizing community resources and churches.
- Clinic staff suggested that inclusion of the mileage reimbursement component (separate from vendor-provided transportation) of the NEMT benefit could make a positive impact on unmet transportation need for IHAWP members.
    - Mileage reimbursement for NEMT via the MCOs is paperless and does not require a physician signature.
- Interviewees shared perceptions of an urgent and high level of need for reliable transportation amongst IHAWP members, especially those who do not have a social support network and/or live in rural areas.
    - Clinic staff are at the forefront of IHAWP member transportation hardship, reporting the consequences of missed appointments, late arrivals, long wait times, and lack of return transportation from appointments.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

  - Rural residents are particularly at risk for transportation hardship because of few private options (such as taxis, ride share services) and limited public transit route and operating hours
- The current capacity and functionality of the NEMT benefit was not seen as sufficient for serving eligible Medicaid members.
  - Clinic staff shared observations about patients who use the NEMT benefit, noting issues with service consistency. Clinic staff shared their reluctance to advise patients to use Medicaid-provided transportation due to transportation issues such as timeliness, "*They're either late or they don't come at all*" and reliability, "*It's not trustworthy.*"
- MCO representatives noted that in some cases, transportation limitations amongst IHAWP members can be circumvented with the use of telehealth in lieu of attending in-person appointments.

Member experiences

Key findings from the IHAWP member survey

IHAWP Members vs. CAHPS Adult Medicaid Members

- IHAWP members in the 2022 Consumer Survey had similar access to timely care services compared to adults in Medicaid from the 2022 National CAHPS Benchmarking Database.
  - 58% of IHAWP members who needed urgent care reported that they always got care for their illness, injury, or condition as soon as needed. The rate was similar for adult Medicaid members in CAHPS at 59%.
  - Just over half of IHAWP members (53%) and CAHPS adult Medicaid members (52%) with a need for routine care reported always getting a check-up or routine care as soon as needed.
  - About half of IHAWP members (51%) and CAHPS adult Medicaid members (50%) with a need for specialist care reported always getting care as soon as needed.
- IHAWP members in the Consumer Survey reported the same rate of flu shot vaccination as adult Medicaid members in CAHPS (40%).
- Adults in Medicaid from the CAHPS database were slightly more likely to report having a personal doctor (81%) than IHAWP members (78%).
  - Among those with a personal doctor, the same rate of IHAWP and CAHPS adult Medicaid members said their doctor usually or always communicated well (93%).
  - Favorable ratings of their personal doctor were also similar for those in IHAWP and CAHPS adult Medicaid.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

- Adults in Medicaid from the CAHPS database were slightly more likely to rate their overall health care favorably (56%) than IHAWP members (52%).

IHAWP Members vs. Traditional Medicaid Members in 2022 Consumer Survey

- Just under half of both IHAWP and traditional Medicaid members (49%) reported receiving preventive care in the past 6 months.
  - Less than one-tenth (7%) of both IHAWP and Medicaid members reported not being able to get preventive care when it was needed.
- Medicaid members reported higher rates of unmet need for prescription medication than IHAWP members.
  - Among those with a need for prescription medication, roughly 3 in 10 Medicaid members reported an unmet need for a prescription medication in the past six months (27%) compared to 2 in 10 IHAWP members (21%).
- More IHAWP members reported receipt of a flu shot (40%) than Medicaid members (31%).
- Fewer IHAWP members (41%) reported being informed by their doctor's office about what to do if they needed after-hours care than Medicaid members (49%).
- A smaller proportion of IHAWP members used the emergency department in the past 6 months (26%) than Medicaid members (32%).
  - Of those who used the ED, significantly more Medicaid members (46%) than IHAWP members (37%) reported that the care they received in the ED could have been provided in a doctor's office.
- Similar rates of IHAWP and Medicaid members (8% and 9%, respectively) reported any hospital stays in the previous six-month period. There were no significant differences between IHAWP and Medicaid members regarding potentially avoidable readmissions.
- Almost half of IHAWP (48%) and Medicaid members (45%) with a health visit reported receiving self-management support from their provider to help take care of their own health.
- About half of both IHAWP and Medicaid members (50% and 51%, respectively) reported talking with someone from their doctor's office about things in life that worried them or caused them stress.
- Reported rates of usually or always receiving good care coordination were similar between IHAWP (80%) and traditional Medicaid members (78%).About half of both IHAWP and Medicaid members rated their health care plan favorably (50% and 47%, respectively).
-

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Iowa Wellness Plan
General Background Information

Originally, two demonstrations were approved on December 10, 2013, both to start on January 1, 2014: Iowa Wellness Plan (Project Number 11-W-00289/5) and Iowa Marketplace Choice (Project Number l 1-W-00288/5). Wellness Plan (WP) was a program operated by the Iowa Department of Human Services providing health coverage for uninsured Iowans from 0-100% of the Federal Poverty Level (FPL) and Marketplace Choice (MPC) was a premium support program utilizing Qualified Health Plans through the Marketplace for Iowans from 101-133% FPL. These two demonstrations encompassed a bipartisan solution to health care coverage for low-income adults not otherwise eligible for public supports. The joint program name was Iowa Health and Wellness Plan (IHAWP). More information regarding the formulation and implementation of these two demonstrations can be found online at the link below.

https://www.medicaid.gov/medicaid/section-1115-demo/demonstration-and-waiver-list/81706

Iowa Health and Wellness Plan replaced IowaCare, a limited provider/limited benefit program operating from 2005-2013. The provider network included 1) a public hospital in Des Moines (Broadlawns), 2) the largest teaching hospital in the state (University of Iowa Hospitals and Clinic), and 3) 6 federally qualified health centers. IowaCare enrolled adults, not categorically eligible for Medicaid, with incomes up to 200% FPL. Table 1 details WP and MPC members by demographic characteristics and whether they were auto enrolled from IowaCare. Columns 1 and 2 provide the number of WP and MPC members who have pre-IWP experience through IowaCare (41,088 and 8,188, respectively). Columns 3 and 4 provide the number of WP and MPC members who were first enrolled through IWP having had no experience in Medicaid or IowaCare at the start of IWP (77,446 and 26,780, respectively). By the close of CY 2014 there were over 35,000 Marketplace Choice members and nearly 120,000 Wellness Plan members.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Table 1. Wellness Plan and Marketplace Choice Members by IowaCare Auto-Enrollment (CY 2014)

	Auto enrolled from IowaCare		Not auto enrolled from IowaCare	
Characteristic	**Enrolled in Wellness Plan N (%)**	**Enrolled in Marketplace Choice N (%)**	**Enrolled in Wellness Plan N (%)**	**Enrolled in Marketplace Choice N (%)**
Gender				
Female	20,673 (49%)	5,290 (60%)	39,860 (52%)	16,539 (62%)
Male	21,211 (51%)	3,528 (40%)	37,586 (48%)	10,241 (38%)
Race				
White	21,866 (52%)	4,587 (52%)	52,386 (68%)	18,399 (69%)
Black	3,183 (8%)	465 (5%)	6,310 (8%)	1,529 (6%)
American Indian	329 (1%)	52 (1%)	1,130 (2%)	272 (1%)
Asian	553 (1%)	138 (2%)	1,567 (2%)	683 (3%)
Hispanic	788 (2%)	224 (3%)	2,950 (4%)	1,350 (5%)
Pacific Islander	35 (<1%)	12 (<1%)	396 (1%)	293 (1%)
Multiple-Hispanic	270 (1%)	60 (1%)	739 (1%)	264 (1%)
Multiple-Other	116 (<1%)	27 (<1%)	622 (1%)	220 (1%)
Undeclared	14,744 (35%)	3,253 (37%)	11,346 (15%)	3,770 (14%)
Age				
18-21 years	1,355 (3%)	272 (3%)	7,314 (9%)	1,781 (7%)
22-30 years	9,699 (23%)	1,732 (20%)	22,228 (29%)	8,305 (31%)
31-40 years	8,627 (21%)	1,773 (20%)	17,624 (23%)	7,310 (27%)
41-50 years	10,378 (25%)	1,976 (22%)	14,018 (18%)	4,592 (17%)
51 and over	11,825 (28%)	3,065 (35%)	16,262 (21%)	4,792 (18%)
County rural/urban status				
Metropolitan	26,530 (63%)	5,451 (62%)	46,293 (60%)	15,466 (58%)
Non-metropolitan, urban	1,667 (4%)	420 (5%)	3,448 (5%)	1,408 (5%)
Non-metropolitan, rural	13,687 (33%)	2,947 (33%)	27,705 (36%)	9,906 (37%)
Total members	**41,884**	**8,818**	**77,446**	**26,780**

IHAWP changes

IHAWP was modified in significant ways in the first two years (Table 2). The first major change occurred when CoOportunity Health withdrew as a Qualified Health Plan (QHP) for MPC members at the end of November 2014. Approximately 9,700 CoOportunity Health members were automatically transitioned to Medicaid providers on December 1, 2014, through MediPASS (primary care case management program), Meridian (HMO), or traditional Medicaid (fee-for-service payment); however, they retained their designation as MPC members. MPC members who were not in CoOportunity Health remained in Coventry, the other QHP.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

During calendar year 2015, it was mandated that all Medicaid members, including IHAWP members, be placed into one of three managed care organizations (MCOs) beginning January 1, 2016. Due to a three-month implementation delay, IHAWP members previously enrolled with Coventry were placed in the traditional Medicaid FFS program effective December 31, 2015, until the Medicaid Managed Care Organizations (MCOs) began accepting members on April 1, 2016.

Effective January 1, 2016, the MPC program was not renewed. All MPC members were rolled into WP. The Iowa Health and Wellness Plan (IHAWP) became the Iowa Wellness Plan (IWP) covering Iowans not categorically eligible for Medicaid with incomes from 0-133% FPL. During CY 2016 members were enrolled with one of three MCOs: Amerigroup Iowa, Inc; AmeriHealth Caritas, Inc.; or UnitedHealthcare Plan of the River Valley, Inc.

Effective November 30, 2017, AmeriHealth stopped serving as an MCO for Iowa Medicaid. Amerigroup was not prepared to accept the AmeriHealth members, so UnitedHealthcare accepted the transfer of the bulk of AmeriHealth members. Effective June 30, 2019, UnitedHealthcare also exited the Iowa Medicaid program and Iowa Total Care was added. As of July 1, 2023, there are three active MCOs serving IWP members: AmeriGroup Iowa, Inc, Iowa Total Care, and Molina Healthcare, Inc.

Figure 1 shows the number of members moving into and out of Medicaid and Medicaid programs.

Gray	Not in a Medicaid program
Red	Marketplace Choice (Folded into Iowa Health and Wellness Plan December 31, 2015)
Yellow	Wellness Plan (Merged with Marketplace Choice December 31, 2015)
Dark blue	IowaCare (ended December 31, 2013)
Green	Income eligible programs such as MAC – medical assistance to Mothers and Children
Teal	All other programs

We focus particularly on the gray, those not in Medicaid, and the yellow, those in Iowa Health and Wellness Plan with attention paid to the lines moving from gray to yellow and yellow to gray.

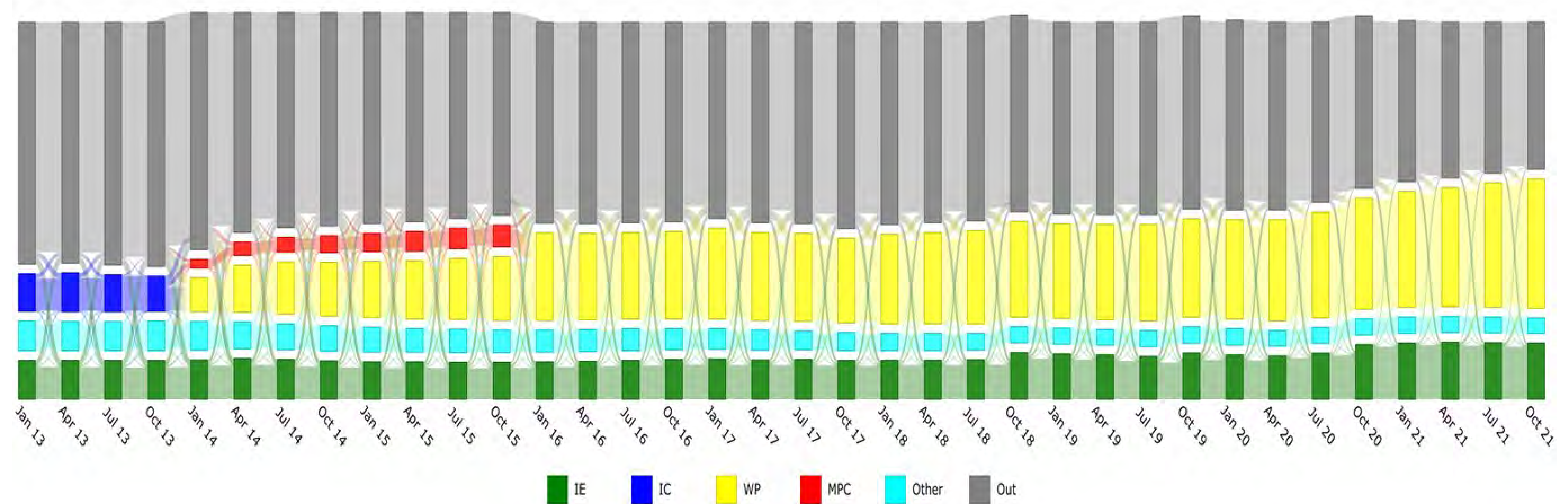
Lines moving from gray to yellow (left to right) represent the number of people entering Iowa Health and Wellness Plan after having no Medicaid-funded coverage option, while those lines moving from yellow to gray (left to right) represent those moving out of Iowa Health and Wellness Plan to having no Medicaid-funded coverage. The red areas are absorbed by the yellow in December 2015 when Marketplace Choice members are merged

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

into Iowa Wellness Plan (IWP). This is followed by a period of stability with fairly consistent movement in and out of IWP. After April 2020, during the pandemic, the line moving from no coverage to Iowa Health and Wellness Plan remains similar to the pre-April pattern; however, the line moving from Iowa Health and Wellness Plan to no coverage nearly disappears. This indicates that we are not seeing more people entering Iowa Wellness Plan on a monthly basis (these numbers are staying relatively stable), but there are far fewer members leaving Iowa Wellness Plan, as one might expect given the suspension of disenrollment.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Figure 1. Movement of Enrollees into and out of Medicaid Programs by Quarter, First Quarter 2013 –Fourth Quarter 2021



The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

The IHAWP has had changes over the last 10 years (Table 2). In May 2014 the first members were enrolled in the Dental Wellness Plan. This plan was originally provided through Delta Dental of Iowa and comprised a three-tiered benefit program. Evaluation report results provided by the University of Iowa indicated that this approach was not effective with few members reaching the third, and most comprehensive, tier of benefits. In August 2017 benefits for all Medicaid adults, including IHAWP, were placed into Dental Wellness Plan 2.0. A two-tiered dental benefit provided by Delta Dental of Iowa and MCNA. This program required that members complete two healthy dental behaviors: a preventive dental exam and a caries risk assessment. The requirement to complete healthy dental behaviors were paused during the PHE. The state has requested that it not be reinstated.

In July 2014 the first members were enrolled in the Healthy Behaviors Incentive (HBI). By completing two healthy behaviors: 1) a preventive medical or dental exam and 2) a health risk assessment, members with income over 50% FPL are able to avoid premium payments. This program was paused during the PHE. It has been reinstated beginning June 1, 2023.

The state requested a waiver of retroactive eligibility in 2018. It was granted for adults with exceptions for pregnant women, members in LTSS, and members enrolled through a disability determination.

Table 2. Timeline for Iowa Wellness Plan Changes and Medicaid Relevant COVID-19

Date	Change
January 1, 2014	First IHAWP members enrolled in one of two programs: Wellness Plan for those 0-100% FPL and Marketplace Choice for those 101-133% FPL. Wellness Plan operated within the traditional Medicaid plans while Marketplace Choice utilized Qualified Health Plans.
May 1, 2014	IHAWP members enrolled in Dental Wellness Plan with Delta Dental of Iowa, a three-tiered benefit program.
July 1, 2014	IHAWP members enrolled in the Healthy Behaviors Incentive Program
November 1, 2014	Marketplace Choice members in CoOportunity (QHP) were moved to MediPASS (PCCM program), Meridian (HMO), or Coventry (QHP)
November 1, 2015	Marketplace Choice members in Coventry (QHP) were moved to MediPASS or Fee-for-service
December 1, 2015	Marketplace Choice component of IWP demonstration ended, Wellness Plan extended to members 100-133% FPL and renamed Iowa Wellness Plan
April 1, 2016	Medicaid members (with a few exceptions such as PACE members), including IWP, moved to one of three MCOs - AmeriGroup Iowa, AmeriHealth Caritas, or UnitedHealthcare Plan of the River Valley
August 1, 2017	All Medicaid, including IWP, adults enrolled in Dental Wellness Plan 2.0 with Delta Dental or MCNA a two-tiered benefit plan

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Date	Change
August 2, 2017	Iowa files an amendment to the IWP requesting a waiver of retroactive eligibility for all Medicaid programs
October 27, 2017	CMS officially approves IWP amendment for waiver of retroactive eligibility
November 1, 2017	Waiver of retroactive eligibility begins, including all but pregnant women and children under 1
November 30, 2017	AmeriHealth Caritas exits Medicaid program
July 1, 2018	Waiver of retroactive eligibility is amended to remove nursing home residents
July 1, 2019	UnitedHealthcare exits Medicaid program as an MCO Iowa Total Care enters Medicaid program as an MCO
January 1, 2020	Waiver of retroactive eligibility is renewed for 5 years; children 1-19 years of age are removed from the waiver
January 31, 2020	First federal emergency declaration for COVID-19
February 20, 2020	CDC issues coding guidelines for novel Coronavirus for health care encounters and deaths related to COVID-19.
March 1, 2020	Updates to billing procedure for telehealth services establishing “originating” and “Distant” site changes.
March 6, 2020	New coding for virtual care services, telehealth related services, and Coronavirus lab tests established in light of COVID-19 pandemic.
March 13, 2020	DHS waives all Medicaid co-pays, premiums and contributions, Prescription refill guideline changes, Telehealth streamlining of appropriate service changes including modifier 95 designation and POS codes for telehealth billing. Complete Summary list of submitted federal waivers found Supplemental Materials.
March 18, 2020	All pharmacy PA’s extended through June 30th. Prescription member copayments suspended including potential for refunds. Patient signatures for medication receipt waived.
April 1, 2020	Changing waiving criteria for Prior Authorizations (PAs) for Medicaid members, and also changes to extensions for MCO approved PAs. Changes to claims filing for medical claims including a 90-day extension to first time medical claims and encounters for MC claims.
April 2, 2020	Expansion of list of telehealth services with billing and coding changes. Expansion of provider types included in telehealth services where appropriate. See Supplemental Materials.
May 19, 2020	New guidance on additional codes pertaining to COVID-19 including new diagnostic coding, laboratory tests and specimen collection.
June 1, 2020	The Families First Coronavirus Response Act (FFCRA) establishes a new Medicaid eligibility group for uninsured members for the purposes of COVID-19 testing.
June 19, 2020	Updated Medicaid provider toolkit found here.
January 8, 2021	Federal PHE extended.
April 21, 2021	Federal PHE extended.
March 9, 2023	Notice of PHE unwind.
June 1, 2023	HBI program reinstated.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Previous findings

This IWP waiver evaluation design builds upon the findings of the first demonstration result by providing ongoing evaluation of key experiences and outcomes for the expansion population, improving the evaluation design to capture additional information for ongoing policies and undertaking an investigation of new policies that were enacted after the first waiver approval. Reports encompassing the first waiver evaluation can be found at https://www.medicaid.gov/medicaid/section-1115-demo/demonstration-and-waiver-list/81706. Additionally, there are a number of reports that have been completed during the first 2 years of this evaluation period.

All related reports can be found at Iowa Research Online by searching for the report title or a key word in the title - https://iro.uiowa.edu/esploro/ .

Related publications

- Iowa Wellness Plan Process Evaluation Report 2023
- Iowa Health and Wellness Plan COVID-19 Impacts Report
- Evaluation of the Dental Wellness Plan: 2021 Survey of Iowa Private Practice Dentists
- Healthy Behaviors Incentive Program Survey 2022 Report
- Iowa Health and Wellness Plan 2022 Member Survey Report
- Evaluation of the Dental Wellness Plan 2.0: Member Experiences After Two Years
- Iowa Health and Wellness Plan Process Evaluation Report 2022
- Iowa Health and Wellness Plan Interim Report, Coverage During the PHE
- Iowa Wellness Plan Consumer Survey 2018 Report
- Healthy Behaviors Dis-enrollment Interviews Report: In-depth interviews with Iowa Health and Wellness Plan members who were recently disenrolled due to failure to pay required premiums
- Healthy Behaviors Claims-Based Report #3 and HRA Completion Report
- Healthy Behaviors Claims-Based Outcomes Report #3 and Healthy Behaviors Modeling Report #2
- Healthy Behaviors Incentive Program evaluation
- Healthy Behaviors Cost Analysis Report
- Non-Emergency Medical Transportation and the Iowa Health and Wellness Plan
- Evaluation of Provider Adequacy in the Iowa Health and Wellness Plan during the second year
- Evaluation of the Dental Wellness Plan: Member Experiences in the First Year
- Evaluation of Provider Adequacy in the Iowa Health and Wellness Plan During the First Year
- Iowa Dental Wellness Plan: Evaluation of Baseline Provider Network
- DWP Evaluation: Annual Report 2019
- DWP Evaluation: Annual Report 2018
- Iowa Wellness Plan Evaluation, Claims-based Outcome Report CY 2013 – 2018

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

- Evaluation of the Dental Wellness Plan: Community Health Center Experiences after Two Years
- Evaluation of the Dental Wellness Plan. Private Practice Dentist Experiences in the First Year
- Access, Utilization, and Cost Outcomes: Iowa Dental Wellness Plan Evaluation 2014-2016
- Evaluation of Provider Network in the Iowa Dental Wellness Plan, 2014-2016
- Iowa Wellness Plan Evaluation - Interim Report CY 2016
- Dental Wellness Plan Evaluation
- Evaluation of the Iowa Wellness Plan (IWP): Member Experiences in 2016
- Evaluation of provider network in the Iowa Dental Wellness Plan during the first year
- Iowa's Marketplace Choice Summative Report
- Evaluation of the Iowa Health and Wellness Plan: Member Experiences in the First Year
- First Look at Iowa's Medicaid Expansion: How Well Did Members Transition to the Iowa Health & Wellness Plan from IowaCare

Additional reports are posted on the Iowa Medicaid and Iowa Research Online as they are approved by CMS and the Iowa Department of Health and Human Services (HHS).

Evaluation questions and hypotheses

Evaluation questions and hypotheses for each component are provided within the specific chapter either separately or within the Progress/Results section.

Methodology

This section outlines the general methodologic approaches taken throughout the seven policy components (Healthy Behaviors Incentive; Dental Wellness Plan; Waiver of Retroactive Eligibility; Cost Sharing; Cost and Sustainability; Waiver of Non-Emergency Medical Transportation; and IWP Member Experiences). The methods specific to policy questions are included with each component. Each section describing the evaluation of the policy component will provide detailed descriptions of the related hypotheses, questions, populations/samples, and methods.

Evaluation design

This evaluation design is complex and rigorous, encompassing up to 15 years of administrative and survey data. For many hypotheses we are able to take advantage of pre- and post-implementation data at both the state and national level. We have also 1) built in more comparisons to other states, 2) increased our collection and utilization of Social Determinants of Health (SDOH) data, 3) added process measure collection and analysis, and 4) improved processing, maintenance, and use of the Medicaid data lake. Additionally,

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

with the COVID-19 pandemic occurring during the first year of the renewal period, we have incorporated national findings to inform our strategies to reflect related changes in Medicaid policies, the health care system and population norms around health services need and utilization. In some instances, it is best to remove the pandemic period from analyses, leaving a gap period in the analytic, while in others we are able to account for changes in policy during the pandemic through time dependent trigger variables. We include sensitivity testing to determine whether county fixed effects and/or person fixed effects are able to adequately control for pandemic effects.

The State has worked within policies and procedures established under Iowa Code to contract with the University of Iowa. The University of Iowa meets the requirements of an independent entity under the code. In addition, the University of Iowa brings the ability to meet the prevailing standards of scientific and academic rigor as appropriate and feasible for each aspect of the evaluation, including standards for the evaluation design, conduct, interpretation, and the reporting. The University of Iowa uses the best available data, uses controls and adjustments for limitations of the data, reports the effects of limitations on results; and discusses the generalizability of results.

Target and comparison populations

The current Iowa Wellness Plan program evolved into one demonstration from two separate but linked demonstrations on January 1, 2016, as outlined in Table 3. This change provides multiple possibilities for comparison groups over the life of the demonstration (January 1, 2014, through December 31, 2024). The groups described below are utilized as target or comparison groups to test the hypotheses within the various components of the evaluation. The descriptions and information provided below provide a general understanding of the IWP population and population groups that are used for comparison. All estimates are based on the most recent month for which data exists or CY 2019. Specific comparisons are included in the sections detailing the methods for the evaluation of the policy components.

Target population: Iowa Wellness Plan members

Iowa Wellness Plan (IWP) members are the primary target population for this evaluation (except for Waiver of Retroactive Eligibility and Dental Wellness Plan). IWP members are between 19 and 64 years of age, are not categorically eligible for any other Medicaid program, and have incomes between 0-133% of the Federal Poverty Level (FPL). Due to the evaluation's complexity, there are a number of subsets to this target population described within the policy component sections.

January 2014-December 2015 (Original Iowa Health and Wellness Plan)

Iowa Health and Wellness Plan originally included members enrolled in either Wellness Plan or Marketplace Choice. These plans included the following enrollment pathways and had the plan options listed below.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Wellness Plan enrollment pathways

1. People previously enrolled in a limited benefit plan (IowaCare) who had incomes from 0 to 100% FPL.
2. People who were not enrolled in a public insurance program but met the income eligibility criterion (0-100% FPL) could actively enroll.

Wellness Plan options

HMO: Until December 31, 2015, Meridian Health Plan was the only Medicaid HMO option in the state, operating in 29 counties in Iowa. It was available to Wellness Plan members in these 29 counties, where approximately half of the members were initially assigned to the HMO (e.g., the PCP option mentioned below). Members had the option to change from the HMO to other options available in their county. Though Meridian began operating in Iowa in March 2012, the plan was not awarded a contract under the IA Health Link managed care program.

Wellness Plan PCP: Operated through the Iowa Medicaid, the PCP option was available in 88 counties statewide. Members were assigned a primary care provider (PCP) who was reimbursed $8 per member per month to manage specialty and emergency care for these patients. PCP assignment within the HMO or PCP was based on history of enrollment with a provider, provider closest to home, and appropriate provider specialty. Members had the option to change the assigned provider.

Fee-for service: Members in the 11 counties with no managed care option (HMO or PCP) were part of a fee-for-service program, not actively managed by the state or another entity.

Marketplace Choice enrollment pathways

1. People previously enrolled in a limited benefit plan (IowaCare) who had incomes from 101 to 133% FPL
2. People who were not enrolled in a public insurance program but met the income eligibility criterion (101-138% FPL) could actively enroll through the Marketplace.

Marketplace Choice options

People enrolled in Marketplace Choice were given a choice of two Qualified Health plans that both operated in all 99 Iowa counties.

CoOportunity Health was a non-profit co-operative health plan offered on the Health Insurance Marketplace through the federal government portal. It was established with start-up funds provided through the Affordable Care Act (ACA), and operates statewide in Iowa and Nebraska, in alliance with HealthPartners of Minnesota and Midlands Choice provider network.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Coventry Health Care was a "diversified national managed care company based in Bethesda, MD". They were also operating statewide and available on the Health Insurance Marketplace through the federal portal.

Medically Frail IWP members

Wellness Plan options were available for Marketplace Choice members who were deemed 'Medically Exempt'. The broader range of options provided more access to behavioral health services and eliminated copays and premiums. Members deemed 'Medically Exempt' are removed from the study population for most analyses and are either considered a comparison population or additional target population, depending on the analytical strategy selected in each policy component.

January-March 2016

Iowa Health and Wellness Plan became Iowa Wellness Plan on January 1, 2016, as the Marketplace choice members were incorporated into the single program with Wellness Plan members. Enrollment continued during January-March 2016. However, all Medicaid members were placed into fee-for-service as the IA Health Link managed care program was implemented.

April 2016-present

Beginning April 1, 2016, all Medicaid members (with few exceptions such as PACE), were enrolled with one of three Medicaid Managed Care Organizations operating throughout Iowa: AmeriGroup Iowa, AmeriHealth Caritas, or UnitedHealthcare Plan of the River Valley. There have been changes to the MCOs over time with AmeriHealth Caritas ending their contract in November 2017, UnitedHealthcare Plan of the River Valley choosing not to renew their contract in July 2019 and Iowa Total Care executing a contract in July 2019. On July 1, 2023, Molina, Inc began providing services as a Medicaid MCO. These changes make it important to control for which MCO a member is enrolled with as we look at outcomes that may be affected by MCO policies, quality assurance activities, and reimbursement strategies.

Comparison population: IowaCare

We have **eliminated** IowaCare as a comparison group. The limited provider network within the IowaCare program, particularly for emergency room and hospital care, severely limited member access to care. Additionally, Iowa hospitals that were not in the provider network reported providing significant amounts of emergency room services to IowaCare members for which they were unable to bill the Medicaid program. Though a fund was created to offset these costs, claims were not processed through Medicaid.

Comparison Population: Adults in families income eligible for Medicaid (IE)

The IE group is composed of adult parents/guardians of children in Medicaid in families with incomes less than 50% FPL.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Pre- and Post-IWP implementation: CY 2011-2015

HMO: Meridian Health Plan is an HMO option for State Plan enrollees eligible because of low income in 29 counties. Members have the option to change their assigned provider.

MediPASS PCCM: Iowa Medicaid State Plan has had a Primary Care Case Management (PCCM) program called MediPASS-(Medicaid Patient Access to Services System) since 1990. This program was available in 93 counties and had approximately 200,000 members. In counties where managed care was available, new enrollees were randomly assigned to a primary care provider (PCP) within either the PCCM (or the HMO if available in the county). Only members enrolled in Medicaid due to low income enroll in MediPASS.

Fee-for service: Members in the 15 counties with no managed care option are part of a traditional fee-for-service payment structure.

Post-IWP implementation: April 2016- CY 2024

Enrolled in MCO option April 1, 2016. See discussion under IWP population.

Comparison population: Eligible due to a Disability Determination (DD)

The DD group is composed of Medicaid State Plan members enrolled due to a disability determination. The FPL for these members may range from 0 to 200%. We utilize this comparison group with caution as Medicaid members enrolled through disability determination may have different trends in cost and utilization than those Medicaid members who enroll due to income eligibility. We expect that their pre-program trends may be steeper. We will test the appropriateness of this comparison group empirically prior to their inclusion in analyses.

Pre- and Post-IWP implementation: CY 2011-2015

The only payment structure for these members was fee-for-service. Members enrolled in Medicare are removed from evaluation analyses.

Post-IWP implementation: CY 2016-2024

Enrolled in MCO option April 1, 2016. See discussion under IWP population.

below provides the demographics for members enrolled through IWP (not Medically Exempt), IE, DD and IWP (Medically Exempt) for CY 2019 and CY 2022 to illustrate the effects of the PHE on the target and comparison populations. Figure 2-Figure 5 provide visual representations of target and comparison group demographics over time (2019 and 2022). These figures provide stark evidence of the rise in Medicaid members and the differences for which the evaluation must account between the member groups. Though Medicaid member coverage was maintained during the PHE, the table and figures below show that this increase in members due to retention of those who would normally be disenrolled was not felt for the disability determination group. Medicaid members enrolled due to a disability determination are rarely, if ever, disenrolled from Medicaid as their categorical eligibility is based upon a long-term functional disability. Though a disability

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

may resolve, the vast majority of those enrolled under this program type, remain eligible throughout their lives. The other 3 program types (IWP not medically exempt, IWP medically exempt, and income eligible) are all programs in which the eligibility determination may change with time. Members of these program types are more likely to be disenrolled in a non-PHE environment, so these programs saw large increases in the number of members during the PHE reflecting the large numbers of members retained who would have normally been disenrolled.

Figure 6 provides a visualization of the differences between our target and comparison groups as shown in Table 4. The IWP not Medically Exempt population is more likely to be split evenly between male and female, much like the disability determination population and the IWP Medically Exempt population, but unlike the income eligible population. The IWP population is also more likely to be younger than the income eligible population though younger than the disability determination population and the IWP Medically Exempt population.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Table 3. Comparison of Target Population with Three Medicaid Comparison Groups, pre- and post-COVID-19, Number of Members

	IWP not Medically Exempt		Income Eligible		Disability Determination		IWP Medically Exempt	
	2019	2022	2019	2022	2019	2022	2019	2022
Sex								
Female	104,500	117,996	73,211	99,145	19,858	19,477	14,927	21,904
Male	93,402	113,398	37,568	53,356	20,292	21,190	13,844	21,771
Race								
White	117,499	132,321	60,266	80,313	25,484	250,22	21,134	31,106
Black	18,022	21,480	13,899	18,401	5,069	5,162	1,927	2,995
Hispanic	13,571	18,910	10,700	16,714	1208	1,421	1029	1,952
American Indian	2,998	3,725	2268	3,284	524	598	648	913
Asian/Pacific Islander	6,282	7,870	2,446	4,623	355	353	250	495
Other/Unknown	39,530	47,088	21,200	29,166	7510	8,111	3783	6,214
Age								
19-21 years	26,971	23,825	3,625	6,110	1,660	1,988	649	983
22-30 years	54,731	68,442	22,663	27,521	5,704	5,500	5,996	7,810
31-40 years	45,414	54,353	24,408	36,318	6,278	6,688	7,550	11,000
41-50 years	31,669	39,144	11,046	17,953	6,583	6,471	6,610	9,948
51-64 years	39,117	45,630	49,037	64,599	19,925	20,020	7,966	13,934
Urban/Rural								
Metropolitan	119,617	142,903	65,047	90,939	23,936	24,557	17,535	26,512
Non-metro, urban	34,751	39,825	19,959	27,131	7,339	7,197	5,188	7,996
Non-metro, rural	43,534	48,666	25,773	34,431	8,875	8,913	6,048	9,167
Months of eligibility								
1-6 months	42,245	22,034	13,715	10,433	2,867	1,922	3,135	2,758
7-10 months	28,546	11,129	11,273	6,157	2,066	1,360	2,935	1,769
11-12 months	127,111	198,231	85,791	135,911	35,217	37,385	22,701	39,148
Total	197,902	231,394	110,779	152,501	40,150	40,667	28,771	43,675

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Table 4. Comparison of Target Population with Three Medicaid Comparison Groups, CY 2022, Proportion of Members

	IWP not Medically Exempt	Income Eligible	Disability Determination	IWP Medically Exempt
Sex				
Female	51%	65%	48%	50%
Male	49%	35%	52%	50%
Race				
White	57%	53%	62%	71%
Black	9%	12%	13%	7%
Hispanic	8%	11%	3%	4%
American Indian	2%	2%	1%	2%
Asian/Pacific Islander	3%	3%	1%	1%
Other/Unknown	20%	19%	20%	14%
Age				
19-21 years	10%	4%	5%	2%
22-30 years	30%	18%	14%	18%
31-40 years	23%	24%	16%	25%
41-50 years	17%	12%	16%	23%
51-64 years	20%	42%	49%	32%
Urban/Rural				
Metropolitan	62%	60%	60%	61%
Non-metro, urban	17%	18%	18%	18%
Non-metro, rural	21%	23%	22%	21%
Months of eligibility				
1-6 months	10%	7%	5%	6%
7-10 months	5%	4%	3%	4%
11-12 months	86%	89%	92%	90%

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Figure 2. Member Sex by Program Type by Year

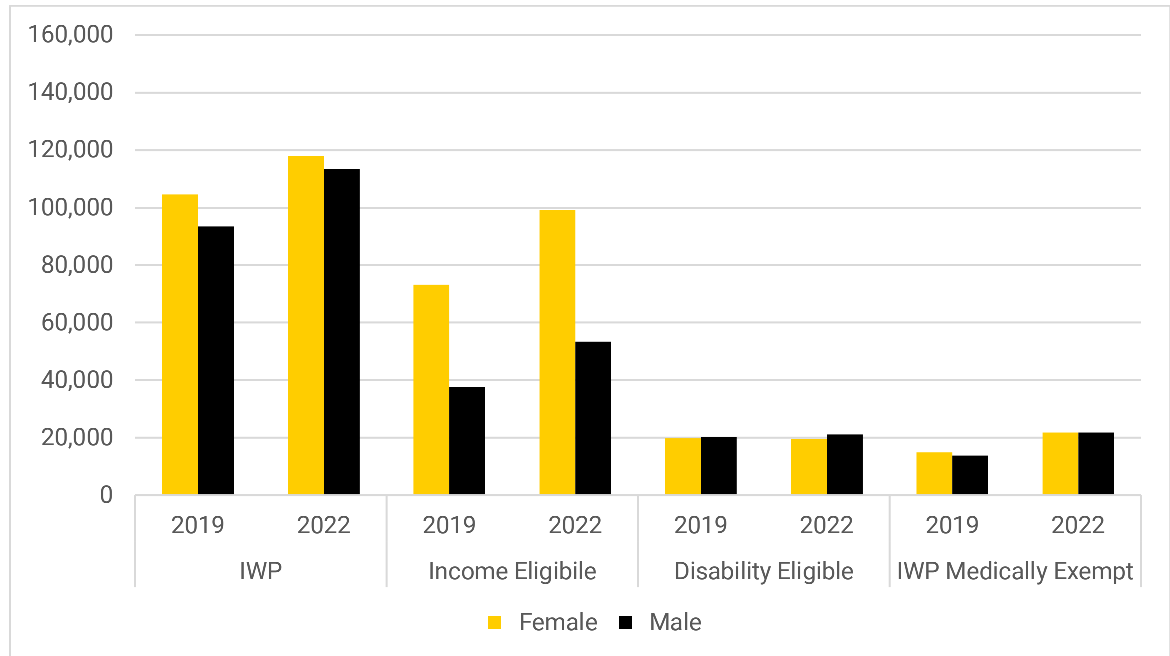
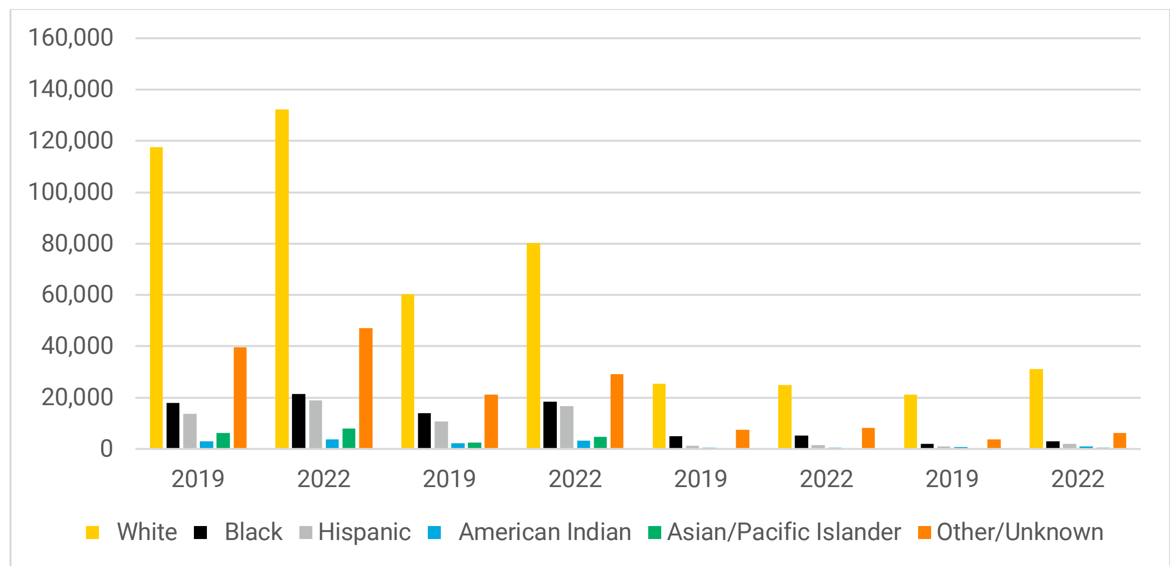


Figure 3. Member Race/Ethnicity by Program Type and Year



The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Figure 4. Member Rural/Urban Location by Program Type and Year

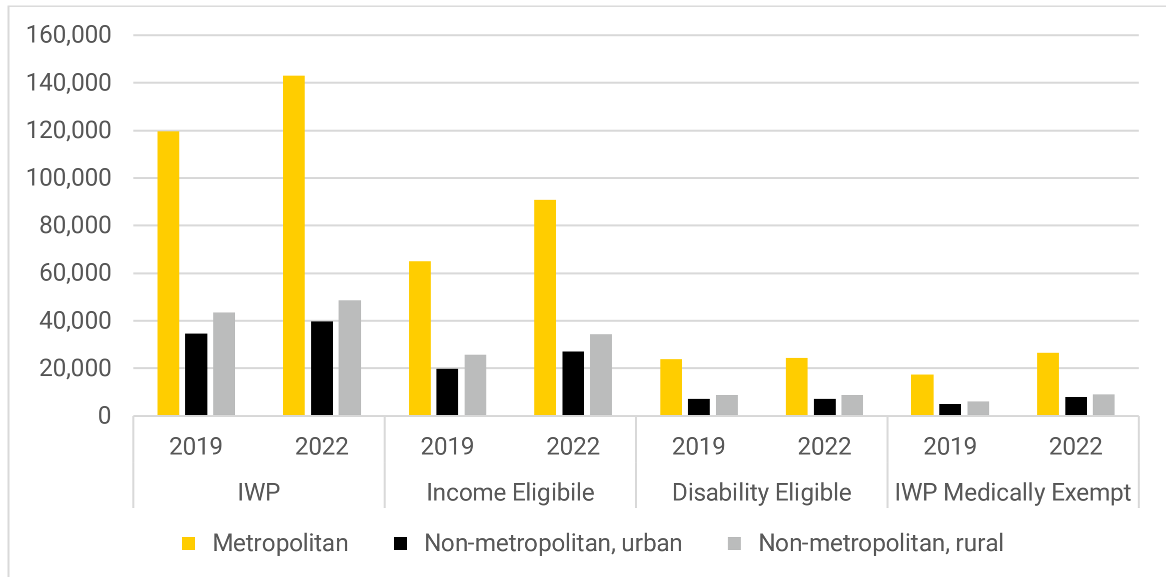
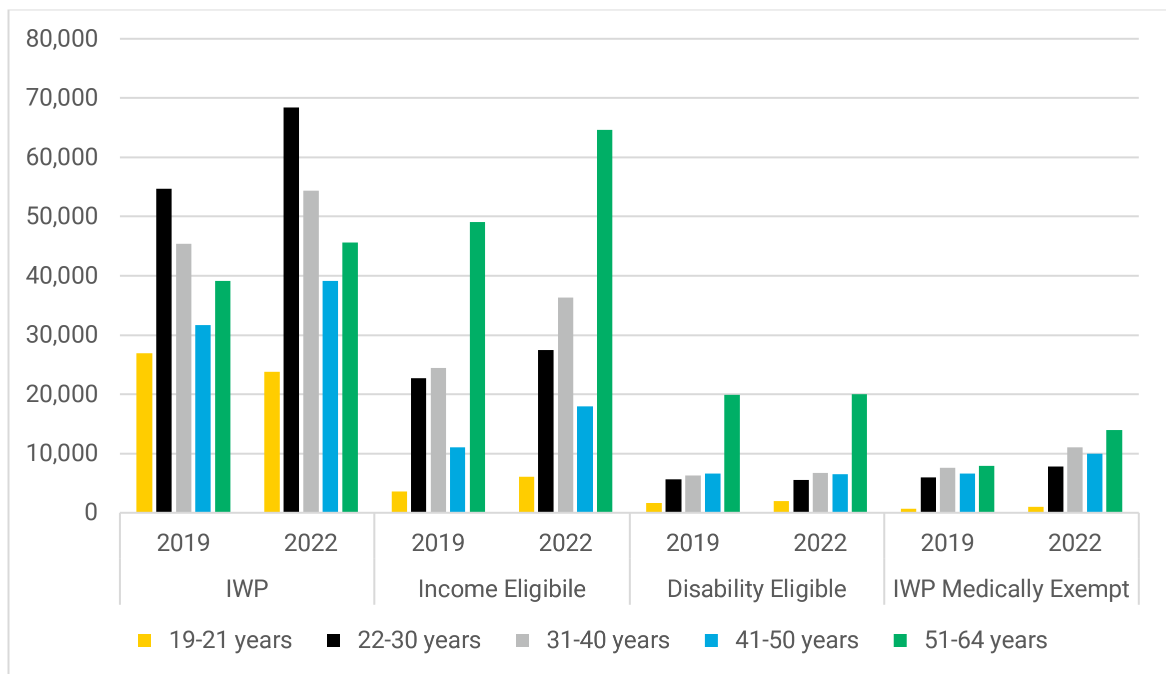
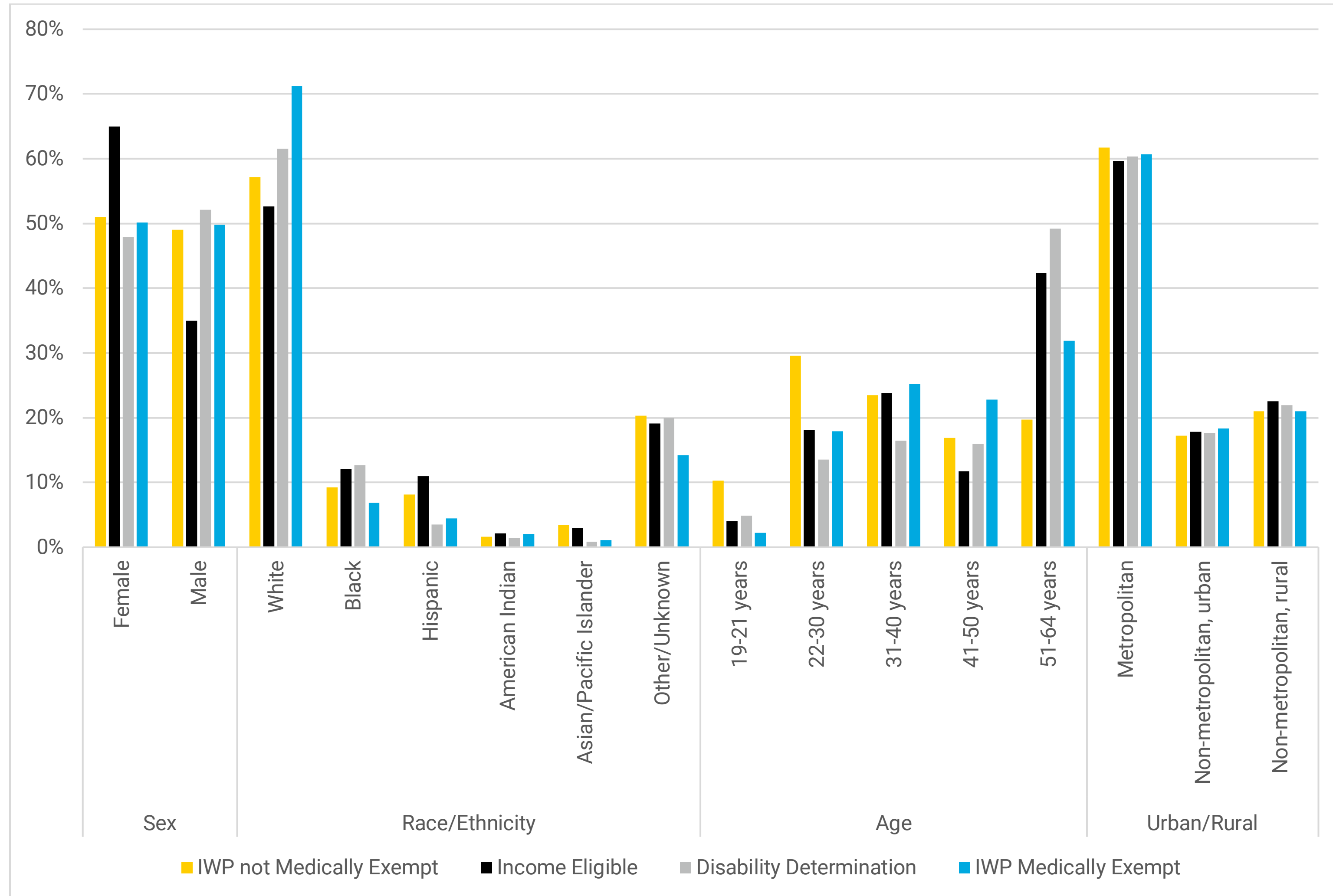


Figure 5. Member Age by Program Type and Year



The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Figure 6. Member Demographics by Program Type, CY 2022



The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Target population: State of Iowa

For a variety of measures data for the entire state are utilized especially with regard to sustainability, outcomes driven by access to care such as Emergency Department (ED) use, and long-term effects of utilization changes driven through a focus on primary/preventive care such as avoidable hospitalizations.

As a state, Iowa is considered rural with just over 3 million residents. Of these 60% are between the ages of 19 and 64, 50% are female and 91% are white. The largest minority group in Iowa is Hispanic or Latino with 6%. The Black or African American population represents 4% of Iowans. The median income for Iowans is $58,000 with 11% of Iowans living in poverty. Over 85% report having a computer with nearly 80% reporting an internet subscription. Out of the 99 counties comprising Iowa, 20 are considered rural with no metropolitan area, and 58 are considered rural with metropolitan area. Twenty-one are considered urban metropolitan.

Comparison population: Other states

The process for identifying comparison states, both that have and have not expanded their Medicaid programs is ongoing. There are many data sources including TMSS, American Community Survey, BRFSS, that provide data for Iowa and comparison states over time. However, extensive assessment is required during the evaluation to determine which of these data sources can provide the data needed for each hypothesis and for those datasets, which states are most comparable. As a small state, Iowa does not have sufficient representation in most national survey datasets to allow analytical comparisons.

The research team is currently narrowing the list of possible comparison states to 3-5. We are taking into account the TMSIS cut over dates for comparability purposes, the existence and timing of expansion activities, other policies that may be relevant in these states, and pre-2014 trends in BRFSS measures including but not limited to proportion having a personal doctor, mean physical and mental health, and age strata.

Target population: Provider entities

Throughout the demonstration many policies and reimbursement/utilization strategies have operated through provider entities. For example, the $8 copayment for non-emergent ED use is charged by the ED. Additionally, many provider entities can choose what covered groups they would like to serve. Not all dentists or physicians are willing to see Medicaid members due to restrictive policies or poor reimbursements. Provider entities are an important target population to understand both the process and outcomes of demonstration activities.

Provider entities may include medical offices, dental offices, hospitals, long-term care facilities, and pharmacies.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Comparison population: Provider entities

The comparison population will be drawn from providers participating in Medicaid. COVID-19 policy changes encouraging the use of telehealth will affect our ability to compare over time. We are aware that entities outside of Iowa have established Medicaid provider numbers to allow for telehealth, but we are unable to determine where they are located as the provider location is listed at a partner or employer office in Iowa. This is particularly true for behavioral health providers.

Data sources

Secondary data

Iowa Medicaid Administrative files

The University of Iowa houses a Medicaid Data Repository encompassing over 350 million claims, encounter, and eligibility records for all Iowa Medicaid enrollees for the period January 2000 through the present. Data are assimilated into the repository monthly. 95% of medical and pharmaceutical claims are completely adjudicated within 3 months of the first date of service, while average adjudication for institutional claims is 6 months. Evaluation staff also have extensive experience with these files as well as over 20 years of experience with HEDIS measures. The University of Iowa is a member of the Academy Health State-University Partnership Learning Network.

The Medicaid database allows members to be followed for long periods of time over both consecutive enrollment months and periods before and after gaps in coverage due to a unique member number that is retained for at least 3 years after the last enrollment and is never reused. This allows long-term linkage of member information including enrollment, cost and utilization even if they switch between Medicaid coverage options.

For the evaluation we utilize 11 years of data, spanning 1,369,191 members with 76,267,580 months of eligibility. There are 198,366 members in the IWP non-exempt group, 233,091 in the IWP exempt group, 356,032 in the income eligible group, and 82,191 in the disability determination group. Additionally, there are 499,511 children that we retain in the data for analyses related to the waiver of retroactive eligibility.

The evaluation strategy outlined here is designed to maximize the use of outcome measures derived through administrative data manipulation using nationally recognized protocols from the National Quality Forum (NQF) and National Committee on Quality Assurance (NCQA) HEDIS.

A synopsis of administrative data types and sources that are used in this evaluation are provided below.

1. Medicaid encounter and claims data
   Contains all claim and encounter data for Medicaid members during the evaluation

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

period. The data is housed within the Medicaid data repository and is updated monthly

2. Medicaid enrollment data
Contains data regarding enrollment and eligibility maintenance such as MCO enrollment, presence of an exemption from any demonstration activities, and Housed within the Medicaid data repository with monthly updates
3. Medicaid provider certification data
Housed within the Medicaid data repository with monthly updates

Data access

The University of Iowa has a data sharing Memorandum of Understanding (MOU) with the State of Iowa to utilize Medicaid claims, enrollment, encounter, and provider data for evaluation purposes.

Communications to stakeholders

State and local secondary sources such as letters to providers, webpages, newsletters, and notices to members have been collected and stored. These will continue to be collected to provide context to the evaluation.

Data access

These data are publicly available through the web.

Iowa Hospital Association inpatient and outpatient datasets

The Iowa Hospital Association houses all hospital claims (inpatient and outpatient) for the state of Iowa. These data are available for the period 2013-present. Currently University of Iowa houses the data for 2013-2020.

Data access

University of Iowa has an active DUA to receive, store, and access these data.

Healthcare Cost & Utilization Project (HCUP)

https://www.hcup-us.ahrq.gov/HCUP_Overview/HCUP_Overview/index.html
Synthetic control analyses have identified four non-expansion states with data from 2010-2021 for comparison purposes: Kansas, Maine, Nebraska, and Utah.

Data access

Currently pursuing the purchase of this data.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Transformed Medicaid Statistical Information System (T-MSIS)

https://www.medicaid.gov/medicaid/data-and-systems/macbis/tmsis/index.html
Data for the four non-expansion states identified above will be accessed through ResDac and the CCW Virtual Data Research Center.

Data access

Currently pursuing the purchase of this data.

Behavioral Risk Factor Surveillance System (BRFSS)

https://www.cdc.gov/brfss
Annual national survey from 1995-2018. Oversampling in Iowa provides an opportunity to compare to other states either through aggregate statistics easily obtainable on the web or through securing the more detailed, state-level datasets. Data encompassing 2011-current have been accessed through the web and were utilized as part of the synthetic control analyses.

Data access

This data is publicly available at the state level.

American Community Survey (ACS)

https://www.census.gov/programs-surveys/acs
An ongoing survey providing information about the economy, healthcare, housing and other topics designed to help public health officials and planners. We are currently utilizing the 5-year ACS data at the block group level to calculate the CDC/ATSDR Social Vulnerability Index (SVI) an area-based socioeconomic deprivation index. Developed by the CDC, it provides a comprehensive context of where people live by capturing multiple domains that are linked to the socioeconomic disadvantages, including economic, education, housing and environment, household structure, transportation, race and ethnicity, and language barriers.

The pre-created state SVI data present three challenges. First, the pre-created SVI data are calculated based on the Census tracts. Second, they are not annually available, but available in 2010, 2014, 2016, 2018 and 2020. Third, what goes into the SVI changed over the years. Given these challenges, we calculated the annual SVI scores for the period of 2010-2019 at the block group geographic unit by ourselves using the list of SVI questions and method in the 2018 CDC's methodology documentation.

Data access

This data is publicly available and has been matched to enrollment data through geocoding of address.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Health Reform Monitoring Survey (HRMS)

https://www.urban.org/policy-centers/health-policy-center/projects/health-reform-monitoring-survey/survey-resources
This ongoing survey focuses on health and health care experiences of US adults ages 18-64 on information about health insurance coverage, and health care access and affordability. Each round of HRMS also includes a child supplement survey. A nonelderly adult who lives in the same household answers survey questions on behalf of the randomly selected child under 18.

Data access

We utilized questions from this survey within the New Enrollee survey.

Primary data collection

Surveys

Surveys with IWP members and providers are conducted to provide a consumer perspective and provider perspective about the program. Evaluation staff have extensive experience conducting consumer surveys with Medicaid members, having conducted member surveys for almost thirty years and publishing numerous articles on methods to increase response rates with Medicaid populations. In addition, Dr. Damiano participated on the development team for the original CAHPS survey and has been modifying the survey instrument to evaluate Iowa Medicaid waivers for the past 25 years. This experience also provides the evaluation team with access to CAHPS enrollee survey results for comparison purposes where appropriate. However, over time varying sampling protocols have been utilized. These require the team to establish weighting methods to compare surveys over time.

Table 5 shows the different types of surveys that we are using for the IWP evaluation. This includes surveys of both members and providers as appropriate to evaluate the impact of the different policy components. These surveys have been significantly disrupted by the PHE as Medicaid members have widely varying access to care and are prevented from disenrollment. The schedule for the conduct of these surveys continues to be modified as appropriate based on changes in policies for the IWP; both for policies changed to respond to the COVID pandemic and for routine policy changes implemented by the Iowa Medicaid.

The sample sizes for these surveys, rather than being based on specific power calculations, are based on a combination of the power calculations that were conducted for the national CAHPS surveys, and our long historical foundation of previous surveys with Iowa Medicaid enrollees so we can predict the respondent numbers we need for sub-group analyses for items that are known. We do not believe it is appropriate to use power calculations for items for which we do not know the prevalence in the population since this is what the power calculations would be based on. We routinely increase our sample size where there is this level of uncertainty.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Table 5. IWP Survey Projects – CY 2021-2024

Survey	Policy Component	Sample Size	Expected Completes	Field Periods*	Incentives
HBI Disenrollment*	HBI				
HBI Phone	HBI	6,000	1,800	2021/2022, 2024	$2 pre; $10 GC post
HBI Panel	HBI	TBD	TBD	2021/2022, 2024	$2 pre; $10 GC post
DWP Member	DWP	12,000	2,400	Every 18 months	$2 pre; GC lottery
DWP Provider	DWP	1,300	585	Every 18 months	$2 pre
Enrollment Phone	Retroactive Eligibility	5,600	1,200	Summer 2023-Summer 2024	$20
IWP Member	Member experiences; NEMT	4,500	900	Every 18 months	$2 pre; GC lottery
ED Experience	Cost sharing	600	300	CY 2024	None

**The Disenrollment survey is no longer being considered as there were no disenrollments for HBI during the PHE. Additionally, HBI was reinstated beginning June 2023 with the first full year ending in May 2024. The first HBI related disenrollments would not begin until September 2024. We could not complete the survey in adequate time with an acceptable sample to report in the final report.*

Process evaluation general description

The IWP evaluation plan included a process evaluation to document and describe the implementation of IWP and its components. The process evaluation used primary and secondary data sources to determine the adherence to the strategies and plans as described in IWP program.

The process evaluation examined the governance and execution of the IWP to provide context about the effectiveness of programming as measured by outcome metrics described in other parts of the evaluation plan. In addition, findings from the process evaluation may be used to improve outcome measures of the evaluation, such as informing language in survey items.

Secondary and primary data sources were coalesced to create a comprehensive depiction of the functions and management of IWP. The synthesis of these sources provide insight into programming vision, perceptions, governance dynamics, communication and management practices which have implications for the outcomes and strategic direction of IWP. Process measures were designed to describe the state of the program or some aspect of the program, but do not lend themselves to testing.

Environmental scan

Existing documents produced for IWP implementation were monitored, compiled and synthesized by the research team to track progress and diversions from original program

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

description and objectives, a process known as an environmental scan. The content of these documents provided sources to identify and recruit stakeholders for structured interviews included in the process evaluation. In addition, information unable to be gathered from the environmental scan determined which outcome areas were included in qualitative data collection.

Environmental scan data sources:

- Waiver documents
- Quarterly progress reports
- Meeting minutes
- Supplemental materials from relevant advisory groups or committees
- Informational letters
- Contract and RFP documents
- Internal planning documents

Structured Key Stakeholder interviews

Interviews with key stakeholders with executive leadership were conducted and more stakeholder interviews with various groups (e.g., Medicaid providers) will be staggered at different times throughout the evaluation. In the 2022 and 2023 evaluation periods, 34 key stakeholders were interviewed from seven key stakeholder types involved in IWP implementation.

- Managed Care Organizations (MCOs) (Amerigroup and Iowa Total Care)
- State Medicaid Agency (Iowa Medicaid)
- Two statewide provider associations
- Medicaid Member Services representatives
- Medicaid Income Maintenance workers
- Clinic staff who provide care to IHAWP members under contract with the MCOs

Interviews were about 60 minutes long and topics for the structured interviews were developed to reflect the content of each program and target any areas which were not covered in the environmental scan or could benefit from elaboration from a primary source. Interview results are being used to provide context for data collection activities, outline the availability of key pieces of information and document adjustments to IWP.

A team of two interviewers from the IWP evaluation team conducted interviews over video conference (Zoom). Video calls were audio recorded and professionally transcribed. The interview transcripts were uploaded into qualitative analysis software (NVivo) and coded into themes by a single coder. Some themes were pre-determined according to the structured script, and some were emergent and reflect the natural flow of conversations and provide additional context for the structured conversation.

A sample of 32 clinics were selected for inclusion in the study, based on volume of IHAWP members served according to Medicaid claims data. Clinics were contacted by phone and email 3-5 times each. Of the 32 clinics invited for an interview, only one clinic participated

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

(a focus group which included three interviewees). Another clinic participated in an informational phone call about the study and ultimately declined to participate in a recorded interview for the report. Clinic representatives who declined interviews cited a lack of time to participate and difficulty coordinating appropriate representatives for the content areas. Because of the small sample size of clinic interviewees (one focus group from one clinic) experiences reported cannot be generalized to other clinics in the state.

We solicited representatives for their experiences implementing IWP. At times, experiences described by interviewees conflict with the delineated expectations and processes of the Iowa Wellness Plan. Experiences reported should not be generalized or interpreted as the actual status of IWP components.

Analytic methods

The four major analytical strategies used in this evaluation are listed below. Each will be described in more detail within the specific policy component evaluation section.

1. Process measures
    a. Content analyses
    b. Document analyses
2. Bivariate analyses
    a. Parametric methods, e.g., paired and two-sample t-tests (or means tests)
    b. Non-parametric methods, e.g., Wilcoxon signed-rank tests, chi-square test of independence
3. Multivariate modelling
    a. Comparative Interrupted Time Series (CITS including Difference-in-Difference (DID))
    b. OLS for continuous dependent variables
        i. Maximum likelihood estimators (logit or probit) for binary dependent variables
        ii. Special regressor method for binary dependent variables with endogenous regressors
        iii. Zero-inflated (modified) Poisson Regression for count dependent variables
    c. Survival analyses
    d. Other supplementary techniques
        i. Matching methods (propensity scores, coarsened exact matching)

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

    ii. Inverse probability of treatment weights

4. Qualitative analyses

Empirical strategy

The empirical strategy we adopt is to approach causal inference. For this purpose, we are conducting two steps in our empirical strategy: 1) pre-process our data by matching target study populations with comparison population groups (e.g., finding matched members for members subject to the retroactive eligibility waiver) and 2) employ econometric modeling techniques, namely, difference-in-difference (DID), comparative interrupted time series (CITS) with control variables on the matched data. Pre-processing data before regression adjustment provides multiple benefits, including reductions in model dependence, estimation error and bias (Iacus et al., 2019). As recommended in King and Nielsen (2019), we will combine propensity score matching (PSM) with coarsened exact matching (CEM) using multiple covariates (including indicators of health condition, income and disability status). We will show post-matching covariate balances. We have experience in using matching methods including CEM and PSM in previous studies and will incorporate the latest evidence-based recommended matching practices in our future estimations of this evaluation.

The DID model is appropriate for survey data when members are observed in at least two periods. We will therefore apply the DID model for research questions that rely on enrollment surveys. The DID model will capture the effect of a health policy, namely the retroactive eligibility waiver, by comparing the pre- and post-program means in a study population (namely, study population 1 or 2) using the pre- and post-policy means in comparison populations 1 and 2 as counterfactuals.

When units of analysis (e.g., members, hospital-level rates of uncompensated care) are observed more frequently, a CITS specification is more appropriate. Under this specification, we analyze means and slopes of pre-waiver values to determine changes in both means and in during-waiver linear and non-linear trends, using comparison populations as counterfactuals.

Analyses

Bivariate analyses

With the complexity of the evaluation and the many areas investigation, it is not possible to provide complex modelling for every measure. Additionally, some measure changes provide context around the more complex modelling. Bivariate analyses can provide an understanding of the changes, for example, that have occurred pre-and post-demonstration between the many target and comparison groups we have identified. Appropriate bivariate analytic approaches we use depend on data structures of two variables of our interest, their sample size and other associated assumptions.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Multivariate modelling

Many outcomes are population-based, however through modification of the protocols they will also be measured as individual outcomes. Individual outcomes can be measured as a dichotomous variable indicating whether or not the member had a service (e.g., person with type 1 or type 2 diabetes receiving a Hemoglobin A1c) or experienced an outcome (e.g., preventive visit) or a continuous variable (e.g., per member per month cost, or time to first enrollment gap)

Comparative Interrupted Time Series (CITS)

A simple comparative interrupted time series analysis (CITS) entails a Difference in Difference (DID) estimation in which the effect of a health program is determined by comparing the pre- and post-program means in the study population using the pre- and post-program means in the comparison population as the counterfactuals. In complex CITS analyses with more pre- and post-IHAWP data (as in the case of many of our hypotheses), we analyze means and slopes of pre-IHAWP values to determine changes both in means and in post-IHAWP linear and non-linear trends, as well as mean and trend heterogeneity among different sub-groups of population.

For programs where a readily identified comparison group exists, CITS methods are very useful. For program groups where no readily identified comparisons exist, regression controlling for observed patient or area characteristics will be utilized. The specific analysis technique will depend on the distribution of the dependent variable (e.g., OLS for continuous variables and logistic regression for dichotomous variables with a skewed distribution). When appropriate, person, program or area fixed effects will be used to control for time-invariant individual (or program or area) effects and year effects. Each method has strengths and weaknesses but combined should offer a robust analysis of program effects on costs and outcomes.

Covariates

- **Program**—Members will be categorized into IWP non-exempt, IWP exempt, eligible due to income, or eligible due to disability.
- **Payment structure**—series of dichotomous variables that provide payment structure comparisons. The variables will indicate whether during the month a member was in the HMO (0,1), PCCM (0,1), fee-for-service (0,0) and which HMO provided the managed care.
- **Age**—calculated monthly
- **Age squared**—to allow for a curvilinear relationship between age and costs
- Gender
- **Race**—within the Medicaid data 30% of enrollees/members do not identify a race. Previous analyses have indicated that this option does not appear to have a race-

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

based bias or systematic component. We will perform the analyses with this group identified as race 'Undisclosed' and without this group.

- We are also using the American Community Survey 5 year rolling estimates for the Social Vulnerability Index. This allows us to account for a variety of social determinants of health and provides insight into the racial constellation of an area. We are able to match 94% of our Medicaid members at the block group level.

Number of chronic conditions–The Health Home program in Iowa Medicaid utilizes seven diagnoses to establish member participation: mental health condition, substance use disorder, asthma, diabetes, heart disease, overweight, and hypertension. A count of these conditions will serve as the chronic conditions measure though the severity of impairment will be unattainable.
We will also investigate the effects of using the Chronic Condition Indicator as a dichotomous indicator of over 25 conditions. Whether this becomes a linear count of chronic conditions or a categorical indicator of ranges of conditions has yet to be determined.

- Additionally, we have utilized the Chronic Conditions Warehouse definitions for specific conditions such as diabetes, hypertension, and hypercholesterolemia. Researcher in the core outcomes group have been utilizing HEDIS measures specifications for over 10 years.

- **Rural/urban**—Rural-urban continuum codes (RUCC) provided through the US Department of Agriculture will be included. We will also test the model with the county of residence as a covariate; however, past analyses indicate that the RUCC is sufficient.
- **Income**—Percent poverty will be included as it appears on the enrollment files.
- **County of residence**—County fixed effects are being considered to account for the many economic, health resource, and COVID effects that we are unable to measure directly.

When needed, we will use maximum likelihood estimators (logit or probit) or a recently developed special regressor method. Dong and Lewbel (2015) show that the special regressor method has several advantages over maximum likelihood estimators including providing consistent estimates in cases of endogenous regressors.

We will also utilize modified Poisson regressions (Poisson regressions with a robust error variance). This method is used to answer research questions involving count dependent variables. Poisson regressions use a log link function to relate the expected value of an outcome of interest (Y) ($E(Y)=\mu$) to a linear combination of X:

$\log(\mu)=X_{it}$, or $\mu=e^{X}$ (1)

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

In addition, we will pre-process the data for estimations using matching methods, including propensity score matching (with difference matching schemes, e.g., nearest neighbor, caliper) or coarsened exact matching methods. Alternatively, we may use propensity scores as inverse probability of treatment weights whenever appropriate. All these estimation techniques are intended to minimize bias and allow us to make causal inference between program interventions and outcomes of interest. In previous rounds of cost analyses, we did use matching techniques to pre-process data and there seemed to be enough common support across covariates.

References

Dong, Y., & Lewbel, A. (2015). A Simple Estimator for Binary Choice Models with Endogenous Regressors. Econometric Reviews, 34(1–2), 82–105.

Iacus, Stefano M., Gary King, and Giuseppe Porro. 2019. "A Theory of Statistical Inference for Matching Methods in Causal Research." Political Analysis 27 (1): 46–68.

King, Gary, and Richard Nielsen. 2019. "Why Propensity Scores Should Not Be Used for Matching." Political Analysis 27 (4): 435–54.

Methodological limitations

There are five primary sets of limitations within this evaluation: 1) those related to primary data, 2) limitations of secondary data, 3) program selection bias, 4) study populations, and 5) COVID-19 considerations.

Primary data

Primary data collection is based on self-reported information and the recall of the member. This can result in recall bias. Whenever possible, we utilize multiple methods to address hypotheses. Coupling primary data collection with secondary data collection and qualitative data provides an opportunity to describe and analyze hypotheses more fully.

Past surveys and interviews with Medicaid members in Iowa, and across the nation, have low response rates, ranging from 20-40%. Non-response bias tests are conducted to determine if the characteristics of respondents differ significantly from non-respondents on measured qualities.

Secondary data

Administrative data are collected for billing and tracking purposes and may not always reflect the service provided accurately. Payers focus on specific areas that may result in sudden changes in primary diagnoses or care patterns. For example, when diabetes became a key quality focus for payers, the use of diabetes as a primary diagnosis and the rates of HbA1c increased. Though this system change is positive, it is not a result of the IWP. We will attempt to keep informed of all changes in Medicaid and MCO coding and quality focus.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Program selection bias

There may be a propensity for enrollees who have the most to gain from insurance coverage to have accessed services earlier than those with less to gain. This has the potential to bias all the estimates of program effects on quality measures and costs for the period prior to Iowa Wellness Plan. Essentially, those who are sicker may use services earlier and the reduction in costs accounted for these enrollees by the Wellness Plan may be greater than for later enrollees. Risk adjustments will used where appropriate to attempt to correct for this potential bias. Some methods may result in estimates that are more valid but only pertain to a segment of the population.

Study populations

Iowa Wellness Plan has undergone many changes during the first demonstration period. In particular, certain aspects of IWP have been extended to the general Medicaid population, e.g., PAHP dental coverage, enrollment in MCOs. These changes make it more difficult to identify appropriate comparison populations. Additionally, in other studies we have found it difficult to identify states that are comparable to Iowa for state-level comparisons. We continue to identify comparison groups at all levels, while attempting to adjust for differences that would affect our results.

COVID-19 considerations

The COVID-19 pandemic has disrupted established systems of care throughout our nation. Changes such as the increased use of telehealth, increased use of acute care related to COVID-19 concerns, and the avoidance of routine/chronic care make it necessary to adapt methods and analytics to adjust for these changes across all evaluation components.

We originally anticipated three impacts of COVID-19 on the evaluation plan, including methods, analytic considerations, and interpretation of findings. The first report outlining member responses to the PHE (Iowa Health and Wellness Plan COVID-19 Impacts Report included as a partner report) has been included with the current report suite as an added evaluation component.

Adjustments for COVID-19

Methods

At the member level we have created a person-month unit of analyses that utilizes dichotomous variables to identify key trigger points in an effort to estimate the effects of these changes. COVID-19 may also have implications for the comparison groups we use in our analyses. For example, in assessing member access and satisfaction with services, we rely on a national comparison group of CAHPS survey respondents. Our team will need to assess the appropriateness of this group given the different ways states have implemented policy changes related to COVID-19. Similarly, it becomes more and more difficult to

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

identify comparison states as we now add COVID-19 exposure and responses to the list of characteristics that may need to be matched or accounted for.

Early reports indicate that survey response rates are improved during, and perhaps following, the COVID-19 pandemic. As members shelter in place, they are more likely to take the time to be interviewed or complete a survey. The salience of the pandemic and its relationship to health care utilization, may increase the willingness of certain respondents to complete surveys and questionnaires. Though this may improve response rates, we do not know whether the sample of respondents completing surveys during the pandemic share the same underlying characteristics as past respondents. Given this consideration, our team of researchers will compare respondents based on their underlying characteristics to determine whether further analytic adjustments are required.

Analytic considerations

Though we propose specific analytical tools within this evaluation and even go so far as to link analytical strategies to hypotheses, we may find that additional analytical strategies will have to be employed. For example, we are considering how to account for the level of COVID-19 penetration in a geographical area as a covariate to generally adjust for these effects. Propensity scoring, instrumental variables and survival analyses are all techniques that we will retain in our list of possible techniques. As we become more familiar with the distribution of the outcomes and the data we will be using, we need to be comfortable modelling and testing each outcome with the strategy that will provide us with the most accurate and useful results. We will continue to communicate with other evaluators to determine what best practices are being developed around complex analytics and COVID-19.

Table 6 lists possible ways that the COVID-19 pandemic, and associated policy changes could have an impact on the data, analyses and results of the IWP evaluation. We are expanding the scope of our process evaluation to include state policy changes related to COVID-19. A summary of the changes to date are found in Table 7.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Table 6. Anticipated Impact of COVID-19 on IWP Evaluation Plan

Topic Area	Examples of Potential Impact	Rationale
Insurance Coverage Gaps and Churning	Monitor changes to churning due to people changing health insurance plans and losing eligibility Increased gaps in insurance coverage Decreased consecutive coverage	CDC projects multiple waves of COVID-19-related unemployment, potentially leading to variations in Medicaid and IWP coverage. As Iowans gain and lose employer-based health insurance, Iowans' reliance on Medicaid and IWP will fluctuate.
Dental Wellness Plan	Decreased access to dental care Provider willingness to accept new DWP members	Dental providers are vulnerable to COVID-19 exposure and face strict requirements for reopening (e.g., enough PPE stock), limiting the number of dental providers available to new and existing patients.
Outcomes	Decreased face-to-face primary care, dental, mental health, and preventive care visits.	Healthcare providers have transitioned to virtual appointments. Our current evaluation plan does not measure telehealth services. The shift from in-person to virtual healthcare visits may impact hypotheses across our evaluation plan. We may add telehealth questions where applicable.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Table 7. Iowa Wellness Plan: COVID-19 State Changes Timeline, 2020

CY 2020	Summary
January 1	Reinstatement of retroactive coverage for children and pregnant women.
February 20	CDC issues coding guidelines for novel Coronavirus for health care encounters and deaths related to COVID-19.
March 1	Updates to billing procedure for telehealth services establishing "originating" and "Distant" site changes.
March 6	New coding for virtual care services, telehealth related services, and Coronavirus lab tests established in light of COVID-19 pandemic.
March 13	DHS waives all Medicaid co-pays, premiums and contributions. Prescription refill guideline changes. Telehealth streamlining of appropriate service changes including modifier 95 designation and POS codes for telehealth billing.
March 18	All pharmacy PA's extended through June 30th. Prescription member copayments suspended including potential for refunds. Pharmacy benefit manager (PBM) audits suspended with changed guidelines. Patient signatures for medication receipt waived. Due date of Cost of Dispensing (COD) survey extended to April 30th.
April 1	Change waiving criteria for Prior Authorizations (PAs) for Medicaid members, and changes to extensions for MCO approved PAs. Changes to claims filing for medical claims including a 90-day extension to first time medical claims and encounters for MC claims.
April 2	Expansion of list of telehealth services with billing and coding changes. Expansion of provider types included in telehealth services where appropriate.
May 6	CMS guidance for nursing homes to procure communicative technology for residents and restrictions implemented to prevent visitation. Guidelines on use and sharing of communicative devices. Grant funding requirements for nursing homes' procurement of communicative devices for residents.
May 15	Guidance for retainer payments during the month of April 2020 with a list of allowable services with appropriate codes to use for seeking retainer payments.
May 19	New guidance on additional codes pertaining to COVID-19 including new diagnostic coding, laboratory tests and specimen collection.
June 1	The Families First Coronavirus Response Act (FFCRA) establishes a new Medicaid eligibility group for uninsured members for the purposes of COVID-19 testing. All details and guidance for the new beneficiary group found here.
June 19	Updated Medicaid provider toolkit.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Timeline

The activities in the timeline below extend past the current waiver period and contract due to the delayed evaluation start date. Activities reflected in the timeline below are in the process of being adjusted to account for Medicaid policy adjustments during the PHE.

	Q3 2021	Q4 2021	Q1 2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023	Q2 2023	Q3 2023	Q4 2023	Q1 2024	Q2 2023	Q3 2024	Q4 2024	Q1 2025	Q2 2025	Q3 2025	Q4 2025	Q1 2026	Q2 2026	Q3 2026	Q4 2026
Reports																						
Interim Report																						
Summative Report																						
Process Evaluation																						
Document Review																						
Script development																						
Tiered interviews																						
Qualitative interview and content analysis																						
Healthy Behaviors																						
Claims-based analyses																						
Survey																						
Interviews																						
Dental Wellness Plan																						
Complete revised evaluation																						
Consumer survey																						
Dentist survey																						
Admin. claims outcomes																						
Member interviews																						
Retroactive Eligibility																						
Stakeholder interviews																						
Enrollment surveys																						

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

	Q3 2021	Q4 2021	Q1 2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023	Q2 2023	Q3 2023	Q4 2023	Q1 2024	Q2 2023	Q3 2024	Q4 2024	Q1 2025	Q2 2025	Q3 2025	Q4 2025	Q1 2026	Q2 2026	Q3 2026	Q4 2026
Claims analyses																						
Enrollment data analyses																						
State comparison																						
Provider interviews																						
Cost Sharing																						
Consumer surveys																						
Claims analyses																						
HCUP ER analyses																						
Cost and sustainability																						
Stakeholder interviews																						
Administrative documents																						
Claims analyses																						
IHA data analyses																						
State Comparisons																						
NEMT																						
Stakeholder interviews																						
Survey development																						
Survey data collection																						
Analyses																						
Member Experiences																						
Consumer survey development																						
Consumer survey data collection																						
Claims data analyses																						

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Healthy Behaviors Incentive (HBI)

Executive summary

Key findings

- Survey data indicated that those who were enrolled since 2015 have the highest level of awareness at 47%. Those enrolled before the pandemic began (March 2020) report awareness of the HBI program at 35%, while 27% of those who only enrolled during the pandemic are aware of the program.
- For survey respondents, adjusted percents show higher awareness of the HBI program for White (37%) vs. Black (26%) and Hispanic members (24%) and for those with a 4-year degree (44%) vs. those with less education. Females also had higher adjusted rates than males.
- As members spend more time in the IHAWP program, the likelihood of having a well-visit during the year increases. For example, 40% of members with eight years of enrollment have a well-visit compared to 31% for members with only one year of enrollment.
- Health risk assessment completion remains low and is not as closely associated with time in the program; completion rates are between 10% and 15% for members regardless of the total number of years in the program.
- Of members enrolled for at least eleven months during the year, 41% have a well-visit while only 11% of members have a well-visit if they were enrolled six months or fewer.
- IHAWP members with higher incomes are more likely to have well-visits during the year compared to members with lower incomes.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

HBI General background information

One unique feature of the IHAWP is the Healthy Behaviors Incentive Program (HBI). IHAWP members who are above 50% of the Federal Poverty Level (FPL) can avoid paying a monthly premium for their insurance after their first year of coverage by participating in the HBI. Members who are at 0-50% of the FPL are not required to pay monthly premiums. The HBI requires members to have a yearly medical or dental exam (a wellness visit) and complete a health risk assessment (HRA) to avoid paying a premium in the following year. If the member does not complete these requirements during their first year of coverage, they may be required to pay a monthly premium ($5 or $10, depending on income). The member must then pay the monthly premium or claim financial hardship. Members who are above 100% FPL can be disenrolled for failure to pay their premium.

As a part of the IHAWP, enrollees are encouraged to participate in the HBI involving two components: 1) a wellness exam and 2) a health risk assessment (HRA).

Starting in 2015, a monthly contribution by the member was required depending on family income. Members with incomes above 50% FPL and up to 100% FPL contributed $5 per month, while members with incomes above 100% FPL contributed $10 per month. Members with individual earnings 50% or less of the FPL did not have monthly contributions. IHAWP members who completed the wellness exam and the HRA were not responsible for a monthly contribution.

Members earning over 50% of the FPL were given a 30-day grace period after the enrollment year to complete the healthy behaviors to have the contribution waived. If members did not complete the behaviors after the grace period ended, members received a billing statement and a request for a hardship exemption form. For members with incomes above 50% FPL and up to 100% FPL, all unpaid contributions were considered a debt owed to the State of Iowa but would not, however, result in termination from the IHAWP. If, at the time of reenrollment, the member did not reapply for or was no longer eligible for Medicaid coverage and had no claims for services after the last premium payment, the member's debt would be forgiven. For members with incomes above 100% FPL, unpaid contributions after 90 days resulted in the termination of the member's enrollment status. The member's outstanding contributions were considered a collectable debt and subject to recovery. A member whose IHAWP benefits were terminated for nonpayment of monthly contributions needed to reapply for Medicaid coverage. The Iowa Medicaid Enterprise (IME) would permit the member to reapply at any time; however, the member's outstanding contribution payments would remain subject to recovery.

Wellness Exam and Health Risk Assessment

The wellness exam is an annual preventive wellness exam (New Patient CPT Codes: 99385 18-39 years of age, 99386 40-64 years of age; Established Patient CPT Codes: 99395 18-39 years of age, 99396 40-64 years of age) from any plan-enrolled physician, Rural Health

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Clinic (RHC), Federally Qualified Health Center (FQHC) or Advanced Registered Nurse Practitioner (ARNP). The exams are part of the preventive services covered by the plans and therefore do not cost the member anything out-of-pocket. A 'sick visit' can count towards the requirement of the preventive exam, if wellness visit components are included and the modifier 25 is used. The wellness exam definition was expanded in 2016 to include a dental exam (D0120, D0140, D0150, D0180). A health risk assessment (HRA) is a survey tool that can be used to evaluate a member's health. The Managed Care Organizations (MCOs) are currently encouraging members to complete an HRA. The format of the HRA differs by MCO.

Implementation of the HBI

There were several changes between the planned and actual implementation of the HBI in the original waiver period. Table 8 describes changes to the HBI program. The HBI was reapproved as part of the extension of the IHAWP effective January 1, 2020.

The HBI program was paused during the public health emergency. As of June 1, 2023, Iowa Medicaid has informed members that they should be completing their healthy behaviors. The program has not begun to implement premiums nor disenrollment based on not completing the behaviors and not paying the premiums.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Table 8. Changes to the Healthy Behaviors Incentive Program

Original Planned implementation	Actual implementation	Planned implementation 2020-2025	Changes due to public health emergency (PHE)
Wellness exam defined as CPT codes 99385, 99386, 99395, and 99396 or a "sick visit" with a modifier code of 25.	Members could report having a wellness exam without documentation. In year 2, a preventive dental exam also fulfilled the requirement.	No change.	Exams were not required.
Members needed to complete the Assess My Health HRA tool. The data would be available to IME, providers, and members.	This information is not shared with the providers or the members.	The MCOs are responsible for members completing the HRA.	HRA completion not required.
A communication campaign would ensure members, providers, and clinic staff awareness and knowledge of the program.	There were limited communication efforts.	Unknown.	Members informed of PHE and starting in June 2023 were encouraged to complete wellness exam & HRA.
Members were to be disenrolled for non-payment of contribution and not completing the HRA and wellness exam.	Systems were not in place to make disenrollment possible until the 4th quarter of the 2nd year.	Members are disenrolled for non-payment or not completing the HBI.	Members were not disenrolled.
Members could complete HRA online with/without provider.	Members could report having completed a HRA without documentation. Some health systems helped members complete the HRA over the telephone.	The mode of completion differs by MCO.	N/A

HBI Previous evaluation findings

Findings from previous Healthy Behaviors Incentive program evaluations can be found online. Table 9 provides details on the titles and locations of reports and articles.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Table 9. Reports and Articles Related to Healthy Behaviors Incentive Program Evaluation

Title	Online location
Healthy Behaviors Dis-enrollment Interviews Report 2017: In-depth interviews with Iowa Health and Wellness Plan member who were recently disenrolled due to failure to pay required premiums	https://doi.org/10.17077/d5zl-amp1
Healthy Behaviors Incentive Program evaluation	https://doi.org/10.17077/f85g-5hr8
Purged from the Rolls: A study of Medicaid disenrollment in Iowa	https://iro.uiowa.edu/esploro/outputs/9984214947102771
Healthy behaviors claims-based report #3 and HRA completion report #3	https://ppc.uiowa.edu/sites/default/files/hbi_claims-based3_hra_3.pdf
Iowa's Medicaid Expansion promoted healthy behaviors but was challenging to implement and attracted few participants	10.1377/hlthaff.2017.0048
Implementation matters: Lessons from Iowa Medicaid's Healthy Behaviors Program	10.1377/hlthaff.2019.01302
Healthy Behaviors cost analysis report	https://ppc.uiowa.edu/sites/default/files/hbi_cost_analysis_report.pdf

We used claims data to conduct rigorous secondary analyses including descriptive analyses of trends in completion rates stratified by income level, multivariable regression analyses to model the likelihood of completing required activities, and quasi-experimental approaches to model health care utilization and spending as a function of completing both required activities. Over the first 5 years of the HBI program, the proportion of members completing both required activities—the wellness exam and HRA—averaged 11% for lower-income members and 18% for higher-income members. In any given year, the rate of completing both required activities never exceeded 32%. Over time, the completion rates dropped among the lower-income members shielded from disenrollment (and in some cases, premiums), while increasing among the higher-income members. Still, completion rates were generally below 25% even among the more compliant higher-income group. We have consistently found that the program may unintentionally exacerbate disparities in health insurance coverage, as members who are younger, male, non-white, and/or live in a rural area are less likely to complete both healthy behaviors and therefore more likely to owe a monthly premium or face disenrollment (Wright, et al., 2018; Askelson, et al., 2017). Finally, using difference-in-differences modeling we found that those who completed both required HBI activities had fewer ED visits and hospitalizations, but spent more in health care costs, even after controlling for the effects of Medicaid expansion (Wright, et al., 2020).

To more fully explore the experiences of IHAWP members with regards to the HBI, we conducted qualitative interviews in 2015 with members who had been enrolled in the program at least 6 months. We analyzed 146 in-depth interviews. We found that member

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

awareness of the program requirements was low, and many respondents did not recall receiving information about the program. Of those who participated in the interviews, the majority had not received an invoice for premiums. Most of those who did receive an invoice did not have difficulties paying their premiums. Interviewees identified encouraging the use of preventive care, promoting health, and lowering health care costs as reasons for them to participate in the HBI. Members also said that a benefit of participating would be thinking more about their own health and lifestyle choices. Overall, interview participants stated that health insurance coverage was important for them because of current medical conditions and future unknown medical needs.

Based on the qualitative interviews with members, we developed a survey to assess member awareness of the HBI, knowledge of the program, perceptions of the program, and experiences with completing the behaviors and paying premiums. The first survey was fielded in 2017; we randomly sampled 6,000 members and had 1,375 respondents. We found that there was low awareness of the program and its requirements and that many members did not complete the program requirements. The vast majority of respondents stated they would rather complete the program requirements than pay $10 per month. In 2018, we followed up with members who completed the 2017 survey to reassess their awareness and completion of program requirements. We surveyed 1,102 members and had 641 respondents. A significant number of members remained unaware of the HBI despite being enrolled in the program for at least two years. In 2019, we repeated the sampling and recruitment methods from 2017. From a random sample of 6,000 members who had not previously participated in other data collections for this evaluation, we had 1,353 respondents. We found that awareness of the program was still low. The weighted percent of respondents who completed a wellness exam (WE) was about 45%, the completion of the HRA was only approximately 15%. Under half of the members recalled being told to complete a medical WE (43.7%), dental WE (41.1%), or HRA (31.0%). Despite this, the respondents once again overwhelmingly stated they would rather complete the program requirements than pay $10 per month.

We also conducted qualitative interviews and surveys with disenrolled members. We conducted two rounds of interviews, with 37 interviews in 2016 and 35 interviews in 2017. The overall themes did not differ between years. An overarching theme was that many interviewees were not aware of the HBI. While for some disenrollment was a minor inconvenience, other interviewees experienced financial hardship because of their disenrollment and engaged in behaviors that could be detrimental to their health (e.g., not refilling prescriptions or stretching medication, and delaying or skipping previously scheduled health care appointments). Interviewees also noted confusion around the disenrollment and reenrollment processes. Many were not able to reenroll either in the IHAWP or another insurance program. In 2017 (n= 237) and 2019 (n= 109), we surveyed disenrolled members about their experiences. Similar to our qualitative interviews, many of the disenrolled members we surveyed were not aware of the HBI (27% in 2017 and 39% in 2019). Very few (under 30% in both years) members were able to reenroll in the IHAWP at

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

the time of the survey. Respondents delayed filling prescriptions, stretched medication, and delayed or did not seeking care. They also reported paying more for health care, dental care, or prescriptions due to their disenrollment. Over half of respondents were concerned about their debt being sent to collections.

Findings from other State's Healthy Behavior Programs evaluations

Other states have implemented healthy behavior programs that are similar in design to Iowa's program (particularly Michigan and Indiana) and the results are comparable to those seen in our evaluation. The evaluation of the Heathy Michigan Plan showed over 80% received at least one preventive care service in the first two years of its implementation, but only about 25% of participants completed an HRA (Clark, Cohn, & Ayanian, 2018). A survey with primary care providers in Michigan in 2015 also showed low awareness of financial incentives associated with HRAs but indicated that providers found the HRA useful for discussing health behaviors with their patients (Zhang et al, 2020). In 2018, enrollee surveys showed lingering low awareness of the HRA while claims data showed about 75% of enrollees having at least one preventive care visit in the previous two years and almost half of enrollees completing the HRA (Goold et al, 2020). Limited program awareness and low completion rates of program requirements were also seen in components of the Healthy Indiana Plan (Lewin Group, 2019). Over half of enrollees who were eligible for a premium under the Healthy Indiana Plan were moved to a limited benefits package or lost coverage due to failure to pay premiums (Rudowitz, Musumeci, Hinton, 2018). This was often due to an inability to pay or confusion about the program requirements (Rudowitz, Musumeci, Hinton, 2018).

References

Askelson, N.M., Wright, B., Bentler, S., Momany, E.T., & Damiano, P. (2017).Iowa's Medicaid expansion promoted healthy behaviors but was challenging to implement and attracted few participants. Health Affairs. 36(5):799-807.

Clark, S., Cohn, L., & Ayanian, J. (2018). Healthy Michigan Plan Evaluation: Report on Health Behaviors, Utilization, and Health Outcomes in the Healthy Michigan Plan. Retrieved from https://www.michigan.gov/mdhhs/0,5885,7-339-71547_2943_66797-490239--,00.html

Goold, S., Clark, S., Kullgren, J., Beathard, E., Kirch, M., Bryant, C., ... & Ayanian, J. (2020). Healthy Michigan Plan Evaluation: 2018 Healthy Michigan Voices Cohort II Survey Report.

Lewin Group. (2019). Indiana Healthy Indiana Plan Interim Evaluation Report. Retrieved from https://www.in.gov/fssa/hip/files/IN_HIP_Interim_Evaluation_Report_Final.pdf

Rudowitz, R., Musumeci, M., Hinton, E. (2018). Digging Into the Data: What Can We Learn from the State Evaluation of Healthy Indiana (HIP 2.0) Premiums. The Henry J. Kaiser Family Foundation. Retrieved from https://www.kff.org/medicaid/

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Wright, B., Askelson, N.M., Ahrens, M., Momany, E., Bentler, S., & Damiano, P. (2018). Completion of requirements in Iowa's Medicaid expansion premium disincentive program, 2014–2015. American Journal of Public Health. 108(2):219-223.

Wright, B., Jung, Y.S., Askelson, N.M., Momany, E.T., & Damiano, P. (2020). Iowa's Medicaid Healthy Behaviors Program associated with reduced hospital-based care but higher spending, 2012–17: An examination of whether Iowa's Health Behaviors Medicaid program reduces hospital-based care and lowers health care costs. Health Affairs. 2020;39(5):876-883.

Zhang, E., Tipirneni, R., Beathard, E. R., Lee, S., Kirch, M. A., Salman, C., & Ayanian, J. Z. (2020). Health Risk Assessments in Michigan's Medicaid Expansion: Early Experiences in Primary Care. American Journal of Preventive Medicine.

HBI Goals

The goals of the Healthy Behaviors Incentive program that are included as part of the Iowa Health and Wellness Plan are designed to:

- Empower members to make healthy behavior changes.
- Begin to integrate HRA data with providers for clinical decisions at or near the point of care.
- Encourage members to take specific proactive steps in managing their own health and provide educational support.

These goals are translated in measurable outcomes in the logic model (see Figure 7)

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Figure 7. HBI Logic Model

2020 HBI EVALUATION LOGIC MODEL

NEED(s): The Iowa Health and Wellness Plan (IHAWP), Iowa's version of Medicaid expansion, provides comprehensive health coverage at low or no cost to low-income Iowans between the ages of 19 and 64. A feature of the IHAWP is the Healthy Behaviors Program (HBP), where members can waive paying monthly premiums if they participate in the following healthy behaviors annually: receive a wellness exam (WE) from their health care provider or a dental exam from their dental provider; and completing a health risk assessment (HRA).

THEORY OF CHANGE: The IHAWP seeks to increase access for low-income Iowans to quality, affordable health care services and coverage. The HBI program is designed to empower members to take specific steps (i.e., obtaining a WE and completing an HRA) to make healthy behavior changes and take ownership in managing their own health. Using a financial incentive, members are encouraged to complete their healthy behaviors. Ideally, by engaging in these healthy behaviors and maintaining their health insurance coverage, members will see improved health outcomes and financial stability.

YOUR PLANNED WORK			YOUR INTENDED RESULTS		
Inputs	Activities	Participation	Short-Term Outcomes	Medium-Term Outcomes	Long-Term Outcomes

IHAWP Members
• Adults ages 19-64
• Income up to 138% FPL
Stakeholder Collaboration
• CMS – federal government
• Iowa Department of Human Services
• Iowa Medicaid Enterprise
• MCOs
  • Amerigroup
  • Iowa Total Care
• State Provider Associations
• Advocacy groups
IHAWP Components
• Funding
• Program staff
• Program infrastructure
Providers
• Primary Care Providers
• Dental providers
• Hospitals
	Overall HBP Activities
	• Yearly wellness exam (WE)
	  • Preventive exam from a plan-enrolled physician
	  • Dental well exam from a plan-enrolled dental provider
	• Health risk assessment survey tool
	HBP Contribution Activities by Income
	• 0-50% FPL
	  • No monthly contribution
	• 51-100% FPL
	  • $5 monthly contribution starting in second year of enrollment if WE and HRA are not completed
	• 101-138% FPL
	  • $10 monthly contribution starting in second year of enrollment if WE and HRA are not completed
	Additional Activities:
	• HBP education and promotion by MCOs, DHS, & providers
	• Financial hardship waiver
		• Completion of WE
		• Completion of HRA
		• Completion of both: WE and HRA
		• Association of member demographics with the likelihood of completing either (WE or HRA) or both required activities
			• Increased awareness about the program among members
			• Increased knowledge of the program among members
			• Increased utilization of preventive health care services
			• Change over time: Proportion of members that complete a WE
			• Change over time: Proportion of members that complete an HRA
			• Change over time: Proportion of members that complete both required activities (WE & HRA)
			• Proportion of members who are disenrolled from the IHAWP
			• Proportion of members who re-apply for benefits following disenrollment and successfully re-enroll
				• Reduced use of the emergency department (ED)
				  • Reduced likelihood of having an ED visit
				  • Reduced # of ED visits
				  • Reduced likelihood of a non-emergent ED visit
				  • Reduced annual # of non-emergent ED visits
				  • Reduced likelihood of having a 3-day return ED visit
				  • Reduced annual # of 3-day return ED visits
				  • Reduced likelihood of having a 7-day return ED visit
				  • Reduced annual # of 7-day return ED visits
				  • Reduced likelihood of having a 30-day return ED visit
				  • Reduced annual # of 30-day return ED visits
				• Reduced use of hospital observation stays
				  • Reduced likelihood of having a hospital observation stay
				  • Reduced annual number of hospital observation stays
				• Reduced use of inpatient hospital care
				  • Reduced likelihood of being hospitalized
				  • Reduced annual # of hospitalizations
				  • Reduced likelihood of experiencing a potentially-preventable hospitalization
				  • Reduced annual # of potentially preventable hospitalizations
				  • Reduced likelihood of experiencing a 30-day all-cause readmission
				  • Reduced annual # of 30-day all-cause readmissions
				• Shift in patterns of member's health care utilization
				  • Fewer potentially avoidable hospitalizations as a proportion of total hospitalizations
				  • Fewer non-emergent ED visits as a proportion of total ED visits
				  • More primary care visits as a proportion of all outpatient visits
				• Reduction in health care expenditures
				  • Total health care expenditures
				  • Inpatient health care expenditures
				  • Outpatient health care expenditures
				  • Primary care expenditures
				  • ED health care expenditure
				  • Non-emergent ED health care expenditures
				  • Pharmacy expenditures
					• Improved financial stability
					• Reduction in health disparities
					• Improved health status for members
					• Improved quality of life
					• Reduced mortality from underlying health conditions

ASSUMPTIONS

- IHAWP members are aware of HBP requirements
- IHAWP members can complete the HBP requirements
- IHAWP members have knowledge about the HBP (i.e., incentive/disincentive components, information on premiums, availability of the hardship waiver)
- IHAWP members value preventive health services
- IHAWP members value health insurance coverage

EXTERNAL FACTORS

- MCO changes within the state
- Willingness and availability of medical and dental providers to participate as plan-enrolled providers for exams
- Underlying health status of members
- Barriers to compliance (access to health care services, health literacy, taking time off work, lacking a current provider, lack of perceived need for a WE)

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

HBI Methodology

Evaluation design

This section describes our approach to testing hypotheses 1 – 9 by answering all research questions from 1.1 – 9.1. We provide an overview of the evaluation period, our data sources, a description of our sample, a discussion of our target and comparison groups, the definitions of our outcome measures (with numerators and denominators specified), the identification of healthy behaviors activities and model covariates, and a description of our analytic approach. In this interim report, we also discuss possible adjustments for the public health emergency. For brevity and clarity, we present any of these items that apply across all hypotheses just once, while other items are presented in the context of the relevant hypotheses and research questions. We also describe limitations and alternative approaches to address them.

One objective of these analyses is to document rates of HBI participation, model HBI participation as a function of several member-level characteristics, assess changes in health care spending as a function of HBI participation, and model several measures of health care utilization as a function of HBI participation. Together, this will further our understanding of the extent to which members are engaging in the requirements outlined by the program. We will further clarify which members are most and least likely to complete the activities required by the HBI program and identify both the extent to which the HBI program is associated with increases or decreases in health care spending and the extent to which HBI participation can improve patient outcomes and reduce potentially avoidable care.

A second objective of these analyses is to understand the overall effect of the HBI program on Medicaid enrollees in Iowa. Addressing this objective adds rigor to the overall analysis as we will compare IHAWP members operating within the HBI program to comparison members not subject to the HBI program elements. We will also explore comparing IHAWP members to residents of other states. We are in the process of using a synthetic control method to identify appropriate states as comparators. This has lengthened the process for acquiring all necessary data, but we believe the resulting analyses will prove valuable. We will use a difference-in-differences design for this objective and include as many of the outcomes from hypotheses 4-9 as is feasible. This analysis also allows for an evaluation of validated well-visits compared to the overall well-visits as part of the HBI program, including administratively tabulated well-visits. To the extent that comparisons meet the necessary assumptions of the difference-in-differences design, analysis from this second objective will yield causal estimates of the effects of the HBI program on member outcomes.

Target and comparison populations

For our analyses examining health care utilization and spending outcomes as a function of completing HBI requirements, we will use propensity score matching to generate a target

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

and comparison group. The **target group** will be defined as members who completed both HBI requirements during the year and the **comparison group** will be defined as members who did not complete any HBI requirements during the year. Members who completed only one of the two required activities will be excluded. The propensity scores will be generated using the predicted likelihood of HBI participation. We will match members in our target and control groups based on their propensity scores using nearest neighbor matching and will visually inspect the covariates to confirm that our target and control groups are balanced with respect to observed covariates.

For our analyses evaluating the overall effects of the HBI program on member outcomes, we will develop other populations as comparison groups:

Income-Eligible Medicaid members (IE)

Medicaid members who are eligible due to income are adults and children in Medicaid in families with incomes less than 50% of FPL. Adults in this group are eligible through the family. Their eligibility varies depending on income. We will include parents/guardians who are income eligible from 19-64 years of age.

Disability Determination Medicaid members (DD)

Medicaid members enrolled through a disability determination are adults and children with a medically verified determination of disability. We will include adults 19-64 years of age in our analyses. Those who are dually eligible for Medicaid and Medicare are not included in the analyses as we cannot account for utilization paid through Medicare.

Other states

For measures available through HCUP data or T-MSIS data, we will also explore using Medicaid eligible members in other states as comparisons. This is a more difficult comparison as Medicaid programs may differ on elements other than just HBI so the details of the comparison state Medicaid programs will be critical.

Evaluation period

The claims-based evaluation of the HBI will span from January 2014 through December 2024, with analyses using data from 2014 through the most current year of Medicaid data available throughout the renewed 1115 waiver period (2020 – 2024). The survey data and interview data will be collected during the 2021-2024 time period. Process evaluation is occurring throughout the waiver period.

Data sources

We are proposing to use six data sources for the secondary analyses of Medicaid administrative claims data portion of the HBI evaluation. They include the following:

- Medicaid enrollment and claims data (January 2014 – December 2024)
- Iowa Medicaid Enterprise/Iowa Medicaid records on completion of wellness exams and health risk assessments (January 2014 – December 2024)

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

We will also adjust for other sociodemographic factors, social determinants of health, and available health care resources in members' local community using selected variables from:

- U.S. Census Bureau's American Community Survey
- Health Resources and Services Administration's Area Health Resources File
- CDC Social Vulnerability Index (replaces Area Deprivation Index)
- DHS Social Determinants of Health data, 2014-present, if available

Sample

Our sample will consist of all members enrolled in IHAWP for a minimum of 12 consecutive months any time after January 1, 2014. We will assign members to one of three income groups: a **low-income group (≤50% FPL)**, a **medium-income group (51 – 100% FPL)**, and a **high-income group (101 – 138% FPL)** reflecting the categories of incentives that apply to members in these income ranges.

Using monthly data, we will create our sample using a rolling cohort method in which we identify the first 12 consecutive months in which a member was continuously and exclusively enrolled in IHAWP. For example, a member enrolled January 2014 through December 2014 would be in cohort 1, while a member enrolled February 2014 through January 2015 would be in cohort 2, and so on. If a member was enrolled for additional 12-month periods beyond their initial 12 months (e.g., a total of 24-, 36-, or 48-months of enrollment), they would be included in those cohorts as well. For example, a member enrolled March 2014 through February 2016 would be in cohort 3 from March 2014 to February 2015, cohort 15 from March 2015 to February 2016, and so on. Essentially, the cohort corresponds to the study month in which the member's 12-month continuous enrollment begins, and they enter a new cohort for each successive 12-month period. However, we will not keep partial years of data. For example, if a member was enrolled for 18 months, we will keep only their initial 12 months, and drop the other 6.

After assigning members to cohorts, we will collapse the data to provide one observation per person per cohort. This method will ensure that we retain as many Medicaid members in our sample as possible, while also ensuring that all members in our sample are exposed to a full year of the program, providing them equal opportunity for HBI participation, and corresponding to the period of time they have to complete activities before being charged a premium (excluding the additional 30-day grace period). In sensitivity analyses, we will extend our cohort definition to 13 months to capture this 1-month grace period after which premiums are enforced. For analyses examining year-over-year trends, we also limit our sample to members whose enrollment does not span calendar years.

Identification of Healthy Behaviors and covariates

At the core of the HBI program is the requirement for members to complete both a wellness exam and a health risk assessment (HRA) each year to avoid paying a monthly premium the following year. Completion of these activities can be identified in claims or reported by managed care organizations. In fact, members may also call the Iowa

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Department of Health and Human Services to report completion of the activities. Regardless of the mechanism by which the data are reported, Iowa Medicaid data are used to make official determinations regarding premium waivers for members, and therefore they are the data that we have previously used (and propose to use) to identify receipt of a wellness exam and HRA completion.

Covariates

Our multivariable models will include several additional covariates to adjust for factors plausibly associated with both the likelihood of completing the HBI requirements and our health care utilization and spending outcomes. These will include demographic characteristics derived from the Medicaid data including age, gender, race/ethnicity, metropolitan area of residence (defined as metropolitan, micropolitan, small town, or rural, using rural-urban commuting areas), number of moves during the 12-month period (to account for lifestyle disruption), and income group. We will also use the Medicaid data to include a number of variables serving as proxies of health status including: an indicator for a mental health diagnosis, an indicator for a substance abuse diagnosis, the total annual number of outpatient visits, the annual number of prescriptions, and an indicator for the presence of each of 24 chronic conditions. We will also include an indicator for the managed care organization in which the member is enrolled and a running count of a member's total years of IHAWP enrollment as of the given year (to assess the extent to which members become more compliant the longer they are enrolled). We will also adjust for other contextual factors using variables of interest drawn from the Area Health Resources File, CDC Social Vulnerability Index, and the American Community Survey. Cohort fixed effects will be captured using a binary variable to indicate the cohort to which a member was assigned. In sensitivity analyses, we will explore the use of fixed effects at the county level.

Public Health Emergency considerations

The declaration of the public health emergency (PHE) following the start of the COVID pandemic complicates nearly every analytic proposed. Our evaluation team is reviewing potential methods we will use to adjust for the PHE.

- Indicator variables: rather than a simple pre/post analysis, we will explore adding covariates to our analyses that correspond to specific aspects of the PHE: starting point, ending point, and possibly more nuanced measures based on the outcome trends we observe. These indicator variables will allow us to compare evidence of program effects or time effects just prior to the PHE, during the PHE, and post-PHE.
- Comparison states: in cases where we make use of comparison states, those states' decisions with respect to the PHE and other public health considerations may allow suitable variation to compare evidence from before, during, and after the PHE in Iowa for various outcomes.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

- Omit PHE months: where adding specific indicator variables and/or other state comparisons falls short of adjusting for the effects of the PHE, we will explore omitting these months from the analytic.

Analytic approach for each hypothesis and research question

We will employ a variety of quantitative analyses depending on the hypothesis and research question and the available data. Briefly, we will produce summary statistics (including time trends) on HBI participation and our outcomes of interest as well as comparison of outcomes over time by groups of interest in terms of HBI participation. We will use multivariate analyses to identify factors associated with the likelihood of HBI participation and assess the relationship between HBI participation and our outcomes of interest while adjusting for potential confounders and selection bias. We will use causal inference methods, primarily difference-in-differences, to establish the overall effects of the HBI program on outcomes. All analyses will be stratified by—or otherwise account for—members' income group. Further details are provided in the table organized by hypotheses and research questions.

Methods for survey and interview data

The above outlined research questions and hypotheses will be answered using a mixed-methods approach consisting of 1) secondary analyses of Medicaid administrative claims data, 2) a member survey, 3) member interviews. These qualitative and quantitative approaches allow for data and methods triangulation across both process and outcomes measures, which increases confidence in the validity of evaluation findings. Additional details are provided below for each approach.

HBI member survey

We conducted a member telephone survey during 2021-2022 during the public health emergency to serve as a baseline for the evaluation. We will be conducting a survey in the summer and early fall of 2024 to capture member experiences following the public health emergency. The surveys address evaluation questions related to awareness and knowledge of the HBI and participation and experience in the program.

Study Design: We have both a panel and cross-sectional survey design to allow us to examine trends over time in the same group of people who have continued exposure to the program and to provide a cross sectional look at the IHAWP population.

Panel Sample: The full sample frame for the survey (n = 18,265) was pulled from all IHAWP members in November 2021. Because of the public health emergency, we stratified the sample based on enrollment. We had 3 mutually exclusive groups: those enrolled for at least 6 months and who only became enrolled during the pandemic, those who were enrolled continuously before the pandemic, and those who were enrolled continuously since at least March 2015. This would allow us to look at these three different groups of members and compare them, with the understanding that their experiences and reasons for being enrolled in Medicaid would vary by group. These groups also allow us to look at the length of enrollment as an "exposure" to the program variable. Within these 3 groups,

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

we sampled by age (19-39, 40-49, 50-59, and 60-64). We also sampled by gender as defined by the Medicaid data and race and ethnicity. We selected these additional groups to sample because past evaluations indicated that these groups participated in the survey at differing levels and had different rates of completing the healthy behaviors. For the 2024 survey, we will include all survey respondents who are still enrolled in IHAWP.

Cross-sectional survey: In 2024 we will also pull a new sample, using the same sampling strategy as 2021 excluding the stratification based on enrollment.

Survey protocol: Our survey protocol was informed by the latest research on survey design and our over 20 years of experience with this population. A pre-notification postcard was sent to members before the phone calls began and included information about how members could update their telephone numbers or indicate that they did not wish to participate.

The telephone survey was fielded by the Iowa Social Science Research Center at The University of Iowa. All survey staff were trained on the purpose of the evaluation, human subjects research protections, and the survey instrument. The research team provided specific HBI and Medicaid related information to the survey staff. Every member with a valid telephone number was contacted at least 8 times. At the beginning of the survey, the survey staff introduced the evaluation and reviewed confidentiality, the voluntary nature of participation, and consent was obtained. Those who completed the survey received a $10 gift card. Data collection started in December 2021 and was completed in June 2022. A total of 2,832 people responded to the telephone survey. The AAPOR standard Response Rate 3 (an industry standard for best practices in calculating response rates for telephone data collection projects of this nature) was 22.4%. A similar protocol will be used for the 2024 survey.

Survey measures: The survey measures are informed by our previous qualitative and quantitative data collections, the existing literature, and reliable and validated measures, when available. Most of the survey measures derive from our previous surveys. These items capture self-report of awareness of the program, knowledge of specific program components, completion of the behaviors (HRA and wellness exam), facilitators and barriers to completion, perceptions of the program, self-efficacy, response efficacy, perceived susceptibility, perceived severity, and perceived benefits. We explore how the members received information about the program. The surveys include CAHPS measures and supplemental items. The supplemental items address issues specific to the healthy behaviors. We include several demographic and self-reported health items to be used as adjustment variables in the analyses. The 2021-2022 survey also included COVID-19 related questions. These may be repeated in 2024, depending on the relevance of the pandemic at that point.

Table 10 provides a snapshot of the survey items we have used in the past.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Table 10. Measures in HBI Program Evaluation Member Survey

Measure	Measure description	Sources	Previous use
Completion of healthy behavior	Whether a member completed a healthy behavior (medical wellness exam, dental wellness exam, medical health risk assessment, dental health risk assessment)	Original items, based on qualitative interviews	2017, 2018, and 2019
Members assessment of the cost, barriers, and benefits to program participation	Members indicate barriers	Original items, based on qualitative interviews	2017, 2018, and 2019
Members assessment of the cost, barriers, and benefits to program participation	Members indicate benefits	Original items, based on qualitative interviews	2017, 2018, and 2019
Members assessment of the value of the program to them	Members indicate importance	Original items, based on qualitative interviews	2017, 2018, and 2019
Member perception of ease of obtaining a yearly physical exam	Respondent report of how easy it is for them to obtain a yearly physical exam	Original items, based on qualitative interviews	2017, 2018, and 2019
Reported completion of healthy behavior by source of information	Told to complete healthy behavior and who told to complete healthy behavior	Original items, based on qualitative interviews	2017, 2018, and 2019
Self-rated health	How members rated their overall and oral health	Health and Performance Questionnaire	2017, 2018, and 2019
Knowledge of program requirements	Members knowledge of program requirements	Original items, based on qualitative interviews	2017, 2018, and 2019
Members understanding of insurance	Members understanding of insurance coverage and benefits, insurance plan's premiums, and what is needed to do to prevent being disenrolled from insurance coverage	Original items	2019
Members knowledge of payment process	Premium/Hardship waiver awareness	Original items, based on qualitative interviews	2017, 2018, and 2019
Members experience with premium payments	Online premium payment	Original items	2019
Members experience with premium payments	Barriers to premium payment	Original items, based on qualitative interviews	2017, 2018, and 2019
Value of incentive	Whether member would rather complete healthy behavior program requirements or pay premium	Original items, based on qualitative interviews	2017, 2018, and 2019
Regular source of care-personal doctor	Personal Doctor	CAHPS 5.0	2017, 2018, and 2019
Getting timely appointments, care, and information	Timely receipt of care	CAHPS 5.0	2017, 2018, and 2019

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Measure	Measure description	Sources	Previous use
Members perceived locus of control	Locus of control	Validated measure	2017, 2018, and 2019
Members use of Federally Qualified Health Centers	Whether member received care from Federally Qualified Health clinics	Original items	2017, 2018, and 2019
MCO	Which Managed Care Organization member is enrolled in	Original item	2017, 2018, and 2019
Members use of government assistance programs	Whether member participated in government assistance programs	Original item	2017, 2018, and 2019
Food insecurity	Hunger Vital Signs	Hager, E. R., et al, (2010). Development and validity of a 2-item screen to identify families at risk for food insecurity. Pediatrics, 126(1), e26-e32.	2019
Health literacy	Single Item Literacy Screener	Morris, N. S., et al,(2006). The Single Item Literacy Screener: evaluation of a brief instrument to identify limited reading ability. BMC family practice, 7(1), 21.	2017, 2018, and 2019
Demographics	Age, gender, employment status, education, and race or ethnicity	Standard questions	2017, 2018, and 2019
COVID-19 measures	COVID-19 status, vaccination, hardships related to public health emergency	Household Pulse Survey	N/A

Analysis: Survey data were weighted as appropriate based on our stratified sampling. For the panel survey, we will be examining the survey results for trends over time, specifically looking to answer questions related to the length of exposure to the program and awareness, knowledge and completion. For some research questions and hypotheses, descriptive statistics will be sufficient. When we compare groups, we will use t-tests or chi-squared tests. Modified Poisson regression will be used for multivariate analyses. A modified Poisson regression will allow us to control for sociodemographic characteristics (race/ethnicity, age, gender, education, employment status), other characteristics and experience with programs, as well as other characteristics (health literacy, food insecurity status, participation in government assistant programs, and MCO enrollment), and perceptions/attitudes (perceived benefits, perceived severity, perceived susceptibility, self -efficacy, and response efficacy).

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

For the longitudinal analysis for the panel survey, we will be adjusting for the dependence from multiple observations from members. We have outlined the proposed analysis for each hypothesis in the table below (Table 13).

Limitations/Challenges: The COVID-19 pandemic may affect our ability to collect accurate and relevant data. First, many survey participants were not aware that the HBI program was paused due to the public health emergency. It is not clear how confusion about the HBI program influenced the survey results we received. It is also not clear if participation in the survey was hampered because people were confused about the status of the program. Additionally, we are not able to assess if the survey respondents were members who under normal circumstances would have been disenrolled from the program and not eligible for participation in the survey. The inclusion of people who typically would be ineligible for the program could result in unknown bias.

Disenrollment survey and interviews

Interviews

To better understand how members experience the HBI program, we have planned a qualitative data collection that will provide in-depth, rich information. Our previous 1115 Waiver evaluation activities included in-depth interviews. The data gathered from these interviews were valuable in understanding how the HBI program functioned, how members understood the program, and member experiences.

Study Design: We will interview members between fall 2023 - spring 2024.

Sample: We will interview approximately 60 members. The sample will be stratified by length of enrollment, race/ethnicity, age, gender, and completion of healthy behaviors.

Interview protocol: They will be sent a letter inviting them to participate in an in-depth interview. The letter will provide them with information for contacting researchers to participate in the interview. There will be 10 attempts to reach the potential respondent to schedule an interview. The interviewer will be specifically trained in qualitative interviewing and will have significant background knowledge about Medicaid and the 1115 Waiver. Interviews will last about 30 minutes, be conducted over the telephone, and be recorded. The recordings will be transcribed by a 3rd party service. Respondents will be provided with a gift card to compensate them for their time.

Interview questions: Our interview guide will be informed by the survey results from the previous years. We will ask open-ended questions to solicit the richest narrative possible. The interview will focus on members' experiences since the start of the public health emergency. The interview guide will be pilot tested to ensure that the questions are appropriate for the target population.

Analysis: The interviews will be transcribed. We will develop a codebook based on the interview guide and the research questions listed below. Trained coders will code a selection of the transcripts to develop intercoder reliability. Following coding, we will examine the codes for themes to answer the basic questions about members' experiences.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

HBI Evaluation Measures Summary

Comparison Strategy	Outcome Measure(s)	Data sources	Analytic Approach
Hypothesis 1: The proportion of members who complete a wellness exam, health risk assessment, or both will vary.			
Research Question 1.1: What proportion of members complete a wellness exam in a given year?			
N/A	Binary indicator for completion of wellness exam	DHS Data and Medicaid Enrollment Data, 2014 – present	Univariate analysis stratified by income group, using t-tests to compare the mean completion rate between income groups
Research Question 1.2: What proportion of members complete an HRA in a given year?			
N/A	Binary indicator for completion of an HRA	DHS Data and Medicaid Enrollment Data, 2014 – present	Univariate analysis stratified by income group, using t-tests to compare the mean completion rate between income groups
Research Question 1.3: What proportion of members complete both a wellness exam and an HRA in a given year?			
N/A	Binary indicator for completion of both a wellness exam and an HRA	DHS Data and Medicaid Enrollment Data, 2014 – present	Univariate analysis stratified by income group, using t-tests to compare the mean completion rate between income groups
Hypothesis 2: The proportion of members completing a wellness exam, health risk assessment, or both will change over time and by income level.			
Research Question 2.1: Has the proportion of members completing a wellness exam decreased among lower-income members and increased among higher-income members?			
N/A	Binary indicator for completion of wellness exam	DHS Data and Medicaid Enrollment Data, 2014 – present	Univariate analysis stratified by year and income group, using t-tests to compare the mean completion rate between income groups and within income groups between years
Research Question 2.2: Has the proportion of members completing an HRA decreased among lower-income members and increased among higher-income members?			
N/A	Binary indicator for completion of an HRA	DHS Data and Medicaid Enrollment Data, 2014 – present	Univariate analysis stratified by year and income group, using t-tests to compare the mean completion rate between income groups and within income groups between years

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Comparison Strategy	Outcome Measure(s)	Data sources	Analytic Approach
Research Question 2.3: Has the proportion of members completing both required activities decreased among lower-income members and increased among higher-income members?			
N/A	Binary indicator for completion of both a wellness exam and an HRA	DHS Data and Medicaid Enrollment Data, 2014 – present	Univariate analysis stratified by year and income group, using t-tests to compare the mean completion rate between income groups and within income groups between years
Hypothesis 3: Member characteristics are associated with the likelihood of completing both required HBI activities.			
Research Question 3.1: Are older, non-Hispanic white females living in metropolitan counties more likely to complete both required activities?			
N/A	Completion of both a wellness exam and an HRA	DHS Data, Medicaid Claims 2010 – present, Area Health Resources File, Social Vulnerability Index (replaces Area Deprivation Index), Census Data, American Community Survey	Multivariable modified Poisson regression model adjusting for member demographics and health status as well as social determinants of health and community level factors. In sensitivity analyses, we will use county-level fixed effects.*
Research Question 3.2: Are members assigned to some MCOs more likely than members assigned to other MCOs to complete both required activities?			
N/A	Completion of both a wellness exam and an HRA	DHS Data, Medicaid Claims 2010 – present, Area Health Resources File, Social Vulnerability Index (replaces Area Deprivation Index), Census Data, American Community Survey	Multivariable modified Poisson regression model adjusting for member demographics and health status as well as social determinants of health and community level factors. In sensitivity analyses, we will use county-level fixed effects.*
Research Question 3.3: Is the length of time in the program positively associated with the likelihood of completing both required activities?			
N/A	Completion of both a wellness exam and an HRA	DHS Data, Medicaid Claims 2010 – present, Area Health Resources File, Social Vulnerability Index (replaces Area Deprivation Index), Census Data, American Community Survey	Multivariable modified Poisson regression model adjusting for member demographics and health status as well as social determinants of health and community level factors. In sensitivity analyses, we will use county-level fixed effects.*
Research Question 3.4: Are members with more negative social determinants of health (Sodha) less likely to complete both required activities?			
N/A	Completion of both a wellness exam and an HRA	DHS Data, Medicaid Claims 2010 – present, Area Health Resources File, Social Vulnerability Index (replaces Area Deprivation Index), Census Data, American Community Survey	Multivariable modified Poisson regression model adjusting for member demographics and health status as well as social determinants of health and community level factors. In sensitivity analyses, we will use county-level fixed effects.*

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Comparison Strategy	Outcome Measure(s)	Data sources	Analytic Approach
Research Question 3.5: Is the highest income group most likely to complete both required activities?			
N/A	Completion of both a wellness exam and an HRA	DHS Data, Medicaid Claims 2010 – present, Area Health Resources File, Social Vulnerability Index (replaces Area Deprivation Index), Census Data, American Community Survey	Multivariable modified Poisson regression model adjusting for member demographics and health status as well as social determinants of health and community level factors. In sensitivity analyses, we will use county-level fixed effects.*
Hypothesis 4: Completing HBI requirements is associated with a member's use of the emergency department (ED).			
Research Question 4.1: Are members who complete the HBI requirements equally likely to have an ED visit?			
DID and/or propensity score matching based on all-or-none completion of HBI requirements.†	Member's likelihood of having any ED visit	DHS Data and Medicaid Enrollment Data, Area Health Resources File, Social Vulnerability Index (replaces Area Deprivation Index), American Community Survey, DHS Social Determinants of Health data, 2014 – present, if available	Bivariate analysis, comparing means of members who completed vs. did not complete required activities within each income group using t-tests. Multivariable modified Poisson model among our propensity score matched sample, adjusting for member demographics and health status as well as social determinants of health and community-level factors^
Research Question 4.2: Do members who complete the HBI requirements have fewer total ED visits annually?			
DID and/or propensity score matching based on all-or-none completion of HBI requirements.†	Member's annual number of ED visits	DHS Data and Medicaid Enrollment Data, Area Health Resources File, Social Vulnerability Index (replaces Area Deprivation Index), American Community Survey, DHS Social Determinants of Health data, 2014 – present, if available	Bivariate analysis, comparing means of members who completed vs. did not complete required activities within each income group using t-tests. Multivariable modified Poisson model among our propensity score matched sample, adjusting for member demographics and health status as well as social determinants of health and community-level factors^
Research Question 4.3: Are members who complete the HBI requirements less likely to have a non-emergent ED visit?			
DID and/or propensity score matching based on all-or-none completion of HBI requirements.†	Member's likelihood of having any non-emergent ED visit (NYU Algorithm)	DHS Data and Medicaid Enrollment Data, Area Health Resources File, Social Vulnerability Index (replaces Area Deprivation Index), American Community Survey, DHS Social Determinants of Health data, 2014 – present, if available	Bivariate analysis, comparing means of members who completed vs. did not complete required activities within each income group using t-tests. Multivariable modified Poisson model among our propensity score matched sample, adjusting for member demographics and health status as well as social determinants of health and community-level factors^

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Comparison Strategy	Outcome Measure(s)	Data sources	Analytic Approach
Research Question 4.4: Do members who complete the HBI requirements have fewer total non-emergent ED visits annually?			
DID and/or propensity score matching based on all-or-none completion of HBI requirements.†	Member's annual number of non-emergent ED visits (NYU Algorithm)	DHS Data and Medicaid Enrollment Data, Area Health Resources File, Social Vulnerability Index (replaces Area Deprivation Index), American Community Survey, DHS Social Determinants of Health data, 2014 – present, if available	Bivariate analysis, comparing means of members who completed vs. did not complete required activities within each income group using t-tests. Multivariable modified Poisson model among our propensity score matched sample, adjusting for member demographics and health status as well as social determinants of health and community-level factors^
Research Question 4.5: Are members who complete the HBI requirements less likely to have a 3-day, 7-day, or 30-day return ED visit?			
DID and/or propensity score matching based on all-or-none completion of HBI requirements.†	Member's likelihood of having a 3-day return ED visit, Member's likelihood of having a 7-day return ED visit, Member's likelihood of having a 30-day return ED visit	DHS Data and Medicaid Enrollment Data, Area Health Resources File, Social Vulnerability Index (replaces Area Deprivation Index), American Community Survey, DHS Social Determinants of Health data, 2014 – present, if available	Bivariate analysis, comparing means of members who completed vs. did not complete required activities within each income group using t-tests. Multivariable modified Poisson model among our propensity score matched sample, adjusting for member demographics and health status as well as social determinants of health and community-level factors^
Research Question 4.6: Do members who complete the HBI requirements have fewer total 3-day, 7-day, or 30-day return ED visits annually?			
DID and/or propensity score matching based on all-or-none completion of HBI requirements.†	Member's annual number of 3-day return ED visits, Member's annual number of 7-day return ED visits, Member's annual number of 30-day return ED visits	DHS Data and Medicaid Enrollment Data, Area Health Resources File, Social Vulnerability Index (replaces Area Deprivation Index), American Community Survey, DHS Social Determinants of Health data, 2014 – present, if available	Descriptive statistics, time trends, bivariate analysis, multivariate analysis including propensity score adjusted models and DID models^
Hypothesis 5: Completing HBI requirements is associated with a member's use of hospital observation stays.			
Research Question 5.1: Are members who complete the HBI requirements equally likely to have a hospital observation stay?			
DID and/or propensity score matching based on all-or-none completion of HBI requirements.†	Member's likelihood of having a hospital observation stay	DHS Data and Medicaid Enrollment Data, Area Health Resources File, Social Vulnerability Index (replaces Area Deprivation Index), American Community Survey, DHS Social Determinants of Health data, 2014 – present, if available	Bivariate analysis, comparing means of members who completed vs. did not complete required activities within each income group using t-tests. Multivariable modified Poisson regression model among our propensity score matched sample, adjusting for member demographics and health status as well as social determinants of health and community-level factors.^

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Comparison Strategy	Outcome Measure(s)	Data sources	Analytic Approach
Research Question 5.2: Do members who complete the HBI requirements have fewer total hospital observation stays annually?			
DID and/or propensity score matching based on all-or-none completion of HBI requirements.†	Member's annual number of hospital observation stays	DHS Data and Medicaid Enrollment Data, Area Health Resources File, Social Vulnerability Index (replaces Area Deprivation Index), American Community Survey, DHS Social Determinants of Health data, 2014 – present, if available	Bivariate analysis, comparing means of members who completed vs. did not complete required activities within each income group using t-tests. Multivariable modified Poisson regression model among our propensity score matched sample, adjusting for member demographics and health status as well as social determinants of health and community-level factors.^
Hypothesis 6: Completing HBI requirements is associated with a member's use of inpatient hospital care.			
Research Question 6.1: Are members who complete the HBI requirements equally likely to be hospitalized?			
DID and/or propensity score matching based on all-or-none completion of HBI requirements.†	Member's likelihood of being hospitalized	DHS Data and Medicaid Enrollment Data, Area Health Resources File, Social Vulnerability Index (replaces Area Deprivation Index), American Community Survey, DHS Social Determinants of Health data, 2014 – present, if available	Bivariate analysis, comparing means of members who completed vs. did not complete required activities within each income group using t-tests. Multivariable modified Poisson model among our propensity score matched sample, adjusting for member demographics and health status as well as social determinants of health and community-level factors.^
Research Question 6.2: Do members who complete the HBI requirements have fewer total hospitalizations annually?			
DID and/or propensity score matching based on all-or-none completion of HBI requirements.†	Member's annual number of hospitalizations	DHS Data and Medicaid Enrollment Data, Area Health Resources File, Social Vulnerability Index (replaces Area Deprivation Index), American Community Survey, DHS Social Determinants of Health data, 2014 – present, if available	Bivariate analysis, comparing means of members who completed vs. did not complete required activities within each income group using t-tests. Multivariable modified Poisson model among our propensity score matched sample, adjusting for member demographics and health status as well as social determinants of health and community-level factors.^
Research Question 6.3: Are members who complete the HBI requirements less likely to have a potentially preventable hospitalization?			
DID and/or propensity score matching based on all-or-none completion of HBI requirements.†	Member's likelihood of experiencing a potentially preventable hospitalization	DHS Data and Medicaid Enrollment Data, Area Health Resources File, Social Vulnerability Index (replaces Area Deprivation Index), American Community Survey, DHS Social Determinants of Health data, 2014 – present, if available	Bivariate analysis, comparing means of members who completed vs. did not complete required activities within each income group using t-tests. Multivariable modified Poisson model among our propensity score matched sample, adjusting for member demographics and health status as well as social determinants of health and community-level factors.^

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Comparison Strategy	Outcome Measure(s)	Data sources	Analytic Approach
Research Question 6.4: Do members who complete the HBI requirements have fewer total potentially preventable hospitalizations annually?			
DID and/or propensity score matching based on all-or-none completion of HBI requirements.†	Member's annual number of potentially preventable hospitalizations	DHS Data and Medicaid Enrollment Data, Area Health Resources File, Social Vulnerability Index (replaces Area Deprivation Index), American Community Survey, DHS Social Determinants of Health data, 2014 – present, if available	Bivariate analysis, comparing means of members who completed vs. did not complete required activities within each income group using t-tests. Multivariable modified Poisson model among our propensity score matched sample, adjusting for member demographics and health status as well as social determinants of health and community-level factors.^
Research Question 6.5: Are members who complete the HBI requirements less likely to have a 30-day all-cause readmission?			
DID and/or propensity score matching based on all-or-none completion of HBI requirements.†	Member's likelihood of experiencing a 30-day all-cause readmission	DHS Data and Medicaid Enrollment Data, Area Health Resources File, Social Vulnerability Index (replaces Area Deprivation Index), American Community Survey, DHS Social Determinants of Health data, 2014 – present, if available	Bivariate analysis, comparing means of members who completed vs. did not complete required activities within each income group using t-tests. Multivariable modified Poisson model among our propensity score matched sample, adjusting for member demographics and health status as well as social determinants of health and community-level factors.^
Research Question 6.6: Do members who complete the HBI requirements have fewer total 30-day all-cause readmissions annually?			
DID and/or propensity score matching based on all-or-none completion of HBI requirements.†	Member's annual number of 30-day all-cause readmissions	DHS Data and Medicaid Enrollment Data, Area Health Resources File, Social Vulnerability Index (replaces Area Deprivation Index), American Community Survey, DHS Social Determinants of Health data, 2014 – present, if available	Bivariate analysis, comparing means of members who completed vs. did not complete required activities within each income group using t-tests. Multivariable modified Poisson model among our propensity score matched sample, adjusting for member demographics and health status as well as social determinants of health and community-level factors.^

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Comparison Strategy	Outcome Measure(s)	Data sources	Analytic Approach
Hypothesis 7: Completing HBI requirements is associated with shifts in patterns of member's health care utilization.			
Research Question 7.1: Do members who complete the HBI requirements have fewer potentially preventable hospitalizations as a proportion of total hospitalizations?			
DID and/or propensity score matching based on all-or-none completion of HBI requirements.†	Potentially preventable hospitalizations as a proportion of total hospitalizations	DHS Data and Medicaid Enrollment Data, Area Health Resources File, Social Vulnerability Index (replaces Area Deprivation Index), American Community Survey, DHS Social Determinants of Health data, 2014 – present, if available	Bivariate analysis, comparing means of members who completed vs. did not complete required activities within each income group using t-tests. Multivariable modified Poisson model among our propensity score matched sample, adjusting for member demographics and health status as well as social determinants of health and community-level factors.^
Research Question 7.2: Do members who complete the HBI requirements have fewer non-emergent ED visits as a proportion of total ED visits?			
DID and/or propensity score matching based on all-or-none completion of HBI requirements.†	Non-emergent ED visits as a proportion of total ED visits	DHS Data and Medicaid Enrollment Data, Area Health Resources File, Social Vulnerability Index (replaces Area Deprivation Index), American Community Survey, DHS Social Determinants of Health data, 2014 – present, if available	Bivariate analysis, comparing means of members who completed vs. did not complete required activities within each income group using t-tests. Multivariable modified Poisson model among our propensity score matched sample, adjusting for member demographics and health status as well as social determinants of health and community-level factors.^
Research Question 7.3: Do members who complete the HBI requirements have more primary care visits as a proportion of total outpatient visits?			
DID and/or propensity score matching based on all-or-none completion of HBI requirements.†	Primary care visits as a proportion of all outpatient visits	DHS Data and Medicaid Enrollment Data, Area Health Resources File, Social Vulnerability Index (replaces Area Deprivation Index), American Community Survey, DHS Social Determinants of Health data, 2014 – present, if available	Bivariate analysis, comparing means of members who completed vs. did not complete required activities within each income group using t-tests. Multivariable modified Poisson model among our propensity score matched sample, adjusting for member demographics and health status as well as social determinants of health and community-level factors.^

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Comparison Strategy	Outcome Measure(s)	Data sources	Analytic Approach
Hypothesis 8: Completing HBI requirements is associated with a member's health care expenditures.			
Research Question 8.1: Do members who complete the HBI requirements have lower spending in all categories?			
DID and/or propensity score matching based on all-or-none completion of HBI requirements.†	Total health care expenditures, Inpatient health care expenditures, Potentially preventable hospitalization expenditures, Outpatient health care expenditures, Primary care expenditures, ED health care expenditures, Non-emergent ED health care expenditures, Pharmacy expenditures	DHS Data and Medicaid Enrollment Data, Area Health Resources File, Social Vulnerability Index (replaces Area Deprivation Index), American Community Survey, DHS Social Determinants of Health data, 2014 – present, if available	Bivariate analysis, comparing means of members who completed vs. did not complete required activities within each income group using t-tests. Multivariable modified Poisson model among our propensity score matched sample, adjusting for member demographics and health status as well as social determinants of health and community-level factors.^
Hypothesis 9: We will identify disparities in the relationships between HBI completion and outcomes.			
Research Question 9.1: Do disparities exist in the following populations- high utilizers, members with multiple chronic conditions, members with OUD, members from racial and ethnic groups, rural members, and by sex?			
DID and/or propensity score matching based on all-or-none completion of HBI requirements.†	As defined above for research questions 4.1 – 4.6, 5.1 – 5.2, 6.1 – 6.6, 7.1 – 7.3, and 8.1	DHS Data and Medicaid Enrollment Data, Area Health Resources File, Social Vulnerability Index (replaces Area Deprivation Index), American Community Survey, DHS Social Determinants of Health data, 2014 – present, if available	We will repeat the analyses outlined for research questions 4.1-4.6, 5.1-5.2, 6.1-6.6, 7.1-7.3, and 8.1, using interaction terms and/or running stratified models to identify differences in the association between HBI participation and outcomes among the following groups of members: High utilizers (those in the top quintile for number of outpatient, ED, and/or hospital visits) Members with multiple chronic conditions (defined categorically as 0/1, 2-3, 4+) Members with opioid use disorder Race/Ethnicity, Rurality, Sex

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Comparison Strategy	Outcome Measure(s)	Data sources	Analytic Approach
Hypothesis 10: Members who have been enrolled longer are more aware of the HBI program than those who have been enrolled a shorter period of time.			
Research Question 10.1: What is the level of awareness about the HBI program among members?			
Members with awareness of the HBI program and those without awareness	Existing survey items on awareness	HBI Phone Survey 2021-2022 & 2024	Descriptive statistics, t-tests
Research Question 10.2: How long are members enrolled in the program?			
Members with awareness of the HBI program and those without awareness	Length of enrollment	Eligibility data	Chi-square, t-test
Research Question 10.3: Is there a relationship between length of enrollment and awareness of the HBI program?			
Members with awareness of the HBI program and those without awareness	Length of enrollment	Eligibility data	Chi-square, t-test
Hypothesis 11: Members who have been enrolled longer have more knowledge about the HBI program than those who have been enrolled a shorter period of time.			
Research Question 11.1: What specific knowledge about the HBI program do members report?			
Members with knowledge of the HBI program and those without	Existing survey items on knowledge	HBI Phone Survey 2024 Interviews	T-test Qualitative analysis
Research Question 11.2: Do members understand the incentive/disincentive part of the HBI program?			
Members with knowledge of the HBI program and those without	Existing survey items on knowledge	HBI Phone Survey 2024 Interviews	T-test Qualitative analysis
Research Question 11.3: Do members know they need to pay a premium monthly?			
Members with knowledge of the HBI program and those without	Existing survey items on knowledge	HBI Phone Survey 2024 Interviews	T-test Qualitative analysis

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Comparison Strategy	Outcome Measure(s)	Data sources	Analytic Approach
Research Question 11.4: Do members know about the hardship waiver?			
Members with knowledge of the HBI program and those without	Existing survey items on knowledge	HBI Phone Survey 2024 Interviews	T-test Qualitative analysis
Research Question 11.5: How long have members been enrolled?			
Members with knowledge of the HBI program and those without	Length of enrollment	Eligibility data	T-test
Hypothesis 12: Those who are aware of the HBI program are more likely to complete the behaviors (HRA and well exam) compared to those who were not aware.			
Research Question 12.1: What is the level of awareness of the HBI program?			
Completion of behaviors of members with awareness will be compared to completion for those without awareness	Existing survey items on awareness	HBI Phone Survey 2021-2022 (wellness exam only), 2024	Chi square, Modified Poisson regression
Research Question 12.2: What is the level of completion of the HRA and well exam?			
Completion of behaviors of members with awareness will be compared to completion for those without awareness	Binary indicator of completing both a wellness exam and HRA	DHS claims data	Chi square, Modified Poisson regression
Hypothesis 13: Those who have more knowledge about the HBI program are more likely to complete the behaviors (HRA and well exam) compared to those with less knowledge.			
Research Question 13.1: What is the level of knowledge about the HBI program?			
Completion of the behaviors of members with knowledge about the program will be compared to completion of behaviors for those without knowledge of the program	Existing survey items on program knowledge	HBI Phone Survey 2021-2022 (wellness exam only), 2024	Chi-square, Modified Poisson regression

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Comparison Strategy	Outcome Measure(s)	Data sources	Analytic Approach
Research Question 13.2: What is the level of completion of the HRA and well exam?			
Completion of behaviors of members with awareness will be compared to completion for those without awareness	both a wellness exam and HRA Binary indicator of completing	DHS claims data	Chi-square, Modified Poisson regression
Hypothesis 14: Members socio-demographic characteristic and perceptions/attitudes are associated with awareness of the HBI program.			
Research Question 14.1: What is the level of HBI program awareness?			
Members based on HBI program awareness	Existing survey items on awareness	HBI Phone Survey 2021-2022, 2024 Interviews	Chi-square, Modified Poisson regression Qualitative analysis
Research Question 14.2: What socio-demographic characteristics (age, gender, income, education, employment, race, and ethnicity) of members?			
Members based on HBI program awareness	Existing demographic survey items	HBI Phone Survey 2021-2022, 2024 Interviews	Chi-square, Modified Poisson regression Qualitative analysis
Research Question 14.3: What are the perceptions/attitudes (self-efficacy, response efficacy, perceived susceptibility, perceived severity, and perceived benefit) of members?			
Members based on HBI program awareness	Existing survey items on perceptions and attitudes	HBI Phone Survey 2024 Interviews	Chi-square, Modified Poisson regression Qualitative analysis
Hypothesis 15: Members socio-demographic characteristic and perceptions/attitudes are associated with knowledge of the HBI program.			
Research Question 15.1: What is the level of HBI program knowledge?			
Members based on HBI program knowledge	Existing survey items on program knowledge	HBI Phone Survey 2021-2022, 2024 Interviews	Descriptive statistics, Modified Poisson regression Qualitative analysis
Research Question 15.2: What socio-demographic characteristics (age, gender, income, education, employment, race, and ethnicity) of members?			
Members based on HBI program awareness	Existing demographic survey items	HBI Phone Survey 2021-2022, 2024 Interviews	Logistic regression; Modified Poisson regression Qualitative analysis

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Comparison Strategy	Outcome Measure(s)	Data sources	Analytic Approach
Research Question 15.3: What are the perceptions/attitudes (self-efficacy, response efficacy, perceived susceptibility, perceived severity, and perceived benefit) of members?			
Members based on HBI program awareness	Existing survey items on perceptions and attitudes	HBI Phone Survey 20224 Interviews	Modified Poisson regression, Modified Poisson regression Qualitative analysis
Hypothesis 16: Members socio-demographic characteristic and perceptions/attitudes are associated with completion of the HRA and well exam.			
Research Question 16.1: What is the level of completion of the HRA and well exam?			
Members based on completion of HRA and well exam	Existing survey items on HRA and well exam completion	HBI Phone Survey 2024 Interviews	Descriptive statistics, Modified Poisson regression Qualitative analysis
Research Question 16.2: What are the socio-demographic characteristics (age, gender, income, education, employment, race, and ethnicity) of members?			
Members based on completion of HRA and well exam	Existing demographic survey items	HBI Phone Survey 2024 Interviews	Logistic regression, Modified Poisson regression Qualitative analysis
Research Question 16.3: What are the perceptions/attitudes (self-efficacy, response efficacy, perceived susceptibility, perceived severity, and perceived benefit) of members?			
Members based on completion of HRA and well exam	Existing survey items on perceptions and attitudes	HBI Phone Survey 2024 Interviews	Modified Poisson regression Qualitative analysis
Hypothesis 17: Members are most likely to hear about the HBI program from their MCO.			
Research Question 17.1: Where are members learning about the HBI program and program components?			
Compare sources of information	Existing survey items on where members learn about HBI program	HBI Phone Survey 2021-2022, 2024	Descriptive statistics
Hypothesis 18: Members report difficult in using hardship waiver.			
Research Question 18.1: What are the perceptions of the ease of use of the hardship waiver?			
N/A	Existing survey items on perception of hardship waiver and barriers to using hardship waiver	HBI Phone Survey 2024 Interviews	Descriptive statistics Qualitative analysis

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Comparison Strategy	Outcome Measure(s)	Data sources	Analytic Approach
Research Question 18.2: What are the challenges members reporting in using the hardship waiver?			
N/A	Existing survey items on perception of hardship waiver and barriers to using hardship waiver	HBI Phone Survey 2024 Interviews	Descriptive statistics Qualitative analysis
Hypothesis 19: Members who do not complete the HRA and well exam report barriers to completing the behaviors.			
Research Question 19.1: What are the barriers to completing the HRA and wellness exam as reported by the members?			
N/A	Existing measure of barriers to completion of HRA and well exam	HBI Phone Survey 2021-2022, 2024 Interviews	Descriptive statistics Qualitative analysis
Hypothesis 20: Disenrolled members report no knowledge of the HBI program. *No Disenrollments will occur during the waiver*			
Hypothesis 21: Disenrolled members describe confusion around the disenrollment process. *No Disenrollments will occur during the waiver*			
Hypothesis 22: Disenrolled members report consequences to their disenrollment. *No Disenrollments will occur during the waiver*			

†In analyses designed to test the relationship between completion of HBI requirements and various health care utilization and spending outcomes, we will use propensity score matching to reduce unobserved confounding between members who do and do not complete the requirements. Specifically, we will model the likelihood of completing the HBI requirements and will match members who completed both required activities to members who completed none of the required activities based on their propensity scores using nearest neighbor matching. Members who completed only one of the two required activities will be excluded. After matching, we will visually inspect the covariates to confirm that our target and control groups are balanced with respect to observed covariates.

**We will estimate either modified Poisson or ordinary least squares regression models (depending on whether our outcomes are binary, count, or continuous). In some cases, there will be no comparison group. In other cases, we will estimate our models among our propensity score matched sample as described above and earlier in the table that presents our analytic approach. All models will adjust for member demographics including age, gender, race/ethnicity, rurality, and income-group. All models will also adjust for members' health status using a subset of health conditions, including chronic conditions indicators, the number of times during the year that a member's residence changes, an indicator of the MCO in which the member is enrolled, the member's total years of enrollment (as a running count of cohorts), and a cohort fixed effect. Finally, we will adjust for other contextual factors drawn from the Area Health Resources File, CDC Social Vulnerability Index, and the American Community Survey.*

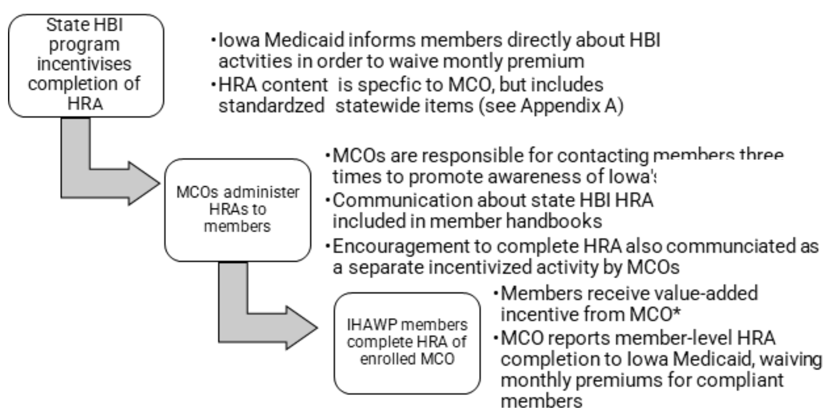
^We will also conduct sensitivity analyses. For example, in lieu of the specific contextual factors described previously, we will adjust for all observed and unobserved variation at the county level using fixed effects. This has the advantage of better controlling for omitted variables but results in a limited ability to identify specific factors. Where feasible, we will also explore the use of individual-level fixed effects for the same reason. Finally, to assess the extent to which there is a dose-response relationship between completing the HBI requirements and our outcomes of interest, we will define our key independent variable in those models as a running count of the number of HBI requirements completed during the period in which a member was enrolled.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

HBI Results

HBI Process evaluation

Figure 8. Summation of Healthy Behaviors Incentive Program Process as Described by Key Stakeholders



**Each MCOs value-added benefits (e.g., sending members gift cards) are completely independent from state HBI administration*

Efforts to promote the HBI Program

Stakeholders indicated that Iowa Medicaid and the MCOs used the following methods to communicate with members about the HBI program:

- Member handbooks
- Mailed letters (occasional neon paper): "*We helped them create actually a letter so for a mailing. And they wanted us to use this mailing, so it's one of three letters. There's one that says you still need to complete your screener. You still need to complete your wellness, or you still need to complete both. And so, we email those out 60 days, I believe 60 days prior to the member's annual enrollment date. And so that's just on a rolling basis. So, we're mailing those out monthly to the members that have their annual enrollment date coming up.*" – MCO representative
- Information posted to state and MCO websites
- Texting (cell phone)
- Telephone calls (incoming and outgoing): "*Our call center agents are trained with the appropriate information should they receive a question when a member engages there as well.*" – MCO representative
- Flyers
- Postcards (occasional neon paper)
- Website

Several stakeholders perceived HBI-information campaigns to approach overcommunication (described by some as "ongoing," "nonstop" and "bombarded").

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Members’ experiences as reported by interviewees

Some interviewees indicated that the promotion campaigns from the state and the MCOs could be challenging for members because of the number of reminders. Another MCO representative commented on the saturated nature of communication efforts, which motivated a change in strategy, saying,

> *“we used to call members as part of that [HBI-related communication] too. And we've stopped that, or actually I stopped that because I think it was causing some abrasion. I just don't think that was a very effective method and people were getting irritated by that. So, we moved to strictly mailers.”*

Regarding the MCOs contractual obligation to contact members at least 3 times before removing them from completion reporting denominator, one MCO representative said,

> *“we get feedback from some members saying they think three is a lot and they're not very happy about it.”*

The role of MCO in promoting Healthy Behaviors

Representatives from the MCOs reported that the HBI program added to the administrative duties of the MCOs, MCO-based caseworkers’ effort in assisting members in navigation of HBI requirements and value-added incentives, the MCOs developed and implemented multi-method communication campaigns and reminders related to HBI, and caseworker time is spent verifying HRA responses, as reported by an MCO representative,

> *“if we get things and they're surveys and they're incomplete, we're calling members reaching out to try to clarify that information.”*

One MCO reported strategies to bolster member participation and encourage provider involvement in completion of healthy behaviors, saying,

> *“We've got marketing materials that we promote the screener with and wellness exams. We do education with our providers around the importance of completing this. We've got different reps assigned to the clinics and so they do some education there with it. We do texting campaigns and call campaigns for our members to get them in for their wellness exams.”*

One MCO representative commented on the tracking of member compliance with the state’s HBI requirements, noting occasional instances of under-reporting credit for completing an MCO HRA within the state’s premium enforcement system, but included that MCOs were involved in resolving erroneous premium charges, saying

> *“they've said for some reason I got charged a premium and they'll call us. And we said, ‘Yeah. We can see that you completed these things.’ So, I mean, generally, or my understanding has been that if the member talks with Iowa Medicaid and says they completed this, that Iowa Medicaid generally waives that requirement, but I know that our case managers have helped facilitate some of that, I believe.”*

Regarding member options to complete an HRA to fulfill IHAWP expectations, one MCO reported options to complete the HRA over the phone or in the MCO’s member portal. The other MCO reported members are able to complete the MCO’s HRA on the web, through

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

mail (paper HRA), or over the phone. One MCO elaborated on preferences for maintaining up-to-date data in member HRA completion, saying,

> *"we encourage our members to complete it on the web, just because that is the quickest way the information is funneled directly into our system obviously, for them to get a reward and, or make sure that we've captured that data to have their premium waived."*

The role of Clinic Staff in promoting Healthy Behaviors

Clinic staff reported that patients bring mail from Iowa Medicaid and MCOs to the clinic, seeking advice, which staff assist with, saying,

> *"A lot of times I tell people I help, 'If you get anything in the mail, bring it in.' I give them a folder, 'Keep it all in here and I'll help you explain it. I'll help explain it to you. I'll help you fill out the paperwork.' A lot of patients do that with me. I've been here long enough that they know that. Some, yeah, no, they never got anything. Or they move a lot and their mail's three addresses ago."*

It should be noted that while clinic staff are increasing healthcare access for members by assisting with their mail, this work may also be viewed as a "spillover" effect; work that staff do that is not necessarily outlined in their job description.

Iowa Medicaid

Representatives of the state Medicaid program indicated the following administrative duties which were a result of the HBI program:

- Issuing refunds to members erroneously charged premiums
- Coordinating data sharing with MCOs and ensuring accuracy of member completion rates
- Quarterly member completion compliance reporting to CMS
- Coordination of and staff time participating in workgroups to develop program implementation specifics

HBI Quantitative Results

Hypothesis 1: The proportion of members who complete a wellness exam, health risk assessment, or both will vary.

Research Question 1.1: What proportion of members complete a wellness exam in a given year?

Research Question 1.2: What proportion of members complete an HRA in a given year?

Research Question 1.3: What proportion of members complete both required activities in a given year?

As Table 11 shows, there is an overall increase in the percentage of members completing a well-visit over the years of enrollment in the program, with the greatest percentage (39.28%) being in the 8th year. The pattern for completion of HRA or of both required

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

activities is less consistent over the years of enrollment. The percentage of people completing either HRA or both activities each year is smaller than the percentage of those completing a well-visit. The largest proportion of members (9.2%) completing both a well-visit and HRA was in the 6th year of enrollment in HBI.

Table 11. Percentages of Members Completing a Well-Visit, an HRA, or Both Required Activities Each Year of Enrollment in HBI, Between 2014 and 2021

HBI year	Had well-visit (%)	Had HRA (%)	Had both well-visit and HRA (%)
1	31.38	14.64	8.61
2	30.59	12.05	7.52
3	32.28	14.79	8.74
4	34.17	10.59	6.82
5	35.34	11.82	7.62
6	37.05	14.33	9.2
7	37.59	12.37	7.39
8	39.28	13.36	8.41

There is an increasing trend in the percentage of members completing a well-visit, an HRA, or both required activities duration of enrollment in a given year (Table 12). Around 40% of members who have been enrolled in HBI for 11 or 12 months completed a well-visit versus roughly 11% of those who have only been enrolled for less than 6 months. Similarly, a little over 11% of those enrolled for 11 or 12 months completed both activities relative to only 1.15% of members who have been enrolled for half a year or less.

Table 12. Percentages of Members Completing a Well-Visit, an HRA, or Both Required Activities by Enrollment Duration in Months, Between 2014 and 2021

Months	Had well-visit (%)	Had HRA (%)	Had both well-visit and HRA (%)
0 to 6	10.77	3.74	1.15
7 to 10	27.79	10.19	5.14
11 or 12	40.53	17.69	11.27

Similar to the findings from Table 12, Table 13 shows that a greater percentage of members enrolled in the HBI program for more months complete either or both of the required activities. Furthermore, for a certain period (e.g., 11 or 12 months), a higher percentage of members who have been in the program for more years complete a well-visit overall. The pattern is less consistent for completion of HRA or both well-visits.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Table 13. Percentage of Members Completing a Well-Visit, HRA, or Both by Enrollment Duration in Months, Each Year in the Program, Between 2014 and 2021

Months	HBI year	Had well-visit (%)	Had HRA (%)	Had both well-visit and HRA (%)
0 through 6	1	10.43	3.7	1.15
	2	10.06	3.56	1.14
	3	11.28	4.05	1.17
	4	12.08	3.57	1.01
	5	12.51	3.87	1.05
	6	12.85	4.41	1.47
	7	16	5.42	1.62
	8	16.33	5.75	1.77
7 through 10	1	25.09	10.56	5.03
	2	29.77	10.07	5.54
	3	28.54	11.38	5.38
	4	29.72	7.45	4.07
	5	29.19	7.85	4.38
	6	33.15	9.96	5.94
	7	34.29	10.68	4.96
	8	39.13	12.27	7.29
11 or 12	1	38.14	18.3	11.23
	2	41.69	16.94	11.26
	3	42.01	20.04	12.62
	4	43.24	13.77	9.48
	5	44.97	15.53	10.67
	6	47.3	19	12.81
	7	45.58	15.05	9.8
	8	49.54	17.16	11.79

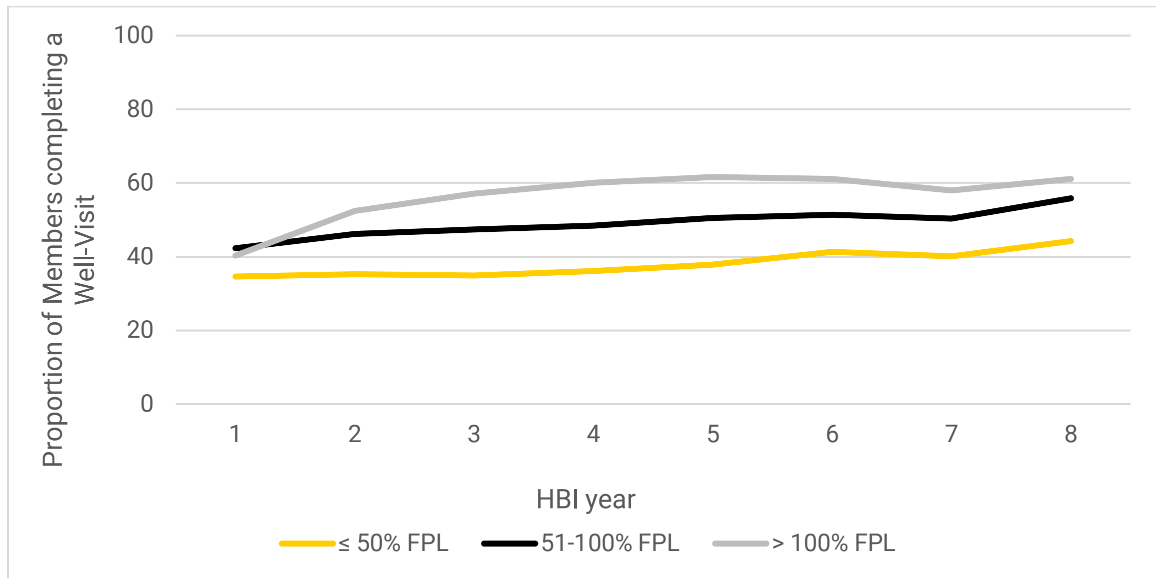
Hypothesis 2: The proportion of members completing a wellness exam, health risk assessment, or both will change over time and by income level.

Research Question 2.1: Has the proportion of members completing a wellness exam decreased among lower-income members and increased among higher-income members?

A greater proportion of members belonging to the highest income group (>100% FPL) complete a well-visit, followed by members belonging to the middle-income group (51–100% FPL), and then by members with the lowest income level (≤50%) (Figure 9).

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Figure 9. Trends in Completion of a Well-Visit by Income Level Between 2014 and 2021

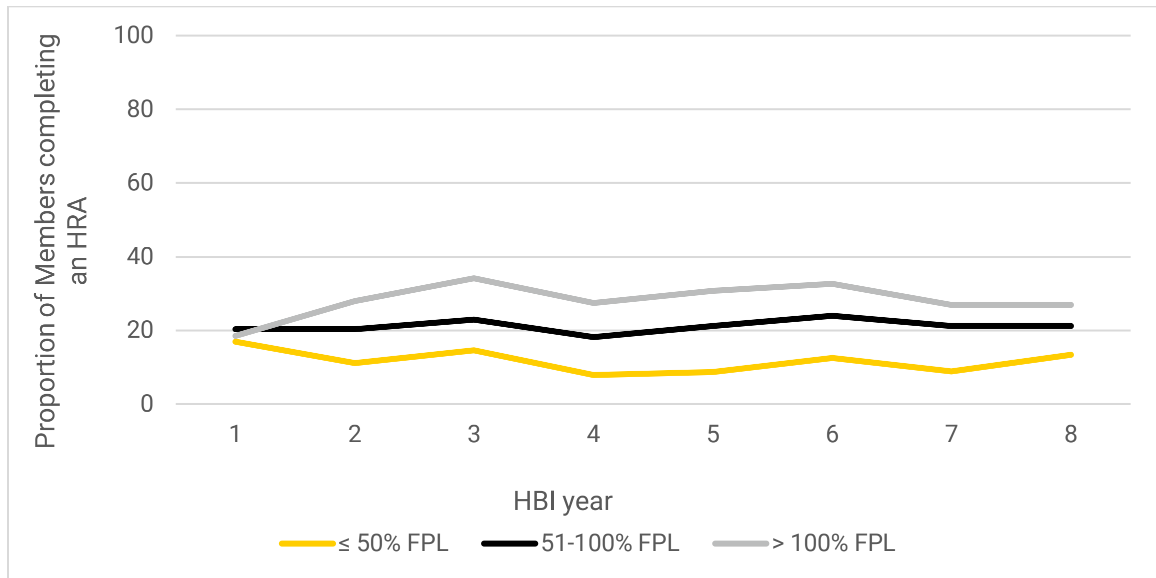


Research Question 2.2: Has the proportion of members completing an HRA decreased among lower-income members and increased among higher-income members?

A greater proportion of members belonging to the highest income group (>100% FPL) complete an HRA, followed by members belonging to the middle-income group (51–100% FPL), and then by members with the lowest income level (≤50%) (Figure 10). Completion trends by number of years in the program are relatively flat across all income groups.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Figure 10. Trends in Completion of an HRA by Income Level Between 2014 and 2021

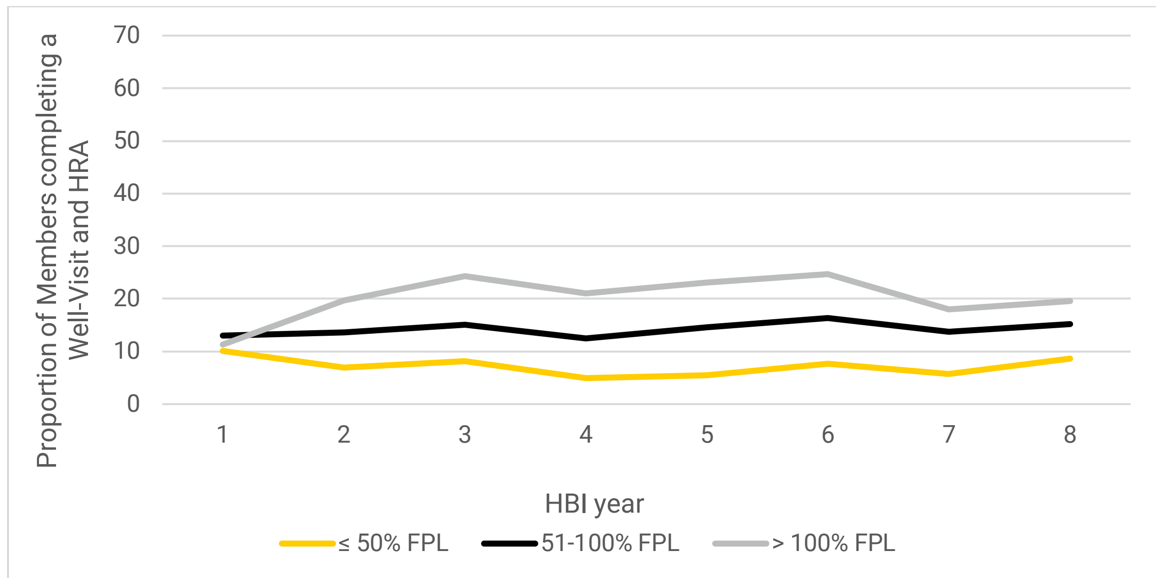


Research Question 2.3: Has the proportion of members completing both required activities decreased among lower-income members and increased among higher-income members?

> *A greater proportion of members belonging to the highest income group (>100% FPL) complete both required activities, followed by members belonging to the middle-income group (51–100% FPL), and then by members with the lowest income level (≤50%) (Figure 11).*

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Figure 11. Trends in Completion of Well-Visit and HRA by Income Level Between 2014 and 2021

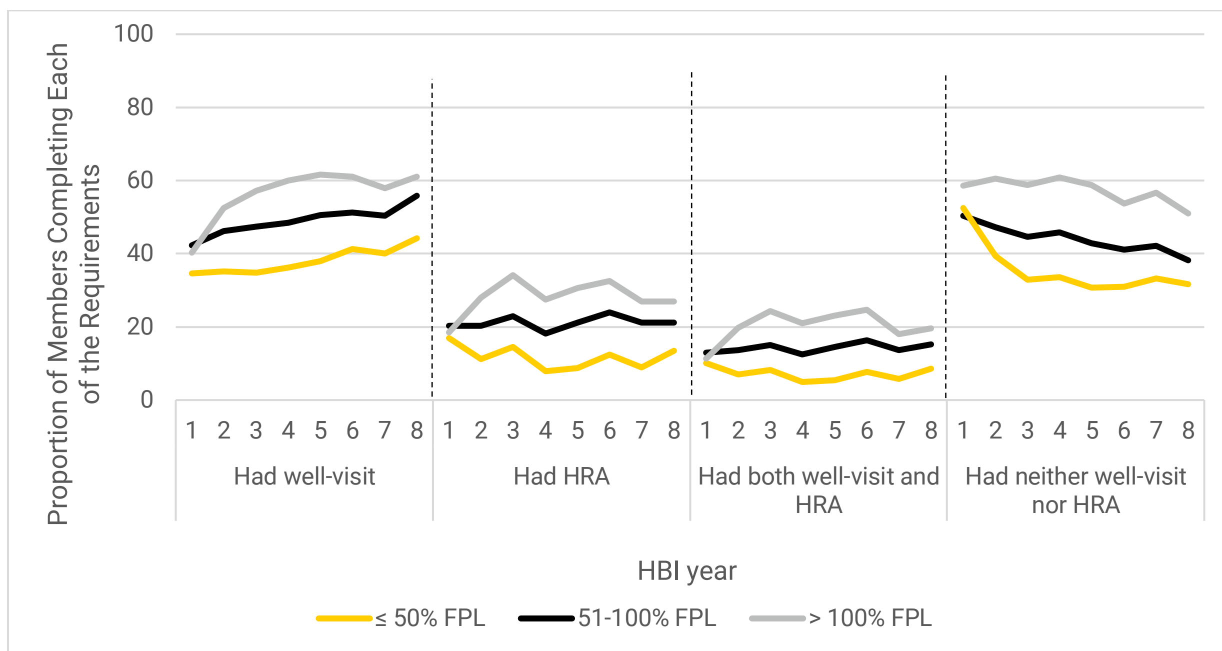


Overall, the percentage of members completing well-visits is higher than the percentage of those completing an HRA, or both required activities, among all three income groups.

Conversely, a greater proportion of members belonging to the lowest income group (≤50% FPL) complete neither of the required activities, followed by members belonging to the middle-income group (51–100% FPL), and then by members with the highest income level (>100% FPL) (Figure 12).

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Figure 12. Trends in Completion of a Well-Visit, an HRA, Both, or Neither of the Required Activities by Income Level Between 2014 and 2021



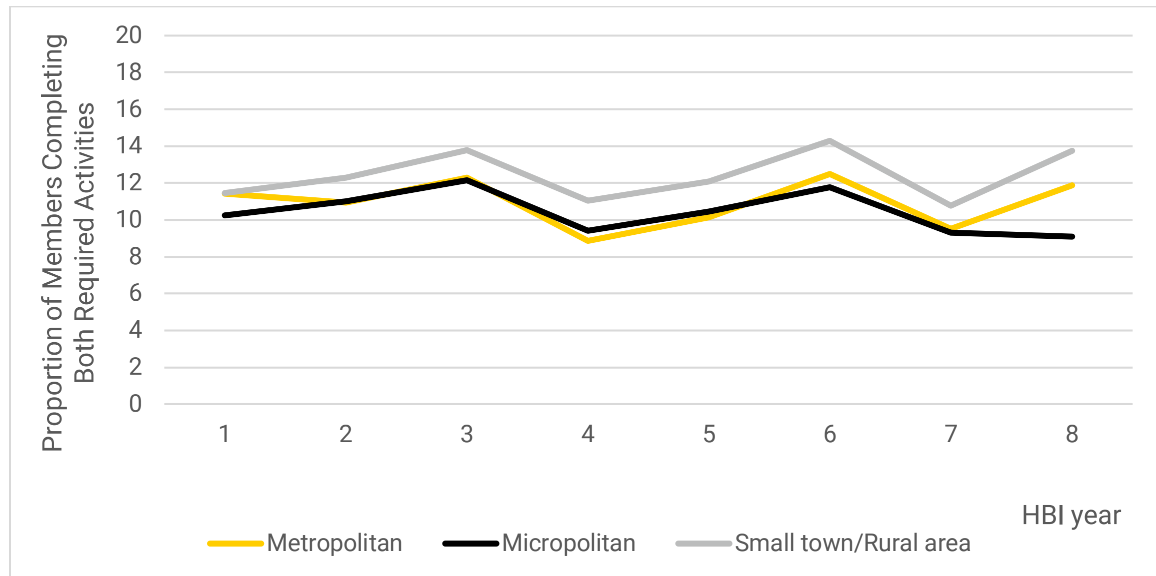
Hypothesis 3: Member characteristics are associated with the likelihood of completing both required HBI activities.

Research Question 3.1: Are older, non-Hispanic white females living in metropolitan counties more likely to complete both required activities? (differences by age and sex will be included with the final report).

A greater proportion of members residing in small towns/rural areas tend to complete both required activities over time compared to counterparts residing in metropolitan or micropolitan areas (Figure 13). Members living in metropolitan and micropolitan areas tend to have similar trends in completion of both activities over time, although a higher percentage of people residing in metropolitan areas completed both activities in their 8th year in the program compared to micropolitan residents whose percentage completing both activities decreased in the 8th year.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Figure 13. Trends in Completion of a Well-Visit and HRA by Type of Residence Area Between 2014 and 2021



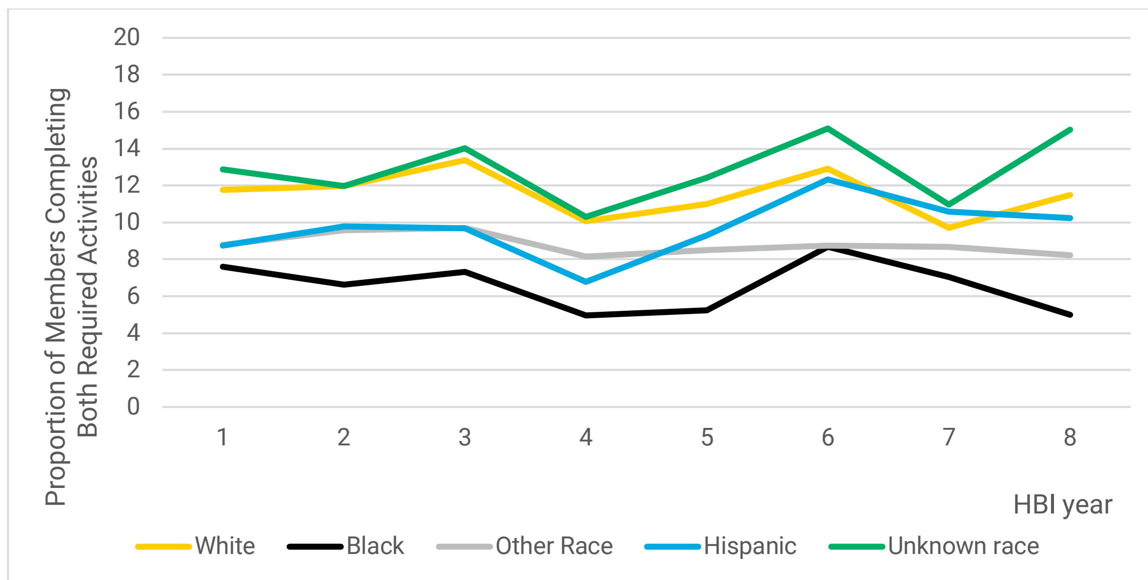
Note: 1,070 observations are missing

The Black population has the smallest percentage of members completing both required activities over time compared to other races/ethnicities (Figure 14). People with "unknown race" have the highest percentages of members completing both activities over time. Overall, most of the race/ethnicity populations follow broadly a similar pattern

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

over time, with the highest percentage of members completing both required activities being in the 6th year.

Figure 14. Trends in Completion of Well-Visit and HRA by Race and Ethnicity Between 2014 and 2021

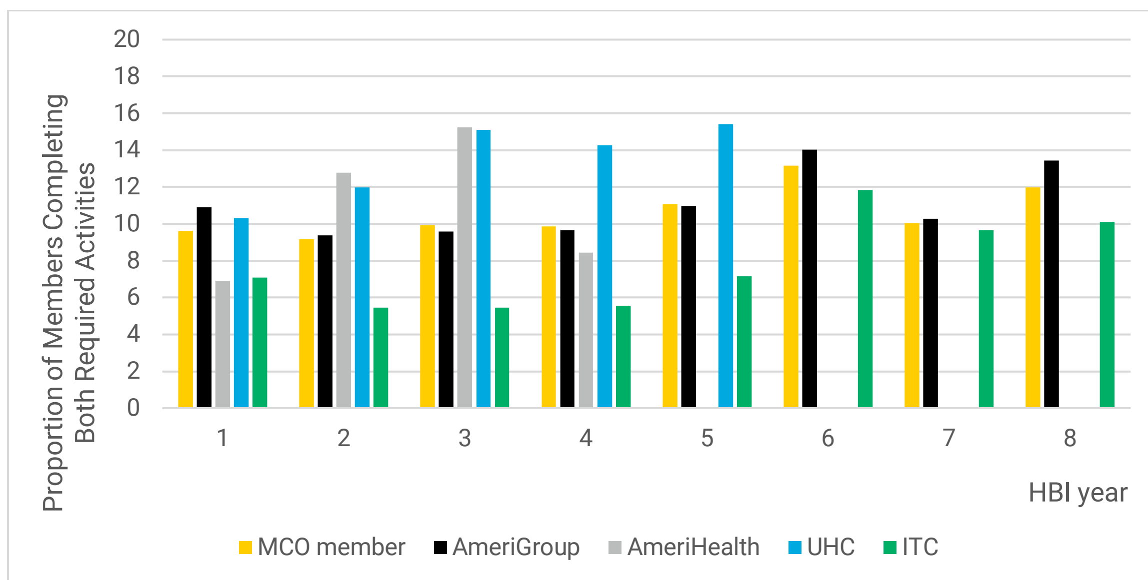


Research Question 3.2: Are members assigned to some MCOs more likely than members assigned to other MCOs to complete both required activities?

There is no regular pattern of change over time in the percentages of members completing both required activities by MCO membership status (i.e., MCO versus non-MCO beneficiary), or by MCO type (i.e., AmeriGroup, AmeriHealth, UHC, or ITC beneficiary) (Figure 15). Overall, the percentage of MCO members completing both activities is fairly stable over the first 4 years of HBI enrollment. The proportion of members starts to increase in the 5th year and reaches the highest percentage in year 6, followed by some decrease and increase in the 7th and 8th years, respectively.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Figure 15. Trends in Completion of Well-Visit and HRA by MCO Membership Status and Type Between 2014 and 2021



Hypothesis 4: Completing HBI requirements is associated with a member's use of the emergency department (ED).

Data compilation and modeling in progress, outcomes will be included in final report. Please refer to the Revised HBI Data sources, Analysis Methods, and Measures for a complete description of the added analysis components, including DID analyses.

Medicaid claims and enrollment files through CY 2022 are compiled. ED visits for these analyses will include all outpatient ED that did not results in a transfer to another hospital or an inpatient stay. Completed lists of ED visits as defined by the Iowa HHS have been collected and coded for analysis. The John's Hopkins ACG system has been purchased and claims have been processed to determine level of emergency – 1) non-emergent, 2) emergent, primary care treatable, 3) emergent, ED care needed and potentially preventable or avoidable with timely and effective ambulatory care, 4) emergent, ED care needed, and not preventable, 5) injuries, 6) psychiatric conditions, 7) alcohol use, 8) drug use, and 9) unclassified.

Research Question 4.1: Are members who complete the HBI requirements equally likely to have an ED visit?

Research Question 4.2: Do members who complete the HBI requirements have fewer total ED visits annually?

Research Question 4.3: Are members who complete the HBI requirements less likely to have a non-emergent ED visit?

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Research Question 4.4: Do members who complete the HBI requirements have fewer total non-emergent ED visits annually?

Research Question 4.5: Are members who complete the HBI requirements less likely to have a 3-day, 7-day, or 30-day return ED visit?

Research Question 4.6: Do members who complete the HBI requirements have fewer total 3-day, 7-day, or 30-day return ED visits annually?

Hypothesis 5: Completing HBI requirements is associated with a member's use of hospital observation stays.

Data compilation and modeling in progress, outcomes will be included in final report. Please refer to the Revised HBI Data sources, Analysis Methods, and Measures for a complete description of the added analysis components, including DID analyses.

Medicaid claims and enrollment files have been compiled through CY 2022. Observation stays are a relatively unique area of investigation requiring additional investigation to ensure the latest coding is utilized. Currently, we code all outpatient ED visits not resulting in an inpatient stay with an observation stay code and all observation only visits as observation stays.

Research Question 5.1: Are members who complete the HBI requirements equally likely to have a hospital observation stay?

Research Question 5.2: Do members who complete the HBI requirements have fewer total hospital observation stays annually?

Hypothesis 6: Completing HBI requirements is associated with a member's use of inpatient hospital care.

Data compilation and modeling in progress, outcomes will be included in final report. Please refer to the Revised HBI Data sources, Analysis Methods, and Measures for a complete description of the added analysis components, including DID analyses.

Medicaid claims and enrollment files have been compiled through CY 2022. Inpatient visits are currently being categorized utilizing HEDIS specifications and avoidable hospitalization coding through the AHRQ QI software.

Research Question 6.1: Are members who complete the HBI requirements equally likely to be hospitalized?

Research Question 6.2: Do members who complete the HBI requirements have fewer total hospitalizations annually?

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Research Question 6.3: Are members who complete the HBI requirements less likely to have a potentially preventable hospitalization?

Research Question 6.4: Do members who complete the HBI requirements have fewer total potentially preventable hospitalizations annually?

Research Question 6.5: Are members who complete the HBI requirements less likely to have a 30-day all-cause readmission?

Research Question 6.6: Do members who complete the HBI requirements have fewer total 30-day all-cause readmissions annually?

Hypothesis 7: Completing HBI requirements is associated with shifts in patterns of member's health care utilization.

Data compilation and modeling in progress, outcomes will be included in final report. Please refer to the Revised HBI Data sources, Analysis Methods, and Measures for a complete description of the added analysis components, including DID analyses.

Research Question 7.1: Do members who complete the HBI requirements have fewer potentially preventable hospitalizations as a proportion of total hospitalizations?

Research Question 7.2: Do members who complete the HBI requirements have fewer non-emergent ED visits as a proportion of total ED visits?

Research Question 7.3: Do members who complete the HBI requirements have more primary care visits as a proportion of total outpatient visits?

Hypothesis 8: Completing HBI requirements is associated with a member's health care expenditures.

Data compilation and modeling in progress, outcomes will be included in final report. Please refer to the Revised HBI Data sources, Analysis Methods, and Measures for a complete description of the added analysis components, including DID analyses.

Research Question 8.1: Do members who complete the HBI requirements have lower spending in all categories?

Hypothesis 9: Disparities exist in the relationships between HBI completion and outcomes.

Data compilation and modeling in progress, outcomes will be included in final report. Please refer to the Revised HBI Data sources, Analysis Methods, and Measures for a complete description of the added analysis components, including DID analyses.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

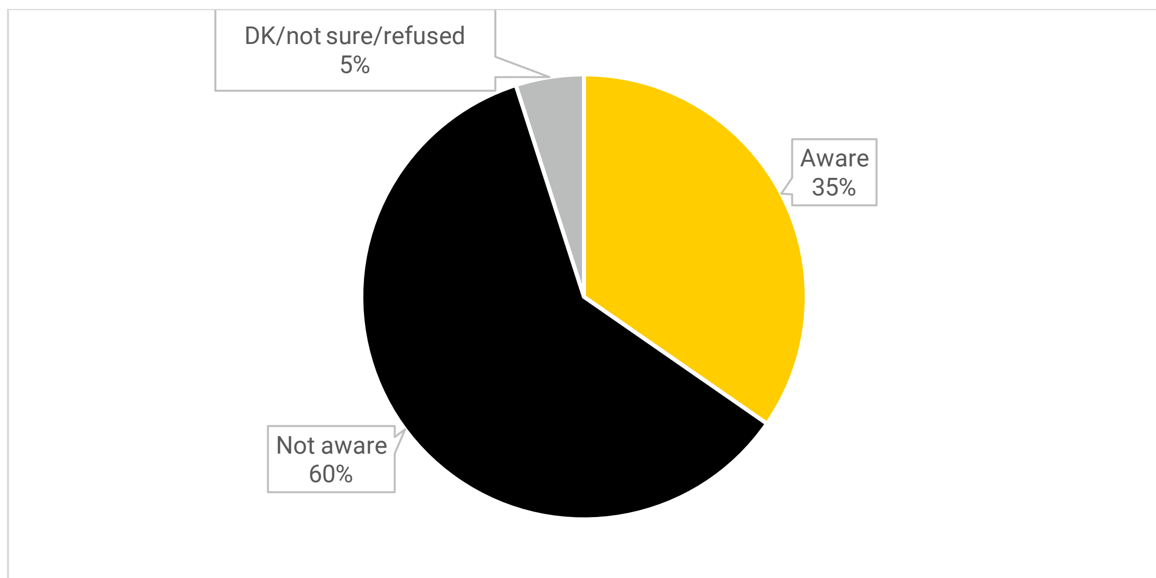
Research Question 9.1: Do disparities exist in the populations based on number of chronic conditions, race and ethnicity, rurality, and sex?

Hypothesis 10: Members who have been enrolled longer are more aware of the HBI program than those who have been enrolled a shorter period of time.

Figure 16 shows awareness of the HBI Program at 35% as reported by survey respondents.

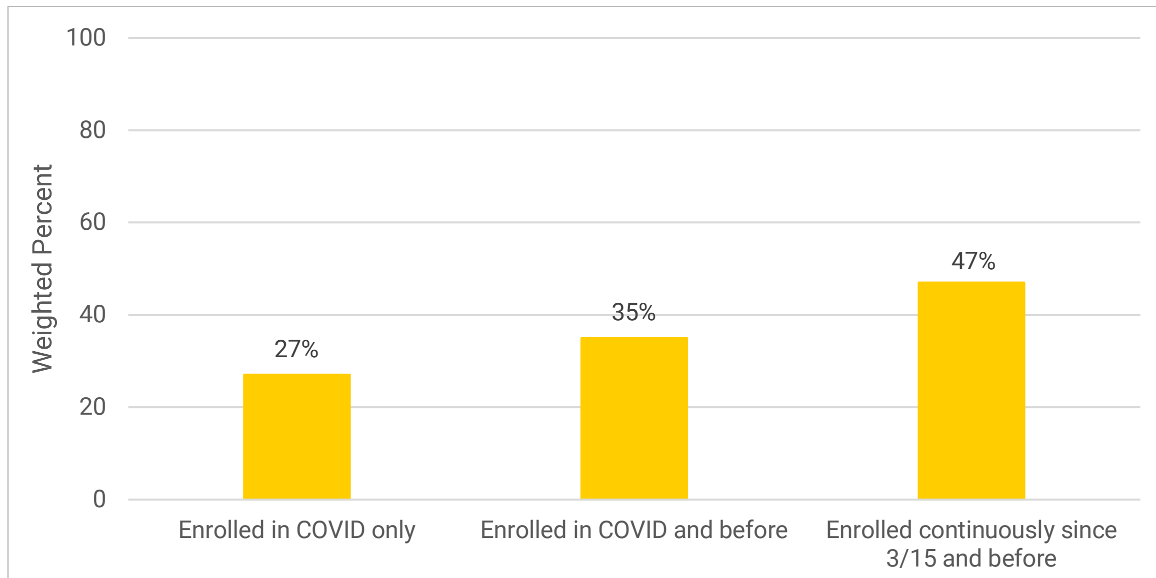
This hypothesis appears to be supported as there is relationship between awareness of the HBI program and length of enrollment. In Figure 17, awareness of the HBI program is compared by length of enrollment. Those who were enrolled since 2015 have the highest level of awareness at 47%. Those enrolled before the pandemic began (March 2020) report awareness of the HBI program at 35%, while 27% of those who only enrolled during the pandemic are aware of the program.

Figure 16. Weighted Percent of Respondents Aware of the HBI Program (N=2,832)



The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Figure 17. Percent of Respondents Aware of the HBI Program by IHAWP Enrollment Duration (N=2,832)



Chi-square p<.05, Don't know coded as not aware

Hypothesis 11: Members who have been enrolled longer have more knowledge about the HBI program than those who have been enrolled a shorter period of time.

Due to the public health emergency, we were unable to ask members about their knowledge of the HBI program. Table 14 shows reported understanding of health insurance coverage. Many members agreed that they understood their coverage and benefits (59%) but only 18% strongly agreed with this. Just under 20% indicated strong agreement that they understood their insurance plan premiums or strong agreement that they understood what to do to prevent disenrollment prior to the pandemic.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

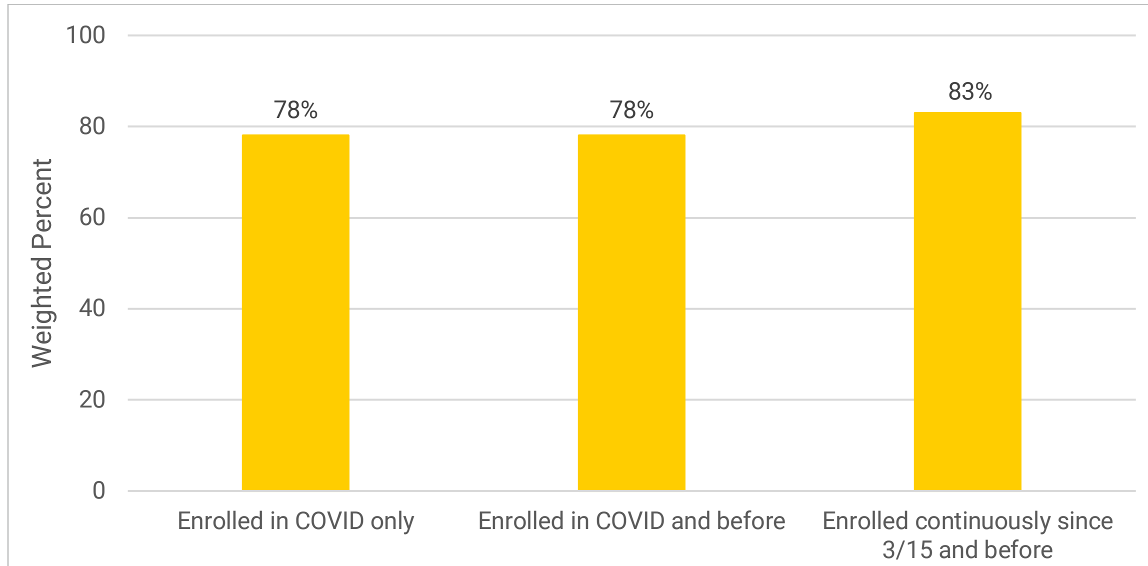
Table 14. Understanding of Specific Aspects of their Health Insurance Plan as Reported by Respondents (N= 2,832)

Statement/Response	Weighted Percent
I understand my insurance coverage and benefits	
Strongly disagree	2%
Disagree	8%
Neither agree nor disagree	12%
Agree	59%
Strongly agree	18%
Don't know/not sure/refused	1%
I understand my insurance plan's premiums	
Strongly disagree	3%
Disagree	11%
Neither agree nor disagree	13%
Agree	52%
Strongly agree	19%
Don't know/not sure/refused	2%
Prior to the pandemic, I understood what I needed to do to prevent from being disenrolled from my insurance	
Strongly disagree	6%
Disagree	15%
Neither agree nor disagree	12%
Agree	45%
Strongly agree	17%
Don't know/not sure/refused	5%

Figure 18-Figure 20 show reported health plan knowledge by IHAWP enrollment duration. Enrollment duration was not associated with overall health plan understanding. The continuously enrolled group also reported the highest rate of understanding how to prevent disenrollment prior to the pandemic.

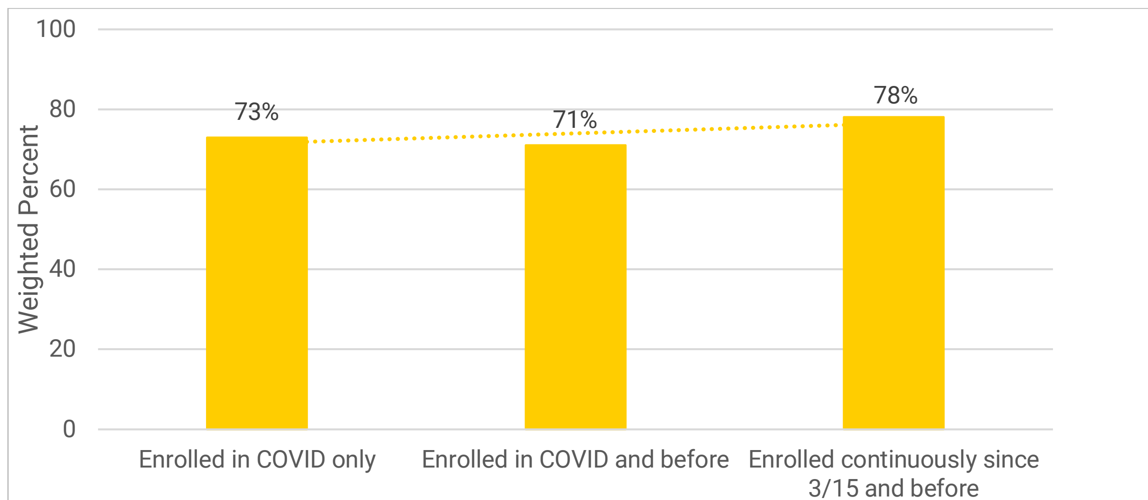
The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Figure 18. Percent of Respondents who Agreed or Strongly Agreed they Understood their Insurance Coverage and Benefits by IHAWP Enrollment Duration (N=2,806)



Chi-square not significant, Don't know/refused coded as missing

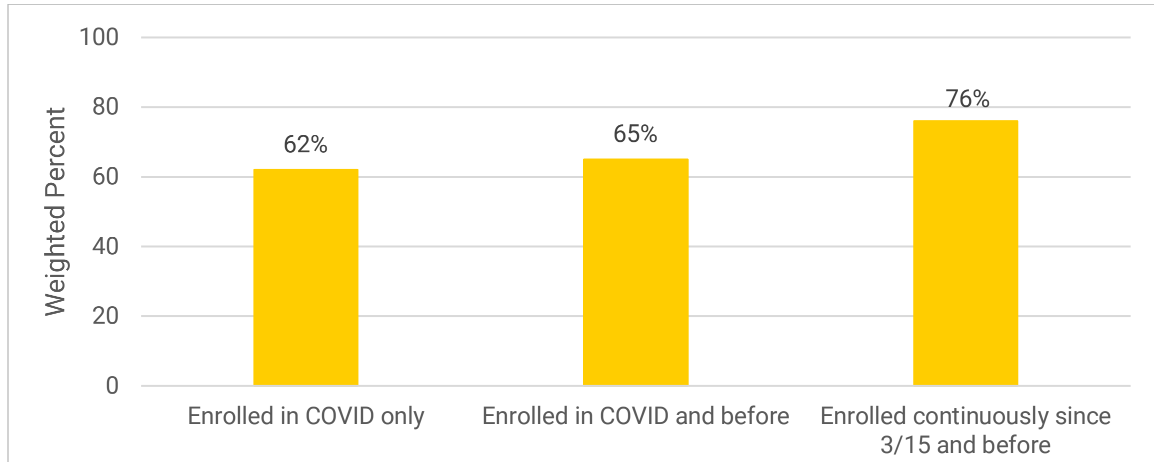
Figure 19. Percent of Respondents who Agreed or Strongly Agreed they Understood their Insurance Premiums by IHAWP Enrollment Duration (N=2,760)



Chi-square p<.05, Don't know/refused coded as missing

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Figure 20. Percent of Respondents who Agreed or Strongly Agreed they Understood How to Prevent being Disenrolled Prior to the Pandemic by IHAWP Enrollment Duration (N=2,685)

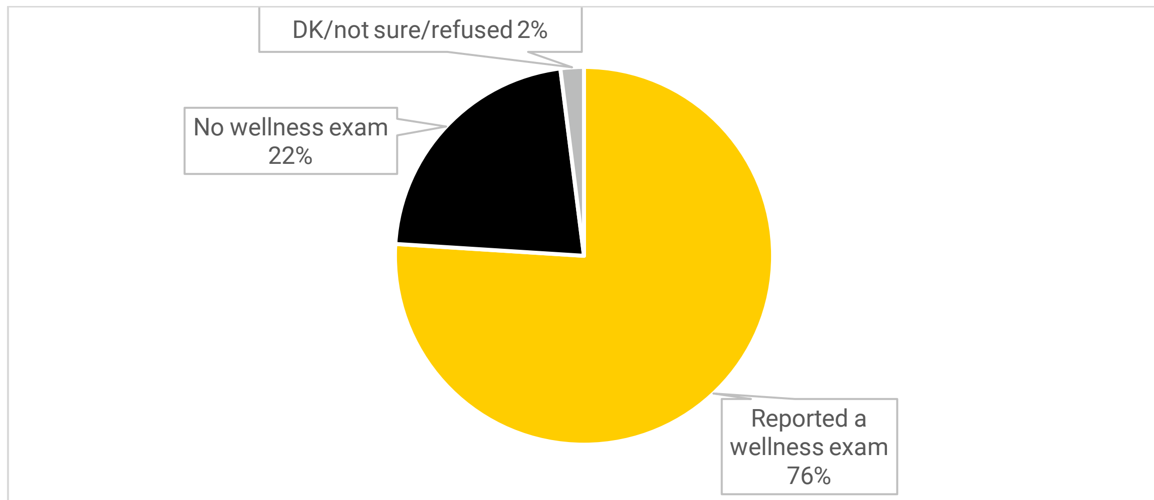


Chi-square p<.05, Don't know/refused coded as missing

Hypothesis 12: Those who are aware of the HBI program are more likely to complete the behaviors (HRA and well exam) compared to those who are not aware.

Over three-fourths (76%) of the members reported having completed a wellness exam in the past year (Figure 21) according to survey respondents.

Figure 21. Weighted Percent of Respondents Reporting a Wellness Exam in the Past Year (N=2,832)

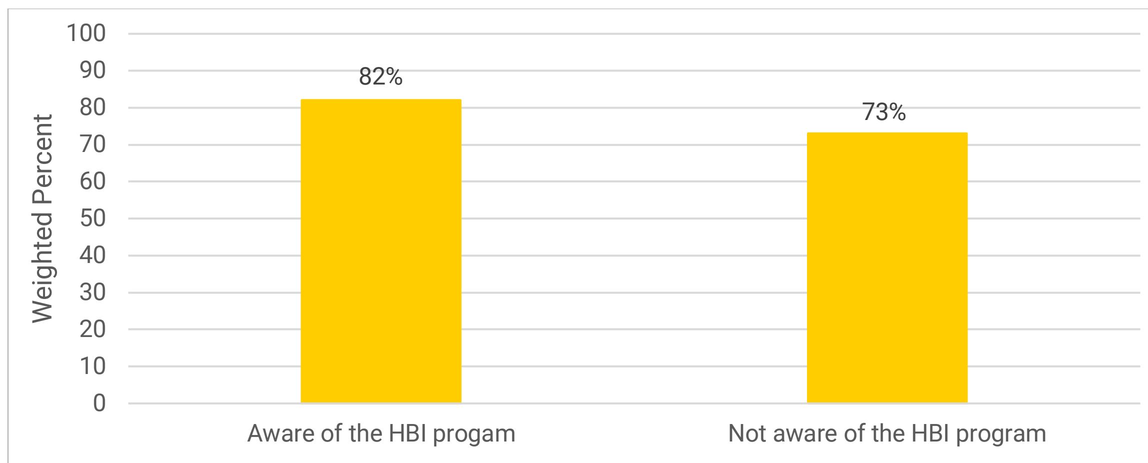


There is evidence that those who were aware of the HBI program were more likely to complete a wellness exam compared to those who were unaware. Figure 22 shows completion of a wellness exam by awareness of the HBI program. People who were aware

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

of the HBI program were more likely to report having completed a wellness exam (82% vs. 73%).

Figure 22. Percent of Respondents Reporting a Wellness Exam by HBI Program Awareness (N=2,832)



Chi-square p<.05, Don't know coded as not having a wellness exam

Hypothesis 13: Those who have more knowledge about the HBI program are more likely to complete the behaviors (HRA and well exam) than those with less knowledge.

Because of the public health emergency, we were unable to ask members about the HBI program. Table 15 shows that reporting more health plan knowledge was associated with a higher likelihood of reporting a well child visit. For example, 80% of those who agreed/strongly agreed they understood how to prevent disenrollment prior to the pandemic reported they had a wellness exam. This compares to 68% of those who disagreed/strongly disagreed that they understood how to prevent disenrollment.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Table 15. Reported Wellness Exam Completion in Past Year by Health Insurance Plan Knowledge

	Weighted percent with wellness exam	Chi-square
Understood insurance coverage and benefits (N=2,806)		
Disagree/strongly disagree	62%	p<.05
Neither agree nor disagree	63%	
Agree/strongly agree	80%	
Understood insurance premiums (N=2,760)		
Disagree/strongly disagree	61%	p<.05
Neither agree nor disagree	68%	
Agree/strongly agree	81%	
Understood how to prevent disenrollment prior to pandemic (N=2,685)		
Disagree/strongly disagree	68%	p<.05
Neither agree nor disagree	69%	
Agree/strongly agree	80%	

Hypothesis 14: Member socio-demographic characteristics and perceptions/attitudes are associated with awareness of the HBI program.

Disparities in HBI program awareness remained mostly unchanged in a logistic regression model controlling for enrollment duration and demographics (Table 16). Adjusted percents show higher awareness for White (37%) vs. Black (26%) and Hispanic members (24%) and for those with a 4-year degree (44%) vs. those with less education. Females also had higher adjusted rates than males.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Table 16. Factors Associated with HBI Program Awareness in Multivariable Logistic Regression Model (N = 2,755)

	Adjusted percent aware of HBI program	Adjusted difference in percent
IHAWP enrollment duration		
Enrolled in COVID only	28%	Reference
Enrolled in COVID & before	34%	+6.7 p<.05
Enrolled continuously since 3/15 & before	44%	+16.8 p<.05
Race/Ethnicity		
White	37%	Reference
Black	26%	-10.3 p<.05
Hispanic	24%	-13.1 p<.05
Multiple race/other	21%	-15.2 p<.05
Age		
19-34 years old	27%	Reference
35-54 years old	37%	+10.0 p<.05
55 years and over	36%	+9.2 p<.05
Education		
High school diploma or less	29%	Reference
Some college	35%	+6.4 p<.05
4-year degree or more	44%	+14.8 p<.05
Gender		
Male	31%	Reference
Female	38%	+6.8 p<.05

Hypothesis 15: Member socio-demographic characteristics and perceptions/attitudes are associated with knowledge of the HBI program.

Due to the public health emergency, we were unable to ask about knowledge of the HBI program. A composite indicator of health plan knowledge indicates agreement or strong agreement with 3 items: understood health plan, understood insurance premiums, and understood how to prevent disenrollment prior to the pandemic. In adjusted logistic regression, those enrolled longer, older members, females, and those with less education reported more understanding of their health insurance plan (Table 17).

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Table 17. Factors Associated with Understanding Health Insurance Plan, Premiums, and How to Prevent Disenrollment in Multivariable Logistic Regression Model (N=2,565)

	Adjusted percent: understood insurance plan, premiums, and how to prevent disenrollment	Adjusted difference in percent
IHAWP enrollment duration		
Enrolled in COVID only	51%	Reference
Enrolled in COVID & before	51%	+0.6 NS
Enrolled continuously since 3/15 & before	60%	+8.6 p<.05
Race/Ethnicity		
White	52%	Reference
Black	58%	+6.4 NS
Hispanic	52%	-0.2 NS
Multiple race/other	43%	-8.9 NS
Age		
19-34 years old	47%	Reference
35-54 years old	53%	+5.9 NS
55 years and over	57%	+9.9 p<.05
Education		
High school diploma or less	59%	Reference
Some college	50%	-8.7 p<.05
4-year degree or more	44%	-15.0 p<.05
Gender		
Male	48%	Reference
Female	57%	+9.0 p<.05

Hypothesis 16: Member socio-demographic characteristics and perceptions/attitudes are associated with completion of the HRA and well exam.

Table 18 shows adjusted percents from a logistic regression model predicting reported wellness exam completion. Those aware of the HBI program were more likely than those not aware of the program to report completing a wellness exam (81% vs. 73%). This finding was not explained by basic underlying demographic differences. Wellness exam completion was also higher for females and older members in adjusted models.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Table 18. Factors Associated with Reported Wellness Exam Completion in Past Year in Multivariable Logistic Regression Model (N = 2,755)

	Adjusted percent reporting wellness exam	Adjusted difference in percent
Aware of HBI program		
No	73%	Reference
Yes	81%	+7.9 p<.05
IHAWP enrollment duration		
Enrolled in COVID only	76%	Reference
Enrolled in COVID & before	76%	-0.2 NS
Enrolled continuously since 3/15 & before	79%	+2.9 NS
Race/Ethnicity		
White	76%	Reference
Black	81%	+5.2 NS
Hispanic	72%	-4.1 NS
Multiple race/other	76%	+0.4 NS
Age		
19-34 years old	72%	Reference
35-54 years old	73%	+1.7 NS
55 years and over	86%	+14.6 p<.05
Education		
High school diploma or less	74%	Reference
Some college	78%	+3.4 NS
4-year degree or more	77%	+2.9 NS
Gender		
Male	72%	Reference
Female	82%	+10.4 p<.05

Hypothesis 17: Members are most likely to hear about the HBI program from their MCO.

Table 19 shows the mechanism by which respondents heard about the HBI program. Most (37%) reported receiving a letter from their MCO, while 19% remember some communication from an unknown source, and 11% indicated they heard about the program from Iowa Medicaid.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

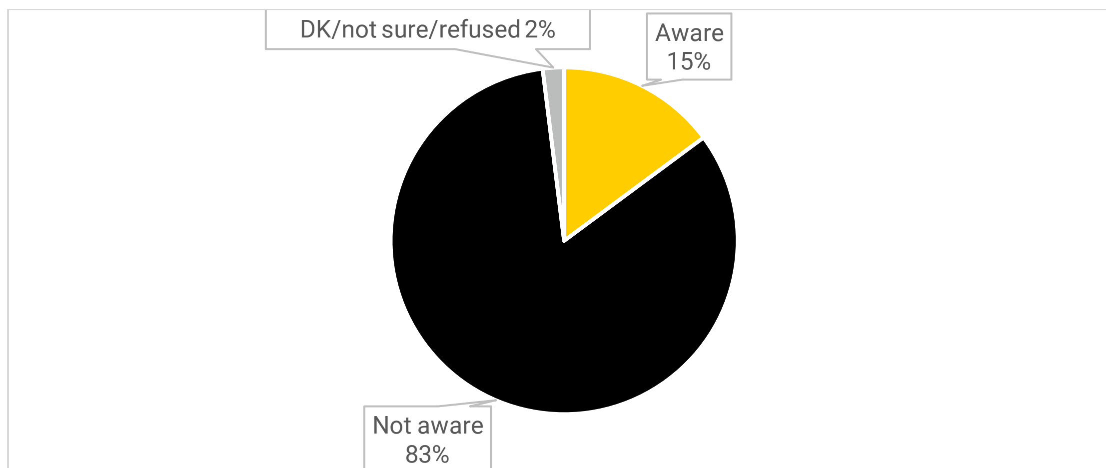
Table 19. How Respondents Heard About the HBI Program (Among those Aware of the Program, N=1,044)*

	Weighted Percent
Received a letter from my MCO (Amerigroup and Iowa Total Care) telling me about the Healthy Behaviors Program	37%
Received a letter/brochure/pamphlet but don't remember from who	19%
Received a letter from DHS/IME/Medicaid/Iowa Health Link telling me about the Healthy Behaviors Program	11%
My healthcare provider told me about the Healthy Behaviors Program while I was at the clinic	10%
Received a call from my MCO (Amerigroup and Iowa Total Care) telling me about the Healthy Behaviors Program	7%
Heard from family, friends, a coworker, or workplace	7%
Found out about it on the internet	6%
Found out about it via email	2%
Received a call or notification from the clinic I go to telling me about the Healthy Behaviors Program	1%
Found out when completing the HRA	1%
Found out when I applied or in initial health care information packet	1%
Found out when I received a bill or was disenrolled	<0.5%
Other	4%
Don't know/not sure	7%

Respondents could select more than one place where they heard about the HBI program

Figure 23 shows the percentage of respondents that were aware that the HBI program was on pause due to the federal public health emergency. Only 15% of the respondents who were aware of the HBI program knew that the program was on pause.

Figure 23. Weighted Percent of Respondents Aware of the HBI Program was on Pause (Among those Aware of the HBI Program, N=1,044)



The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Table 20 illustrates how members reported hearing about the HBI program being on pause due to the public health emergency. Over a quarter (28%) had heard about this change through some communication with the Managed Care Organizations or Iowa Medicaid.

Table 20. How Respondents Heard the HBI Program was on Pause (N = 162)*

	Weighted Percent
Received a call/letter from my MCO (Amerigroup and Iowa Total Care) telling me	15%
Received a letter from DHS/IME/Medicaid/Iowa Health Link telling me	13%
My healthcare provider told me	12%
Found out about it on the internet	9%
Received a letter/brochure/pamphlet but don't remember from who	8%
Heard from family, friends, a coworker, or workplace	8%
Received a call or notification from the clinic I go to telling me	4%
Heard on the television/news	4%
Found out when I received a bill	2%
Called in to ask	1%
Other	8%
Don't know/not sure	18%

**Respondents could select more than one place where they heard the HBI program was on pause*

Hypothesis 19: Members who do not complete the HRA and wellness exam, report barriers to completing the behaviors.

For those who did not complete a wellness exam, the most often selected barriers were not believing one needed a medical check-up (30%), being too busy (20%), and it being hard to schedule an appointment (11%) (Table 21).

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Table 21. Barriers to Completing a Wellness Exam (Among those with No Exam, N=563)*

	Weighted Percent
I don't believe I need a medical check-up	30%
I am too busy	20%
Hard to schedule an appointment for a medical check-up/no availability	11%
COVID concerns	9%
Getting transportation to my doctor's office is hard	6%
I don't like getting a medical check-up	6%
I don't currently have a doctor/switched doctors	6%
I can't get time off from work	6%
Forgot or just didn't go	5%
Intend to soon or appointment scheduled	5%
Dealing with other health issues	3%
Insurance coverage issues or unaware could get check-up	3%
Not sure where to go to get a medical check-up	3%
Caregiver responsibilities and challenging life circumstances	3%
I don't like my current doctor	2%
Can't get childcare	<0.5%
No HBI penalty/it was not required	<0.5%
Other	5%
No barriers	6%
Don't know/not sure	2%

**Respondents could select more than one reason for not completing a wellness exam*

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Additional analyses related to the COVID-19 Pandemic

Table 22. Factors Associated with Reported Receipt of at Least One Dose of a COVID-19 Vaccine (N=2,503), Bivariate Associations and Multivariable Logistic Regression

	At least 1 dose of a COVID-19 vaccine		Adjusted % point difference in predicted probability of reporting a COVID-19 vaccine (95% CI)
	Weighted %	Chi- square	
Race/Ethnicity			
White, non-Hispanic	67%	p<.05	Reference
Black, non-Hispanic	63%		-1.4 (-8.5 pp, 5.7 pp)
Hispanic	75%		11.9 pp (2.5 pp, 21.3 pp)*
Multiple race/other	52%		-14.2 pp (-24.7 pp, -3.6 pp)*
Age			
19-34 years old	64%	p<.05	Reference
35-54 years old	63%		-1.1 pp (-7.0 pp, 4.7 pp)
55 years and over	76%		10.7 pp (4.4 pp, 17.1 pp)*
Education			
Less than high school	54%	p<.05	Reference
High school diploma	59%		5.9 pp (-4.4 pp, 16.2 pp)
Some college	66%		11.8 pp (1.6 pp, 22.0 pp)*
4-year degree or more	83%		30.7 pp (20.2 pp, 41.1 pp)*
Gender			
Male	65%	NS	Reference
Female	68%		-2.6 pp (-7.4 pp, 2.1 pp)
Employment status			
Employed full-time	65%	NS	Reference
Employed part-time	68%		0.7 pp (-5.4 pp, 6.8 pp)
Not working	67%		1.8 pp (-3.7 pp, 7.4 pp)
IHAWP enrollment duration			
Enrolled in COVID only	68%	NS	Reference
Enrolled in COVID and before	65%		-3.5 pp (-8.2 pp, 1.3 pp)
Enrolled continuously since 3/15 and before	71%		1.7 pp (-3.0 pp, 6.4 pp)
Wellness exam in past year			
No	52%	p<.05	Reference
Yes	71%		11.5 pp (5.2 pp, 17.9 pp)*
Personal Doctor			
No	47%	p<.05	Reference
Yes	70%		16.2 pp (9.0 pp, 23.4 pp)*

**p<.05 for comparison vs. reference group in multivariable logistic regression model*

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Table 23. Factors Associated with Ever Having COVID-19 by Self-Report (N=2,523), Bivariate Associations and Multivariable Logistic Regression

	Ever had COVID-19		Adjusted percentage point difference in predicted probability of reporting ever having COVID-19 (95% CI)
	Weighted %	Chi- square	
Race/Ethnicity			
White, non-Hispanic	40%	p<.05	Reference
Black, non-Hispanic	34%		-6.9 pp (-14.4 pp, 0.5 pp)
Hispanic	54%		12.9 pp (1.5 pp, 24.4 pp)*
Multiple race/other	44%		2.9 pp (-8.8 pp, 14.7 pp)
Age			
19-34 years old	46%	p<.05	Reference
35-54 years old	40%		-2.9 pp (-9.1 pp, 3.3 pp)
55 years and over	31%		-9.3 pp (-16.2 pp, -2.4 pp)*
Education			
Less than high school	39%	NS	Reference
High school diploma	39%		-1.9 pp (-12.3 pp, 8.4 pp)
Some college	43%		1.3 pp (-9.1 pp, 11.6 pp)
4-year degree or more	36%		-3.9 pp (-15.3 pp, 7.4 pp)
Gender			
Male	39%	NS	Reference
Female	42%		5.2 pp (0.2 pp, 10.2 pp)*
Employment status			
Employed full-time	46%	p<.05	Reference
Employed part-time	41%		-2.6 pp (-9.1 pp, 3.9 pp)
Not working	33%		-10.0 pp (-15.9 pp, -4.1 pp)*
IHAWP enrollment duration			
Enrolled in COVID only	41%	p<.05	Reference
Enrolled in COVID and before	42%		0.3 pp (-4.7 pp, 5.3 pp)
Enrolled continuously since 3/15 and before	30%		-8.8 pp (-13.7 pp, -3.9 pp)*
At least one dose of a COVID-19 vaccine			
No	51%	p<.05	Reference
Yes	35%		-15.1 pp (-20.6 pp, -9.5 pp)*

**p<.05 for comparison vs. reference group in multivariable logistic regression model*

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Dental Wellness Plan

DWP Executive summary

A plan to evaluate the dental portions of Iowa Medicaid's 1115 waiver (also known as the Dental Wellness Plan-DWP) was submitted to the Center for Medicare and Medicaid Services (CMS) as part of the original IHAWP evaluation plan in 2020. However, in December 2021, the Iowa Medicaid Program made significant programmatic changes to the DWP that affected the original evaluation design. Most impactful on the evaluation was that the Iowa Medicaid program retroactively discontinued the dental Healthy Behavior portion of the DWP as described in the Iowa Wellness Plan Section 1115 Demonstration Waiver.

As a result of the programmatic changes, a new DWP evaluation plan was developed with new hypotheses and research questions that were more appropriate to the new design of the program. This plan was submitted and approved by CMS. Particular emphasis in the new evaluation plan was placed on the knowledge and impact that having a dental wellness exam qualifies as a medical healthy behavior and the impact of the dental wellness exam on having an emergency department visit for a non-emergent dental problem.

Key Findings

- The proportion of general dentists who reported accepting new adult patients with DWP remained relatively stable since 2019 at approximately 28%. The proportion accepting new children declined from 49% accepting new children with Medicaid in 2019 to 40% accepting new children with DWP Kids in 2021.
- There was a substantial difference in DWP participation across the two dental carriers. For acceptance of new DWP adult patients, 7% of dentists accepted both carriers, 20% accepted only one carrier or the other, and 74% did not accept either. This was consistent with estimates from 2019. For acceptance of children, 11% accepted both carriers, 29% accepted one or the other, and 61% did not accept either.
- The proportion of dentists who had existing adult DWP patients in their practice was 67% and also varied significantly by carrier (66% for Carrier 1 and 27% for Carrier 2).
- Among dentists accepting new adults or children with DWP, most placed limits on new patient acceptance, such as family members of existing patients, emergencies, or a set number of patients with DWP/DWP Kids.
- Regarding DWP benefit structure, a majority of dentists had positive attitudes toward having an annual dental visit as an HBI requirement and the $3/month premium, and a majority had negative attitudes toward the $1000 annual benefit

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

maximum and toward the DWP program overall. Attitudes were very consistent with findings from 2019.
- Nearly all participating DWP general dentists (96%) reported difficulty referring their DWP patients to specialists – especially oral surgeons and endodontists.
- Nearly one in five dentists (18%) used teledentistry during the first six months of COVID, but only 9% were still using it at the time of completing the survey in August 2021. Among dentists who utilized teledentistry in August 2021, most did so by receiving photos via email/text and conducting visits by phone. Few dentists reported conducting teledentistry visits by video. Most dentists used it for emergency consultations.

DWP General background information

DWP 1.0: May 2014 – June 2017

On May 1, 2014, Iowa Health and Wellness Plan (IHAWP) members became eligible for dental benefits through the CMS-approved Dental Wellness Plan (DWP). Originally, DWP offered tiered dental benefits to the state's Medicaid expansion population (ages 19 to 64) with members earning enhanced benefits by returning for regular periodic recall exams every 6-12 months (DWP 1.0).

Three years later, on May 1, 2017, the State of Iowa proposed a waiver amendment to be effective July 1, 2017, redesigning DWP as an integrated dental program for all Medicaid enrollees aged 19 and over.

DWP 2.0: July 2017 – December 2019

Benefit design

Beginning July 1, 2017, all Medicaid members were provided dental benefits through a single program. Additionally, the 1115 waiver amendment also changed the earned benefits model. Medicaid enrollees were eligible for the same set of benefits as before; however, they did not have the same requirements for recall exams. The DWP 2.0 structure eliminated the tiered benefits in response to concerns that too few members had become eligible for Tiers 2 and 3. Comprehensive dental benefits were available to members in the DWP 2.0 during their first year of enrollment.

The modified earned benefit structure in DWP 2.0 required members to complete State-designated "Dental Healthy Behaviors" annually in order to maintain comprehensive dental benefits after the first year of enrollment. Dental Healthy Behaviors include completion of an oral health self-assessment and a preventive dental visit.

Premium structure

Previously, adult Medicaid enrollees in the fee-for-service program were responsible for a $3.00 visit copayment; however, there was no copayment required for dental services in

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

the DWP 2.0. However, members with incomes over 50% of the Federal Poverty Level (FPL) who did not complete the required Dental Healthy Behaviors during their first year of enrollment had a premium obligation beginning in year two. If members failed to make monthly $3 premium payments, benefits were reduced to basic coverage benefits only. Certain DWP members (e.g., pregnant women) were exempted from the premium obligations and reduced benefits for failure to complete the Dental Healthy Behaviors.

Consistent with the previous Medicaid State Plan and DWP 1.0, there was originally no annual maximum with DWP 2.0. However, beginning September 1, 2018, a $1,000 annual maximum was implemented for the DWP program.

Delivery system

DWP 2.0 benefits are provided by a managed care delivery system via Prepaid Ambulatory Health Plans (PAHPs). The State contracted with two PAHPs to deliver DWP benefits: Delta Dental of Iowa and MCNA Dental. Beginning July 1, 2017, all adult Medicaid enrollees were transitioned from the fee-for-service delivery system to one of these two PAHPs; existing Medicaid enrollees were assigned evenly between the two plans. Going forward, newly eligible members are also assigned evenly between the two plans. Members have the option to change PAHPs within the first 90 days of enrollment without cause.

DWP: January 2020 – present

Table 24 provides a list of changes for both the DWP program specifically and dental care for Iowans more generally. We have included text within the table entries to clarify which dental activity are affected by the changes. During the PHE Medicaid members were not required to complete Dental Healthy Behaviors (preventive dental exam and caries risk assessment) to avoid a premium payment. On July 1, 2021, the DWP became the dental coverage for Medicaid members 0-18 years of age. On December 7, 2021, the state informed CMS that they would not reinstitute the Dental Healthy Behaviors and premiums but would retain the annual benefit maximum. This action was taken retroactively to January 1, 2020, in response to concerns expressed by dental providers in the IWP dental provider survey and to make the DWP program operate ‘more like private insurance’.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Table 24. Iowa Dental Wellness Plan: COVID-19 State Changes Timeline

Date CY 2020	Summary
March 13	Coding and billing for teledentistry services including legal parameters and details of requirements for teledentistry encounters established for dentists providing care to Medicaid members. Guidelines found here.
March 16	UI College of Dentistry ceases elective patient care
March 27	Iowa Governor mandates cessation of non-emergency dental care for all Iowans, effective through April 16
April 2	Iowa Governor extends proclamation, which includes ban on non-emergency dental care for all Iowans, to expire on May 1
April 16	Federal government shares guidelines for re-opening
April 27	Iowa Governor extends prohibition of nonessential dental services for all Iowans through May 15
May 6	Iowa Governor issues proclamation that any dental care resume with adherence to safety guidelines for all Iowans, effective May 8. State of public health disaster emergency currently set to expire on May 27th.
May 8	Dentists in Iowa may begin providing routine dental care to all Iowans
May 26	Iowa Governor issues extension of previous proclamation and extends the window until June 25th.
July 1	Iowa Medicaid issued IL 2148-FFS-D-CVD announcing an enhanced dental payment to address facility and safety upgrades.

A plan to evaluate the dental portions of Iowa Medicaid's 1115 waiver (also known as the Dental Wellness Plan-DWP) was submitted to the Center for Medicare and Medicaid Services (CMS) as part of the original IHAWP evaluation plan in 2020. However, in December 2021, the Iowa Medicaid Program made significant programmatic changes to the DWP that affected the original DWP evaluation design. Most impactful on the evaluation was that the Iowa Medicaid program retroactively discontinued the dental healthy behavior portion of the DWP as described in the Iowa Wellness Plan Section 1115 Demonstration Waiver.

Originally IHAWP members were required to have a dental check-up and complete a dental health risk assessment or potentially pay a monthly premium for their dental coverage. These DWP healthy behaviors were suspended in March 2020 with the introduction of the COVID-19 federal Public Health Emergency (PHE) and the decision was made by the Iowa Medicaid Program to not reinstate the dental healthy behaviors after the PHE ended in May 2023.

Evaluation of the DWP portion of Iowa Medicaid's 1115 waiver remained relevant, however, as receipt of a preventive dental exam continued to be one of two options for IHAWP members to meet the wellness exam component of the Medical Healthy Behaviors—the medical healthy behaviors were going to be reinstated after the PHE ended. Thus, these

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

programmatic changes necessitated modifications to the dental portions of the Iowa Health and Wellness Plan (IHAWP) evaluation and resubmitted to CMS for approval, as much of the original evaluation plan was related to the completion of the dental healthy behaviors.

The hypotheses and research questions are predicated on the current goals for the DWP portion of the IHAWP as listed below.

- Goal 1: IHAWP members will have an increase in preventive care use as a result of the HBI requirements (receipt of a dental examination meets the HBI requirement for a preventive visit).
- Goal 2: IHAWP members will have increased access to covered services.
- Goal 3: IHAWP members will experience improved oral health.
- Goal 4: Support members' re-entry into the dental care delivery system post-COVID shutdowns.

DWP Evaluation questions and hypotheses

Member perceptions and experiences with receiving a Dental Wellness Exam to meet the Healthy Behaviors Incentive (HBI) requirements.

Hypothesis 1: Higher levels of awareness and perceived ability to comply with requirements will be associated with receiving a dental wellness exam.

Research Question 1A: What level of awareness do members have of a dental wellness exam qualifying as a healthy behavior?

Subsidiary Hypothesis 1A.1: Members who have been enrolled longer will have higher levels of awareness that the dental wellness exam can satisfy the HBI requirement than new enrollees.

Research Question 1B: What are the barriers to receiving a dental wellness exam in order to meet the HBI requirements?

Subsidiary Hypothesis 1B.1 Members who are exempt from the HBI Program will identify the same barriers to dental care as members subject to the HBI requirements.

Research Question 1C: What member characteristics are associated with awareness that dental wellness exams qualify for HBI requirements?

Research Question 1D: How are members learning that receiving a dental wellness exam qualifies for HBI requirements?

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Subsidiary Hypothesis 1D.1: Members will report receiving information about how a dental wellness exam meets the HBI exam requirement from multiple sources.

Subsidiary Hypothesis 1D.2: Members will report that information from their prepaid ambulatory health plan (PAHP) helped them understand how they could use a dental wellness exam to meet the HBI requirements.

Research Question 1E: Do members view receiving a dental wellness exam as a favorable alternative to monthly premiums?

Subsidiary Hypothesis 1E.1: Receiving a dental wellness exam will be preferred over monthly premiums.

Impact of the HBI requirement on members' access to and utilization of dental care

Hypothesis 2: IHAWP members will have equal or greater access to a dental wellness exam and other dental services because dental wellness exams qualify as a healthy behavior.

Research Question 2A: What proportion of IHAWP members receive a dental wellness exam annually?

Subsidiary Hypothesis 2A.1: IHAWP members who are at or above 50% of the federal poverty level (FPL) and at risk of paying a premium are more likely to receive a dental wellness exam than Medicaid members who are not subject to potential premiums.

Subsidiary Hypothesis 2A.2: IHAWP members with longer lengths of enrollment are more likely to receive a dental wellness exam

Research Question 2B: Are adults in the IHAWP more likely to have had a dental wellness exam than other adults in Medicaid?

Research Question 2C: Are IHAWP members able to find a dental home where they can receive a dental wellness exam?

Subsidiary Hypothesis 2C.1: Likelihood of having a regular source of dental care will increase with length of enrollment.

Subsidiary Hypothesis 2C.2: Newly enrolled members will be able to find a participating dental provider.

Research Question 2D: Are adults in the IHAWP less likely to visit the ED for non-traumatic dental conditions (NTDCs) than other adults in Medicaid?

Subsidiary Hypothesis 2D.1: Members who receive a dental wellness exam will have fewer ED visits for NTDCs annually.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Dataset is nearly completed for period 2011-2021. Eligibility and visit data have been assimilated, need to assign ED visit NTDC status.

Subsidiary Hypothesis 2D.2: Members who receive a dental wellness exam will be more likely to follow-up with a dentist after an ED visit for a NTDC.

Dataset is nearly completed for period 2011-2021. Eligibility and visit data have been assimilated, need to assign ED visit NTDC status and presence of follow-up visit.

Research Question 3D: Are IHAWP members less likely to have transportation-related barriers to dental care than other adult Medicaid members who are eligible for NEMT benefits?

Subsidiary Hypothesis 3D.1: IHAWP members will be less likely to report transportation-related barriers to dental care.

Impact of the receipt of a Dental Wellness Exam on members' oral health

Hypothesis 3: The oral health status of IHAWP members who receive a dental wellness exam will improve over time.

Research Question 3A: How do members who have received a dental wellness exam in the past year rate their oral health as compared to those that did not?

Subsidiary Hypothesis 3A.1: Members who receive a dental wellness exam will rate their oral health as better.

Dataset containing all members who received a dental wellness exam is complete through 2021. Additional data through the survey period will be added at the completion of the survey and linked to survey responses.

Impact of the COVID-19 Pandemic on receipt of a Dental Wellness Exam

Hypothesis 4: Utilization of a dental wellness exam among IHAWP members will change due to system changes associated with the COVID-19 pandemic.

Research Question 4A: Have IHAWP members' ability to access a dental wellness exam changed during the COVID-19 pandemic?

Subsidiary Hypothesis 4A.1: Members will be less likely to have had a dental wellness visit during the COVID-19 pandemic.

Data is complete through 2021. Currently, we are adding information from 2022.

Research Question 4B: Is the COVID-19 pandemic associated with members' use of the emergency department (ED) for NDTCs?

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Subsidiary Hypothesis 4B.1: Members will be more likely to have ED visits for NTDCs during the COVID-19 pandemic.

Dataset is nearly completed for period 2011-2021. Eligibility and visit data have been assimilated, need to assign ED visit NTDC status. Currently, we are adding information from 2022.

DWP methodology

Data sources

The three primary data sources being used to evaluate the DWP portion of the IHAWP are listed below.

- Dental Provider survey
- Member survey
- Administrative claims and enrollment files

Dental provider survey

To evaluate the levels of Medicaid participation (a key factor in access to care) as well as other attitudinal issues, our research team has utilized a mixed mode survey with all private practice dentists in Iowa (n=1,219), excluding orthodontists. For this particular evaluation, a survey was conducted in 2021, right as the evaluation plan was being redesigned and is once again being fielded in 2023. Dentist addresses and demographic data are drawn from the Iowa Dentist Tracking System (IDTS). IDTS tracks state dentist workforce information and is part of the University of Iowa's Office of Statewide Clinical Education Programs. Survey topics included dentist participation in DWP, awareness of policy changes, and experiences with the DWP program. Items in both surveys are mostly consistent with previous DWP provider surveys administered by this evaluation team. Prior to survey fielding, the Iowa Dental Association (IDA) assists by placing a notice about the upcoming survey in their newsletter that goes out by email to all IDA members. The survey instrument is reviewed by Iowa Medicaid prior to distribution. A $2 bill incentive is included in the first mailing. A reminder postcard is then sent one week after the initial mailing, and a second survey is sent three weeks after the postcard. Dentists also have the option to complete the survey online in Qualtrics, using their unique ID code to access the survey.

The complete results from the 2021 survey with Iowa Dentists are available at: https://iro.uiowa.edu/esploro/outputs/report/Evaluation-of-the-Dental-Wellness-Plan/9984404350202771?institution=01IOWA_INST

The most 2023 dental provider survey is currently in the field with a 43% unadjusted participation rate following the first mailing. The second mailing was recently sent with a final report expected spring of 2024.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Member survey

Information about IHAWP member experiences with the DWP has also been collected routinely has a part of this evaluation using a sequential mixed-mode strategy, combining mail (with web option) and a telephone follow-up to non-respondents-similar to previous IHAWP member surveys. The next DWP consumer survey will happen during 2024. The sampling frame will be comprised of 6,000 IHAWP members, and 6,000 traditional Medicaid members who are eligible as adult members of a family not covered due to pregnancy or a disability. The traditional Medicaid comparison group is primarily associated with families eligible through the Temporary Assistance to Needy Families (TANF), which is termed the Family Investment Program (FIP) in Iowa. The random samples for each group will be drawn from IHAWP and Medicaid enrollment data current as of the month prior to the first mailing. Members are considered eligible if they have been in their current plan for at least the previous six months, are between the ages of 19 and 64, living in Iowa, are not enrolled in Medicare, and have a valid address and phone number. We will only include one person per household to reduce the relatedness of the responses and respondent burden.

Respondents will be given the option to complete the survey on paper or online by entering a unique access code. Nominal monetary pre-incentives will be utilized to maximize response rates for mailed surveys. Both a pre-incentive and gift card lottery will be used in the first mailing: each initial survey packet will include a $2 bill and respondents who complete and return the survey within two weeks of the mailing will be entered into a random drawing for one of twenty $100 Walmart gift cards.

A reminder postcard will be sent to the entire sample one week after the initial mailing. Five weeks after the first mailing, a second survey and cover letter will be sent to those who had not responded to the initial mailing. Approximately three weeks after the second mailing, the phone follow-up for non-respondents will begin. At least two attempts will be made to each viable number.

Survey instrument

As indicated, we will be fielding a sequential mixed-mode survey, combining mail (with web option) and a telephone follow-up to non-respondents-similar to previous IHAWP member surveys during 2024. The sampling frame will be comprised of 6,000 IHAWP members, and 6,000 traditional adult Medicaid members. Results from this survey will be presented as part of a final report to the Iowa Medicaid program as well as in the Final Evaluation report to CMS in June 2026. The foundation for the 2024 survey instrument will be the survey instrument used in the 2019 DWP member survey, which will also allow for comparisons between the 2019 and 2024 surveys.

- Awareness that having received a dental wellness exam qualifies for completion of the preventive exam component of the HBI requirement
- Access to dental care including barriers to receipt of a dental wellness exam

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

- Dental care received in an emergency department
- Emergency dental care
- Carrier communication to members
- Oral health status
- Demographic information

Iowa Medicaid administrative data

See discussion in Secondary data.

.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Waiver of Retroactive Eligibility

WRE Executive Summary

Key findings from the process evaluation

- Information provided through the process evaluation indicates that providers have increased their role in initiating Medicaid applications.

Key progress

- The New Enrollee survey is currently in the field and will conclude July 31, 2024.
- Completion of enrollment file spanning 13 years of data (2010-2022).

WRE General background information

An amendment to the IWP demonstration was submitted on August 10, 2017, requesting a waiver of retroactive eligibility for all but pregnant women and children under 1. The waiver was granted on October 27, 2017, with members enrolling on or after November 1, 2017, subject to the waiver. New members were no longer granted 90 days of retrospective enrollment, instead they were guaranteed enrollment from the first day of the month in which they applied. On July 1, 2018, nursing home residents were no longer subject to the waiver. On January 1, 2020, the waiver was renewed for another 5 years and children 1-19 years of age were no longer subject to the waiver (See Table 25 and Supplemental Materials Document).

The state provided the following rationale for this action in the original amendment:

> *"The State's rationale for this amendment request is founded on the fact that the commercial market does not allow for retroactive health coverage, and if CMS grants this request to waive Section 1902(a)(34), sufficient protections will still remain in place for members to receive necessary care.*
>
> *As mentioned above, the State seeks to more closely align Medicaid policy with that of the commercial market, which does not allow for an individual to apply for retroactive health insurance coverage. Eliminating Medicaid retroactivity encourages members to obtain and maintain health insurance coverage, even when healthy. With the availability of Medicaid expansion and premium tax credits, affordable coverage options have been available in Iowa for those complying with the individual mandate, thus eliminating the need for retroactive coverage. Further, by more closely aligning Iowa Medicaid policy with policy in the commercial insurance market, members will be better prepared if they are eventually able to transition to commercial health insurance."*

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Table 25. Waiver of Retroactive Eligibility Significant Policy Changes

Date IL Number	Policy changes
10/1/2017 1808-MC-FFS-D	Removal of retroactive eligibility for all eligible groups. Does not affect presumptive eligibility, annual renewals/reviews, or the 90-day reconsideration period.
10/26/2017 1841-MC-FFS-D	Halt to implementation of waiver of retroactive eligibility pending CMS approval of policy change.
11/1/2017 1847-MC-FFS-D	Waiver of retroactive eligibility begins for all eligible groups except pregnant women and those women within the 60 days following delivery and infants under 1 year of age.
7/1/2018 1955-MC-FFS-D	In accordance with Senate File 2418 passed by the Iowa Legislature during the 2018 session, DHS is revising its policy and will reinstate a 3-month retroactive Medicaid coverage benefit for applicants who are residents of a nursing facility at the time of application and are otherwise Medicaid-eligible.
1/1/2020 2085-MC-FFS-D	Retroactive eligibility is reinstated for children under 19

WRE Goals

In the most recent amendment, November 2019, the state provided a table of goals and questions as shown below.

Table 26. State Waiver Goals

Waiver Policy: Waiver of Retroactive Eligibility	
Goal: Encourages members to obtain and maintain health insurance coverage, even when healthy.	
Eliminating retroactive eligibility will increase the likelihood of enrollment and enrollment continuity.	Do eligible people subject to retroactive eligibility waivers enroll in Medicaid at the same rates as other eligible people who have access to retroactive eligibility?
	What is the likelihood of enrollment continuity for those subject to a retroactive eligibility waiver compared to other Medicaid beneficiaries who have access to retroactive eligibility?
	Do beneficiaries subject to retroactive eligibility waivers who disenroll from Medicaid have shorter enrollment gaps than other beneficiaries who have access to retroactive eligibility?

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

The State also proposed the following hypotheses and research questions.

Table 27. State-Specified Hypotheses and Research Questions

Hypothesis	Research Question(s)
Eliminating retroactive eligibility will increase enrollment of eligible people when they are healthy relative to those eligible people who have the option of retroactive eligibility.	Do newly enrolled beneficiaries subject to the waiver of retroactive eligibility have higher self-assessed health status than other newly enrolled beneficiaries who have access to retroactive eligibility?
Through greater continuity of coverage, health outcomes will be better for those subject to retroactive eligibility waivers compared to other Medicaid beneficiaries who have access to retroactive eligibility.	Do beneficiaries subject to the retroactive eligibility waiver have better health outcomes than other beneficiaries who have access to retroactive eligibility?
Elimination or reduction of retroactive coverage eligibility will not have adverse financial impacts on consumers.	Does the retroactive eligibility waiver lead to changes in the incidence of beneficiary medical debt?

Figure 24 is drawn from the State's amendment and CMS's approval letter to the state granting the 1115 renewal dated November 15, 2019. Additionally, in the original amendment the waiver of retroactive eligibility is proposed to reduce annual costs in excess of $36M with the federal share topping $26M due to a reduction in total member months.

Figure 24. WRE Logic Model

Process		Outcomes		
Policy	**Process**	**Short-term outcomes**	**Intermediate outcomes**	**Long-term outcomes**
Waiver of Retroactive Eligibility	Provider communication Member communication	Increase likelihood of enrollment Increase enrollment continuity There will be no adverse financial impact on consumers Increase in provider-initiated applications	Increase enrollment of healthy beneficiaries Lower PMPM costs Increase use of preventive care No change in rates of uncompensated care No change in member medical/dental debt Reduction total member months	Improved self-ratings of physical/mental health Reduced avoidable inpatient admissions Program wide cost reductions
Moderating factors: Existing chronic conditions, presence of enrolled Medicaid beneficiaries in the household, previous Medicaid enrollment, demographic characteristics				

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

WRE Methodology

Evaluating the waiver of retroactive eligibility requires a variety of analytics and data collection strategies. This evaluation will be composed of 2 phases. Phase 1 is oriented to process measures and Phase 2 is oriented to outcome measures.

Evaluation design

Process evaluation

See Process evaluation general description.

Quantitative analyses

See Empirical strategy.

Target and comparison populations

Target populations

November 1, 2017, through December 31, 2019

Children and adults who were subject to the waiver of retroactive eligibility including all adults in Iowa Health and Wellness Plan (IHAWP) and adults and children in the Family Medical Assistance Program (FMAP), we may include children in the Children's Medical Assistance Program (CMAP). Eligibility for these coverage types is determined using the Modified Adjusted Gross Income (MAGI) methodology. Although members receiving Long-Term Services and Supports (LTSS) were subject to the waiver during this time, their utilization patterns vary significantly from any other group within Medicaid precluding their use in these analyses.

January 1, 2023, through December 31, 2024

Adults subject to the waiver of retroactive eligibility including all adults in IHAWP and FMAP coverage. Children were no longer subject to the waiver during this time frame. We have purposely eliminated any Public Health Emergency (PHE) years from the analyses.

Comparison populations

January 2011 through October 31, 2017

Pre-waiver population of adults and children in groups that are later subject to retroactive eligibility including all adults in IHAWP and FMAP coverage and children in CMAP.

January 1, 2020, through December 31, 2024

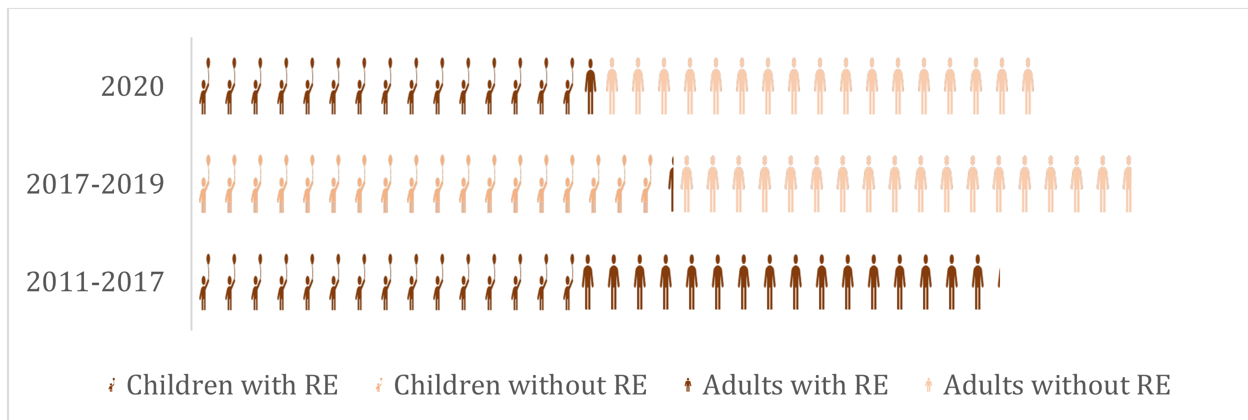
Children in CMAP no longer subject to the waiver of retroactive eligibility at this time.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

There are no adult comparisons groups due to the provision of presumptive eligibility.

Figure 25 provides a visualization of the number of adults and children subject to the waiver of retroactive eligibility within three key time periods: prior to the waiver, during the first 2 years of the waiver and following adjustments to the waiver on January 1, 2020. Each figure represents 15,000 members.

Figure 25. Visualization of Study Groups



Target population: Provider entities

Provider entities such as medical offices, public health offices, hospitals and long-term care facilities help patients/clients who may be eligible for Medicaid apply for benefits by initiating and, in some cases, following-up to make certain the application was filed in an effort to improve their ability to get paid for services. These activities may be performed by front office staff, billing and claim staff, discharge planners, care coordinators, outreach workers, peer counselors and a host of other staff. Additionally, service providers such as physicians, pharmacists, therapists, ARNPs, and PAs may act to trigger application assistance or may direct patients/clients to apply directly when application assistance is not available at their entity. Information from these sources is critical to understand entity/facility changes that may have occurred due to the waiver of retroactive eligibility. We will utilize process measures to understand and assess the effects of the waiver of retroactive eligibility on health care providers.

Data sources

Iowa Medicaid administrative data

See Secondary Data.

New Enrollee Survey

We are currently surveying newly enrolled members to learn about their experiences prior to and during Medicaid enrollment to address evaluation questions related to the impacts

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

of the waiver of retroactive eligibility on enrollment, enrollment continuity and financial wellbeing.

The survey is cross-sectional and was initially planned to field in Spring, 2021. The COVID-19 pandemic and related PHE pausing Medicaid disenrollment postponed the fielding of the survey until August 2023.

Sample

All newly enrolled adults in Iowa Health and Wellness plan (subject to the waiver) and newly enrolled children under 13 years the Family Medical Assistance Program (not subject to the waiver), are drawn on a monthly basis. We exclude members who have been eligible in the last 12 months, who are living out of state, or are without a valid phone number. Only one person is selected per household to ensure the independence of sample variance and reduce the respondent burden. For children as new members, parents or guardians provide the responses on behalf of them. To determine the sample size, we used a combination of strategies, including power calculation, previous survey evaluations with Medicaid members, and a one-month pilot survey. We plan to have a final sample of 1,200 new members, with a target of 100 completed surveys per month.

The Medicaid enrollment files contain a 'Language' variable which allows us to determine whether members prefer to receive communications in Spanish. The Spanish versions of the postcard and survey are sent to those indicating Spanish as their preferred language.

Survey measures

The survey contains several domains, including new members' enrollment reasons and experiences, previous health insurance coverage and current coverage expectation, access to and use of health care, affordability of healthcare, and self-reported health status and financial well-being. The initial survey measures were informed by our previous member survey, disenrollment survey, the latest literature, and the relevant national surveys (e.g., Health Reform Monitoring Survey, National Health Interview Survey). We also involved The Iowa Social Science Research Center (ISRC) at The University of Iowa, our fielding partner, during the measurement development phase given their experience and expertise in other evaluation surveys with the Medicaid population. Additionally, using our pilot survey feedback, we further refined our health care use preference and medical debt measures, and edited response options for some enrollment related questions to improve clarity and better reflect this population's experiences. The survey instruments are offered in English and Spanish (see Supplemental Materials). Akorbi (https://akorbi.com) a professional translation company, was hired to provide the Spanish instrument translation.

Survey administration

The data collection started in August 2023 and is planned to close in July 2024. It is a telephone-administered survey. In an effort to maximize response rates for this telephone survey, an introductory postcard with our survey info and a post-completion $20 cash incentive are used. (See Supplemental Materials Document).

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

All the postcards are sent out using first-class mail service at the beginning of each month, which is at least one week prior to the telephone contact. For people who identify Spanish as their preferred first language in the Medicaid eligibility file, Spanish postcards are mailed, and telephone calls are conducted accordingly by Spanish-speaking interviewers.

The ISRC at The University of Iowa is responsible for fielding and survey data collating. All survey staff are trained on the human subjects research protections, background of the Medicaid evaluation, and the survey instrument. Up to six call attempts are made to reach each potential respondent. Members who explicitly refuse to take the survey or hang up during survey introduction are removed from the contact list. For those who ask, a call backs are arranged at a convenient time for the respondent. The English version of the survey takes about 20 minutes to complete, while the Spanish version has taken approximately 30 minutes to complete.

Pilot survey

To have a better understanding of the response rates for a newly enrolled population and the performance of the survey instruments, we conducted a one-month pilot survey in June 2023. Postcards were mailed to 381 members (359 in English, and 22 in Spanish) On June 3. Calling was started on June 7. The overall response rate was 27%, with 26% for those presented with the English version and 48% for those presented with the Spanish version. We further adjusted the rates using AAPOR calculator by excluding ineligible members when surveying in the denominators, which result in 30%, 29%, and 69%, respectively. Table 28 presents the response rates by program and income level within the IHAWP program: 0-100% FPL childless adults in IHAWP program, 101-133% FPL childless adults in IHAWP program and parents of children in FMAP coverage program.

Table 28. Response Rates by Program

Group	Sample	Completes	Response Rate
0-100% FPL childless adults	283	73	26%
101-133% FPL childless adults	45	10	22%
parents of children	53	19	36%

For the survey instruments, the pilot tested both English and Spanish versions to ensure the survey domains and questions accurately addressed the research questions for this policy evaluation. Additionally, it tested whether the questions were defined in a clear and consistent manner, asked in an appropriate and easy way, and understood well by our target population.

Comments and feedback obtained from the pilot included:

- Length of the survey (plan was 15 minutes; pilot mean and median were at 20 and 19 minutes)

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

- Understanding of the questions and response options, including the logic, wording, content, and consistency.
- Commonly mentioned open-ended responses
- Structured response format (e.g., binary-option, multi-option)
- Other field notes

We discussed with the ISRC, and incorporated all the comments and feedback as we revised our introductory postcards and instruments. The ISRC re-trained and practiced the updated instruments with all their field staff.

Response bias and missing data

After the survey is closed, we will assess whether those who respond to the survey compare favorably with those who do not on demographic characteristics. We will also learn about the missing data (i.e., nonresponses) we may have from this survey, make plans for variables missing at different percentages and patterns, and consult statistician to explore the post-survey adjustments.

Healthcare Provider Cost Reporting Information System (HCRIS)

See Secondary data.

National Survey Options

Though previous work, we have found that national surveys, such as the Medical Expenditure Panel Survey (MEPS) and the National Financial Capability Survey, do not recruit Iowans in sufficient numbers to allow for state-level comparisons. However, we may be able to utilize the American Community Survey (ACS) and/or the Behavioral Risk Factor Surveillance System (BRFSS) to assess some state level effects.

See discussion Secondary data.

Covid-19 Adjustments

It is unclear how the COVID-19 pandemic and its ensuing economic effects will alter the enrollment for state Medicaid programs. Some unemployed workers may be able to keep their health insurance, while other may lose their insurance but will not qualify for Medicaid immediately. We will utilize enrollment surveys to determine the magnitude of the effect that COVID-19 has on enrollment.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

WRE Evaluation Measures Summary

Comparison Strategy	Outcomes measures(s)	Data sources	Analytic approach
Hypothesis 1: Eliminating retroactive eligibility will increase the likelihood of enrollment and enrollment continuity.			
Primary Research Question 1.1: Are people subject to the waiver of retroactive eligibility more likely to enroll in Medicaid relative to members in the same programs prior to the waiver?			
Subsidiary Research Question 1.1a: Are people subject to the waiver of retroactive eligibility more likely to enroll while still healthy relative to members in the same programs prior to the waiver?			
Study group: Medicaid members subject to waiver – IHAWP, FMAP, SSI Comparison group: Medicaid members not subject to the waiver – Parents of children as proxy	In general, how would you rate your (your child's) physical health now? Excellent; Very good; Good; Fair; Poor In general, how would you rate your (your child's) overall mental and behavioral health now? *(Excellent; Very good; Good; Fair; Poor)* In general, how would you rate your (your child's) overall dental health now? Excellent; Very good; Good; Fair; Poor	New enrollee survey	OLS August 2023-July 2024
Study group: Adults in IHAWP, FMAP, SSI CY 2018-2021 and children in Medicaid CY 2018-2019 Comparison group: Adults in IHAWP, FMAP, SSI CY 2014-2017 and children in Medicaid CY 2014-2017 and 2020-2024	Hospitalizations per 1,000 member per month ED visits per 1,000 member per month Ambulatory care visits per 1,000 member per month Average number of prescriptions per member per month	Medicaid claims	ITS Pre-RE waiver CY 2014-2017 Post-RE waiver CY 2018-2024
	Per member per month Medicaid reimbursement in first 3 months of enrollment		CITS Pre-RE waiver CY 2014-2017 Post-RE waiver,2018-2024

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Comparison Strategy	Outcomes measures(s)	Data sources	Analytic approach
Subsidiary Research Question 1.1b: Are people subject to the waiver of retroactive eligibility more likely to enroll earlier?			
Study group: Medicaid members subject to waiver – IHAWP, FMAP, SSI Comparison group: Medicaid members not subject to the waiver – Parents of children as proxy, SSI members	In the year prior to joining [PLAN NAME], so since [CURRENT MONTH] [CURRENT YEAR-1], were you covered by any kind of health insurance? (Yes, No) Was the most recent insurance private insurance? (Private means you or your family got it through an employer or individually purchased it). (Yes, No) In which year did that earlier coverage end? (2022, 2023, 2024) In which month in (previous answer year) did that earlier coverage end? [months January through December listed] Thinking about your recent application to [PLAN NAME], how long ago did you start thinking about applying? *[fill in number of months or number of weeks]*	New enrollee survey	Means test August 2023-July 2024
Primary Research Question 1.2: Do people subject to the waiver of retroactive eligibility have increased enrollment continuity relative to members in the same programs prior to the waiver?			
Subsidiary Research Question 1.2a: Do people subject to the waiver of retroactive eligibility understand that they will not be covered during enrollment gaps?			
Study group: Medicaid members subject to waiver – IHAWP, FMAP, SSI Comparison group: Medicaid members not subject to the waiver – Parents of children as proxy, SSI members	For some people, [PLAN NAME] may pay the costs of medical care they received before joining the plan. When you applied for [PLAN NAME], did you think that the plan would pay for any of the medical care you received BEFORE joining? (Yes, No)	New enrollee survey	Means tests and descriptive analyses August 2023-July 2024

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Comparison Strategy	Outcomes measures(s)	Data sources	Analytic approach
Subsidiary Research Question 1.2b: What are the barriers to timely renewal for those subject to the waiver of retroactive eligibility?			
Study group: Medicaid members subject to waiver – IHAWP, FMAP, SSI Comparison group: Medicaid members not subject to the waiver – Parents of children as proxy, SSI members	How easy or difficult was it to apply for [PLAN NAME]? *(Very easy; Somewhat easy; Somewhat difficult; Very difficult)* What difficulties did you have when applying? *(Couldn't understand the forms, process too complicated, had no transportation to appointment, did not know where to go to get help, did not have all the documents I needed, had no one to help me fill out the forms, couldn't access the online forms)*	New enrollee survey Member survey	Descriptive analyses August 2023-July 2024
Subsidiary Research Question 1.2c: Among members subject to the retroactive eligibility waiver, is timely renewal more likely by those who might be expected to value coverage highly, relative to those who might value coverage less?			
Study group: Medicaid members subject to waiver – IHAWP, FMAP, SSI Comparison group: Medicaid members not subject to the waiver – Parents of children as proxy, SSI members	Everyone has their own opinion about health insurance: What about you? Would you say that, for you, having health insurance coverage is…? *(Very important; Somewhat important; Not very important; Not at all important)*	New enrollee survey	Descriptive analyses August 2023-July 2024
Study group: Adults in IHAWP, FMAP, SSI CY 2018-2019 and 2023-2024 Comparison group: Adults in IHAWP, FMAP, SSI CY 2014-2017	Number of enrollment gaps over 2 months within the calendar year Average length of enrollment gap in the calendar year Risk stratified by prescription use and presence of chronic conditions as measured by CCS Length of enrollment period Total months of enrollment from first enrollment in period to end of enrollment or end of period, whichever comes first, adjusted for months remaining in period at enrollment.	Medicaid enrollment files	CITS Pre-RE waiver CY 2014-2017 Post-RE waiver, Non-PHE CY 2018-2019 and 2023-2024
Subsidiary Research Question 1.2d: Are people subject to the waiver of retroactive eligibility more likely to remain continuously enrolled relative to members in the same programs prior to the waiver?			
Study group: Adults in IHAWP, FMAP, SSI CY 2018-2019 and 2023-2024 and children in Medicaid CY 2018-2019	Longer periods of continuous enrollment Average months of continuous enrollment, adjusted for months remaining in period at enrollment	Medicaid enrollment files	CITS Pre-RE waiver CY 2014-2017 Post-RE waiver, non-PHE CY 2018-2019 and 2023-2024

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Comparison Strategy	Outcomes measures(s)	Data sources	Analytic approach
Comparison group: Adults in IHAWP, FMAP, SSI CY 2014-2017 and children in Medicaid CY 2014-2017 and 2023-2024	Time to first enrollment gap		Survival analysis CY 2014-2019, 2023-2024 Time dependent covariates including RE waiver, PHE
Subsidiary Research Question 1.2e: Are people subject to the waiver of retroactive eligibility more likely to re-enroll following a voluntary or administrative disenrollment relative to members in the same programs prior to the waiver?			
Study group: Adults in IHAWP, FMAP, SSI CY 2018-2019 and 2023-2024 and children in Medicaid CY 2018-2019 Comparison group: Adults in IHAWP, FMAP, SSI CY 2014-2017 and children in Medicaid CY 2014-2017 and 2023-2024	Length of enrollment gap Number of months between disenrollment (forced or voluntary) and re-enrollment	Medicaid enrollment files	CITS Pre-RE waiver CY 2014-2017 Post-RE waiver, non-PHE CY 2018-2019 and 2023-2024
	Rates of re-enrollment Proportion of members disenrolled (forced or voluntary) who re-enroll within 1 year		Descriptive analyses CY 2014-2019 and 2023-2024
Hypothesis 2: Eliminating retroactive eligibility will not increase the likelihood of negative financial impacts on members.			
Primary Research Question 2.1: Are there any negative financial impacts on consumers because of the waiver of retroactive eligibility relative to members in the same programs prior to the waiver?			
Subsidiary Research Question 2.1a: Do beneficiaries subject to the waiver of retroactive eligibility experience greater 'medical debt' relative to members in the same programs prior to the waiver?			
Study group: Medicaid members subject to waiver – IHAWP, FMAP, SSI Comparison group: Medicaid members not subject to the waiver – Parents of children as proxy	In the last 3 months [coverage gap time if fewer than 3 months], did you have any health care bills? Include bills such as from doctors, dentists, hospitals, therapists, and pharmacies etc. (Yes, No) Did you have any difficulty paying these bills? (Yes, No) Were these bills for any of the following types of services? Medical care; Dental care; Prescription medication; (Yes, No) For this question, think about your [IF DOV_FAMSIZE>1: and your family's] health care experiences over the past 12 months, that is, since [CURRENT MONTH] [CURRENT YEAR-1]. Did you [IF DOV_FAMSIZE>1: or anyone in your	New enrollee survey	OLS August 2023-July 2024 OLS August 2023-July 2024

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Comparison Strategy	Outcomes measures(s)	Data sources	Analytic approach
	family] have problems paying any medical bills? Include bills for doctors, dentists, hospitals, therapists, medication, equipment, nursing home, or home care. *(Yes, No)* Do you [IF DOV_FAMSIZE>1: or anyone in your family] currently have any medical bills that are being paid off over time? This could include medical bills being paid off with a credit card, through personal loans, or bill paying arrangements with hospitals, doctors, or other health care providers. The bills can be from earlier years as well as this year. (*Yes, No*) Do you [IF DOV_FAMSIZE>1: or anyone in your family] currently have any unpaid medical bills that are past due? Include bills for doctors, dentists, hospitals, therapists, medication, equipment, nursing home, or home care. This could include medical bills owed directly to health care providers or paid with a credit card or personal loan. The bills can be from earlier years as well as this year. *(Yes, No)* About how much do you [IF DOV_FAMSIZE>1: or your family] currently owe for medical bills that are past due? Exclude bills that will likely be paid by an insurance company. Your best estimate is fine. *(Less than $500, $500-less than $1,000, $1,000-less than $2,500, $2,500-less than $5,000, $5,000-less than $10,000, $10,000 or more)*		
Subsidiary Research Question 2.1b:Do hospitals experience higher rates of uncompensated care after the enactment of the waiver of retroactive eligibility?			
Iowa Hospitals before and after the waiver	Reported rate of uncompensated care	HCRIS	ITS Pre-RE waiver CY 2014-2017 Post-RE waiver, CY 2018-2024
Hospitals in comparison states without waivers	Reported rates of uncompensated care		CITS Pre-RE waiver CY 2014-2017 Post-RE waiver CY 2018-2024

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Comparison Strategy	Outcomes measures(s)	Data sources	Analytic approach
Hypothesis 3: Eliminating retroactive eligibility will improve member health.			
Primary Research Question 3.1: Do people who are subject to waiver of retroactive eligibility have better health outcomes?			
Study group: Adults in IHAWP, FMAP, SSI CY 2018-2021 Comparison group: Adults in IHAWP, FMAP, SSI CY 2014-2017	Avoidable inpatient admissions	Medicaid claims files	Descriptive analyses Pre-RE waiver CY 2014-2017 Post-RE waiver CY 2018-2024
Hypothesis 4: Eliminating retroactive eligibility will reduce the annual Medicaid services budget.			
Primary Research Question 4.1: What are the effects on the Medicaid services budget?			
Study group: Iowa Medicaid CY 2013-2017 Comparison group: Iowa Medicaid CY 2018-2024	Total annual Medicaid health care services expenditures	Medicaid claims	ITS Pre-RE waiver CY 2013-2017 Post-RE waiver CY 2018-2024
Study group: Iowa Medicaid CY 2013-2017 Comparison group: Iowa Medicaid CY 2018-2022	Total number of months Medicaid eligibility	Enrollment files	Descriptive analyses Pre-RE waiver CY 2013-2017 Post-RE waiver, non-PHC CY 2018-2019 and 2023-2024
Hypothesis 5: Providers will increase initiation of Medicaid applications for eligible patients/clients.			
Primary Research Question 5.1: Have health care providers increased the initiation of Medicaid application for eligible patients/clients?			
Providers at the individual, MCO, ACO level	Provider reports of Medicaid application initiation process and follow-up	Key stakeholder interviews	Descriptive analyses July 2021-June 2022

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

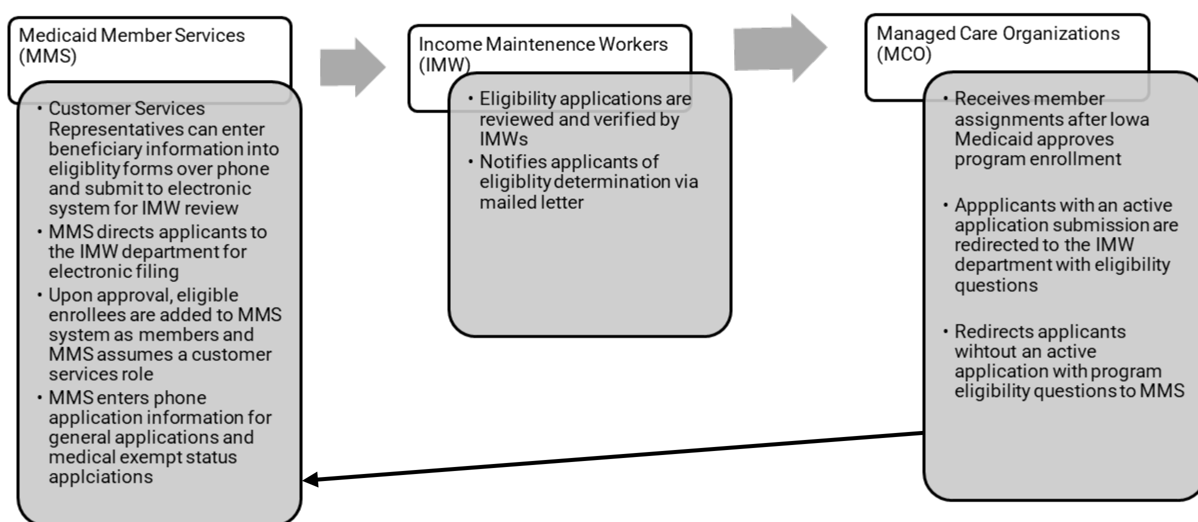
WRE Results

WRE Process evaluation

General

Interviewees described how steps of member enrollment are managed across organizations. Figure 26 summarizes the flow of applications and roles of each organization in the process.

Figure 26. Retroactive Eligibility and Medicaid Enrollment Process



Enrollment and enrollment continuity

Interviewees noted some areas in which the retroactive eligibility waiver intention could be compromised, including provider's ability to attend to enrollment logistics, situations in which an uninsured person could be incapacitated and unable to apply for enrollment in a timely fashion, and, generally, a provider association representative stated, "I think the intent is good. I think that the implementation is still rather messy."

A representative from Iowa Medicaid described the categorical eligibility policy as so nuanced that it is difficult to communicate to members en masse, saying, "I don't know that there's anything on the website specific to retroactive eligibility. I think it's more just part of the application process, since it's so specific to either age or other requirements."

Representatives from an MCO and provider association elaborated that the intention of retroactive eligibility waiver to encourage proactive enrollment amongst eligible

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

populations may lack effectiveness due to a complex design, more immediate competing priorities, and a general lack of awareness of potential eligibility, saying:

“That would make sense. I mean, that might be how I would think about it. I don't know if that's how the average person who's eligible for the Iowa Health and Wellness Plan thinks about it, but I understand the design.” — MCO representative

“If you're just barely paying your bills, you're just not thinking about, "Hey, maybe I'll go try to buy insurance, or I'll try to qualify for Medicaid." You just may not have thought of that.” — MCO representative

“Just by the nature that folks don't always know that those items can be covered by Medicaid…a lot of times, they don't know that they have those benefits.”— Provider Group representative

Interviewees shared experiences of how uninsured Iowans eligible for retroactive Medicaid coverage initiate the enrollment process. Stakeholders described various avenues to enrollment, including provider direction and initiation.

“I think it's situational. It [provider involvement in enrollment] depends on how the member presents the information. And we say this a lot member services because it really does depend on how someone says everything. If they have everything together, they might not mention that they've worked with their provider at all. It really would be hard to drill down to that level.” – Medicaid Member Services representative

“They're the ones who've completed that application [providers] for the client in the portal and their name's on it and they list themselves as the representative.” – Income Maintenance worker

“Well, that would be, for the most part, when somebody calls in and wants to do an application, we tend to not really know whether a provider assisted them unless they are coming through the DHS, the qualified entities that the hospitals and clinics all have, where they can do an application online with a member if there's an issue or something, they contact us and we help walk them through those processes. So other than that, we would not know probably whether this member worked with their provider or not. Only to say, somebody may say, "Well, I went to the doctor and they told me to call and apply." – Medicaid Member Services representative

Medicaid representatives also described member-initiated applications (as opposed to provider initiated), noting that members may apply via the **online portal, fax or email, or filling out applications in person at a clinic.**

“I'm guessing a lot of it is word of mouth between clients too, especially when they realize they don't have coverage or the smaller clinics like [clinic name]. It's not a big hospital, but they serve a lot of people…they'll help them with an application or I'm not sure if they're telling them to go online to do it.. Most of my applications come in online versus them going to the office and filling out an application.” – Income Maintenance worker

“They could drop it off or fax it in or email... Well, they could email it in, but most of the time they go to the office, fill it out or drop it off.” – Income Maintenance worker

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Interviewees described the types of provider staff who work with uninsured people admitted to the emergency room or hospital to gain access to Medicaid retroactive coverage, which included examples like **patient advocates, social workers, and financial counselors.**

"I don't know if say a patient comes in, in the middle of the month. I don't know how soon it is before that person knows, "Hey, room 502, they don't have health insurance. Someone needs to get up and talk to them." Possibly put in a presumptive eligibility application or a Medicaid application. I don't know how the process works on the hospital side of it as far as when they get notification that someone needs help." – Income Maintenance worker

"And usually with the presumptive apps I get, if they're working with a patient advocate or financial counselor with the hospital or provider, they aren't shy about emailing us regarding the status or what potentially is needed to determine eligibility for that particular patient or client." – Income Maintenance worker

One interviewee noted the variation in access to staff who can assist with Medicaid applications, depending on the timing of healthcare utilization (whether it was during regular business hours).

"Locally, our hospital, the moment you walk into the ER, they're asking for your insurance coverage. At that moment, that person knows you don't have insurance. That's our social worker at our hospital, that's their job from that point on to get them insurance. Do not let them walk out the door until they fill out that application. Now, if it is a weekend or sometime that maybe the social worker isn't there, and honestly, I'm not sure that we have more than one at our small hospital. I really do think that that person that took your insurance information is going to give you an application before you leave and have that social worker follow up on Monday morning, because locally our county would have to write that off if they didn't pay their bill." – Income Maintenance worker

Clinic staff shared comments about member experiences with **wait times** when calling Medicaid to update members' personal information such as an address change or a name change.

"We found that there's very, very long wait times…I have been on hold with these people for 45 minutes with Medicaid to get through to them." – Clinic staff

"Well 45 minutes or even longer because I've heard you even say that." – Clinic staff

"Like [STAFF] said, it is a barrier. More often than not, I can honestly say there's only been one time I was able to get right through and it was very early in the morning, like 7:30 in the morning. Otherwise, the minimum has been a 45-minute wait most of the time. It's frustrating. I mean that's a lot of time to wait to just change it, to update your information with Medicaid. That's if you want to report an address change even. Or phone number change or that you got married or had a baby." – Clinic staff

Verification

Interviewees described the verification process, including timeline between application and member ability to utilize their coverage to access care, noting up to a 45-day

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

processing timeline (although generally actual processing time is shorter) and no ability to process applications in an expedited manner for uninsured people with urgent health needs (in contrast to other benefits like SNAP).

> *"We don't have expedited medical. We don't expedite Medicaid. We do SNAP benefits, but we don't do Medicaid...When work comes into our number or into our queues to work, we don't rush medical in any way. It gets processed in date stamp order. Unless we're told by a supervisor like, "This needs to be expedited," which does not happen very often." – Income Maintenance worker*

> *"It varies from worker to worker. I know for us; I think we have 45 days to process a medical application. Very rarely in my case does it ever take that long but we have the expectation in my service area that we have to have all of our applications touched within seven days of it coming in, of it being pushed into our queue to process, to either have it processed or at least have a request out or contact made somehow with whether it's SNAP Medical or cash assistance, it doesn't matter." – Income Maintenance worker*

> *"I feel like right now it's in our busiest time of the year to begin with. We were in open enrollment. People always apply more during the holidays, which Thanksgiving then turnaround right away, it's Christmas. We are always the busiest this time of year but normally just on a regular scale, I feel like we can get medical applications processed within five days, easy. They're easy because you don't have to request anything. If everything passes through the system, you don't have to request and wait the 10 days to have them provide something back to you. So, you can literally take an application and it may take you five minutes from start to finish to approve that application and moving on." – Income Maintenance worker*

Enrollment

Stakeholders shared perspectives about the Medicaid enrollment process within the scope of the retroactive eligibility waiver, noting the various roles and steps involved. Interviewees reported hospital-based advocates, MCO case managers, administrative positions, community health workers, hospital social workers, healthcare staff and socialized enrollment staff as having roles in guiding newly identified eligible members through the enrollment process and maintaining related records.

One provider association representative described the staff involved in implementing retroactive coverage, saying,

> *"in our smaller [provider settings], it's much more likely to be a provider or administrative position [managing enrollment]. In our larger [provider settings], a lot of those have hired social workers, community health workers, or just enrollment staff. And a lot of those enrollment staff assist with just the day-to-day insurance checks and eligibility checks."*

A representative from Iowa Medicaid noted that typically, MCO case workers would be relied upon for care coordination tasks, but people in the process of applying for retroactive coverage don't have access to that support, saying,

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

"If they're enrolled in MCO, the case management on medical management will work with social workers at the hospital to assist in any of those needs [enrollment]. But if they're not enrolled, then I'm not sure."

A provider association representative reported efforts to connect patients with a provider once coverage is verified, saying,

"their [health care staff] goal with the patients, if they can, is to make sure they're enrolled, then that they know that they have coverage, and then get them into some kind of treatment plan and work to get them back in a timely fashion. And once a patient comes in, they try really hard to make sure that they understand if the patient is eligible and help them get into that."

Representatives from both MCOs acknowledged the expectation of provider intervention in assisting uninsured members in the prerequisite enrollment process for retroactive coverage, saying,

"Different providers have varying levels of sophistication about enrolling Medicaid. If you're a hospital and somebody has no insurance, they come in and they maybe had something pretty major, the hospitals are pretty motivated to see if they can't qualify for Medicaid. They lead the process there, but other providers may not be that sophisticated and motivated, and so then the members end up getting medical bills they can't pay or something. Then it doesn't go quite as well.

In response to the question, "Do you think this has any kind of impact on provider workflow or administrative burden?" an MCO representative replied,

"I'm sure it does. I don't hear about that as much from providers, but I can't imagine it wouldn't. Because they're trying to make sure that those members are getting the paperwork in with Iowa Medicaid to get the eligibility that they need. I'm not familiar with the ins and outs of the process, but it would be work on their end for sure."

In contrast, a representative from Iowa Medicaid, denied provider involvement prior to confirmation of Medicaid eligibility, saying,

"Generally, providers aren't involved until we know that the member is eligible, of course. If they're working together, if there's a miss, as far as the potential for retroactive eligibility, and it didn't happen at the time of application, then we might have some provider involvement in it at that point, but generally not do the providers." This account from Iowa Medicaid of providers not being involved in enrollment processes conflicts with MCO and provider association representative accounts in which healthcare providers reportedly do assist with verifying eligibility and initiating enrollment.

An Iowa Medicaid representative talked about how various positions interact to verify Medicaid eligibility and coverage, saying,

"the enrollment process, well, it's kicked off by the members' application, of course, but then it's our field operations, and income maintenance field staff that process the applications."

Interviewees reported about the various eligibility categories within the retroactive eligibility waiver, noting the difference between coverage for members who are and are not

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

eligible for 90-day retroactive eligibility. A representative from Iowa Medicaid elaborated, saying,

> *"If they're not eligible for retroactive coverage, the notice of decision that we send indicating approval would just be effective the month of application…Their effective date, if they're approved, then their effective date of eligibility would be reflected, whether it be one, or all three months of the retroactive coverage, or just from the month of application forward, because they don't meet the criteria to be eligible for retroactive coverage."*

In prior sections of the key stakeholder interview findings, several spillover effects (e.g., impacts not directly intended by the policy) related to the retroactive eligibility waiver for the IHAWP members emerge from the content, described below:

A representative from a provider association discussed the role of providers and clinic staff in operationalizing retroactive eligibility, reporting that providers are burdened with additional administrative work to verify member eligibility and funding care at the time of service, describing the process as, "back sorting through a lot of paperwork" and "navigating a number of players involved in getting reimbursement." This representative continued, noting challenges assessing eligibility with patients unfamiliar with Medicaid and lacking information needed to determine eligibility.

Illustrations of the provider experience

> *"We also have a patient population which I would say it's harder to get that stuff out of. and it's just not a population like you and I, who has at our fingertips and can scan it or send it in or whatever. So, I think that puts some burdens on our providers as well."*

> *"A lot of times, they [uninsured patients] don't know that they have those benefits and don't communicate that possibly to a center and then they are treated as a slide patient…from what I've seen, we probably have a bigger risk of missing somebody or using that money and finding out there's coverage later… Just by the nature that folks don't always know that those items can be covered by Medicaid."*

> *"You asked a question about providers being paid. From our perspective, that continues to be an issue. Providers are having to reach out to their associations to get help. If there is an issue where the service plan is not developed in authorizations, dated as such…any work that's done is after the fact, and it is to adjust for decisions that have been made and denials for payment…and it is still a bit of a struggle, I think that the MCO staff on the ground are willing to work with us, but that is not the way the system is set up."*

A provider association representative described their response to challenges and barriers encountered while navigating retroactive eligibility waiver, saying staff has "to go back and do the legwork themselves, but we can at least say,

> *"Hey, you have this, let's say, 20% of your population that hasn't given you any updates as to what their insurance is. And you have nothing on file as to what their family income is either. What workflows can we help you put in place to help winnow through that list a little better and get that list*

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

a little bit more accurate." Of course, then you're just always still riding up against our patient population and also staff resources too."

The representative also noted,

"we do have a little bit more of a hands-on approach with some of our patients, that maybe that continuity issue isn't lost as much, thanks to our staff."

Financial impacts on members

One interviewee talked about the specific content in the application form regarding financial hardship paying medical bills in the last three months, which, regardless of answer, the IHAWP-eligible population is expected to apply within the calendar month for coverage, saying,

"There's a question on the applications that states, "Do you need help paying medical bills for the past three months?" That's a question the client answers on the application….And so if they are actually only eligible for IHAWP, they could answer yes to that and then kind of find out that they are actually only eligible for that kind of coverage for the calendar month."

Interviewees described the experiences of uninsured people applying for coverage and submit their applications too late, missing the calendar month application window.

"Yeah, or they have services and somehow the hospital or provider doesn't realize that they don't have coverage, which doesn't happen very often. But we do get, or I get, I shouldn't say for all of us, but I get quite a few applications where the adult is asking for retro coverage and they're not eligible for it." – Income Maintenance worker

"It [retroactive coverage] would go back to the first of the month in which they applied, but a lot of the times that doesn't benefit some people if they've waited too long." – Income Maintenance worker

One interviewee described how providers **leverage alternative funding sources** to assist uninsured or underinsured patients with medical bills, saying,

"I've worked a lot of applications where they get in an accident not expecting a $250,000 bill deductible. They meet may be very high. They have health insurance, the [hospital] wants them... they want them to apply because if they're denied over income for Medicaid, then they can step in for that financial assistance. So, I know that we do applications like that to help them get assistance. They don't want to deny that they are withdrawing the application because they know they make too much. They need that for the [hospital]. I know some workers will deny at their request because they know they're not eligible. That's not what the [hospital] wants. They want them denied over income then financial assistance can step in for them."- Income maintenance worker

"I take it as that's just from the provider at the hospital. They just have to have that kind of to back them up why they're doing financial assistance. They want the client to reach out and extend all options that no one else can pay that bill, then they'll step back in and do either... And I think I've heard it's one of two things. They can do financial assistance and hopefully write the bill off, or what

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

they do is they'll say, "We can do so much of it," but they'll make the patient pay a percentage still." – Income Maintenance worker

Clinic staff shared member experiences related to retroactive eligibility, noting low awareness amongst members and reluctance to utilize healthcare because of past unpaid bills or expectation of payment.

"I do know that that retroactive for the three months, not everyone is still... Some people still think that's in action and it's not." – Clinic staff

"Yeah, very difficult. Along with what we were talking about in regards to the retro with the benefits and stuff, it can be very, I think that's very difficult because like [STAFF] and [STAFF] have both said here is that then they just give up and those members don't... Whoever it is, patients don't want to take that time then because it's so long. Then they come in and by the time they realize, "Oh, I have [STAFF] or I have [STAFF] that can help me out with this." Then it's like, "Oh, now you know what? I saw a doctor two months ago." Now they're very concerned because now they have to pay that past bill and that too." – Clinic staff

"That's losing that 90-day retroactive I think also is that barrier too, because then here they are... I've had patients say they don't want to even make an appointment or come in because they know they already owe. They don't know how they're going to pay that. It's like, no, no, no, no, no, no, no. You need to come in, you need to see a doctor. We don't want you not to see a doctor. Anyways, wrapping that back to the retro piece of it, at least that's my opinion." – Clinic staff

A representative from Iowa Medicaid spoke to the positive impact for uninsured people gaining coverage to relieve financial burden from a medical crisis, saying,

"In general, it's a wonderful thing for people. Because it really helps them out when they're in a bad crunch. So, no, I haven't heard anything negative." Along with a dearth of negative feedback, an Iowa Medicaid representative cited changes to benefit eligible populations as evidence for effectiveness, saying "I would assume [policy effectiveness] because they gradually added populations back to allow retro that those were lessons learned, or there was feedback that contributed to making those changes."

Improve member health

An MCO representative shared perceptions about retroactive coverage positively influencing future care utilization and behaviors, saying,

"[Does] giving people eligibility, even retroactive eligibility, motivates them to get insurance in the future and whatnot. I would probably say yes. Maybe their situation changes. They've maybe established care with the provider, and they see the importance of it, especially if they have a chronic issue. They probably realize, 'Hey, I thought I [was] healthy and immortal before I had this other issue that then got me on Medicaid, and now I need to think about that going forward.' I do think it probably does influence them."

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Medicaid services budget

Program Level Financial Solvency

> *"I think there was probably some cost concern in it too…I know it's been re-extended to a couple of provider types. We don't necessarily get the total reason and rhyme for that and why not others, but we also know what the price tag was to re-extend to everybody, the fiscal note for the legislature. And that was not something that would be appealing to the legislature at that time. So, guess that's my basic understanding, assumptions of it." – Provider group representative*

In response to whether the state has seen any cost saving impact from the retroactive eligibility waiver, a representative from Iowa Medicaid responded,

> *"That, I'm not sure. I don't have the numbers on that. So, I can't really say to that."*

Promoting efficiency in the enrollment, care management, and reimbursement processes

> *"The tighter the retroactive timeframe, the more efficient it would be for a provider. And so, if you're working in a scenario where you have six months of retroactive eligibility, which is not what we have in place here, just from a provider perspective that's six months where, from an accounts receivable standpoint, they're carrying those balances on the books until they know where to bill appropriately. So, the tighter the timeframe, the more efficient ultimately." – MCO representative*

Initiation of Medicaid applications

Member Awareness

In regard to the ability of calendar month-limited retroactive coverage to influence member decisions to proactively enroll in Medicaid, two stakeholders perceived limited awareness amongst members, with an MCO representative saying,

> *"that distinction is, I don't think, common knowledge," and a provider association representative saying, "I would say, across the board, patients have no idea."*

Interviewees shared perceptions that the IHAWP-eligible population has limited awareness of Medicaid eligibility, in part due to limited interactions with the healthcare system.

Interviewees commented on how the improved awareness amongst providers has, in turn, benefited awareness amongst people eligible for IHAWP coverage. Increased awareness, amongst both stakeholder types, supports the retroactive eligibility waiver's utilization and successful access to retroactive coverage within the calendar month timeframe.

> *"I don't think that's something that your average Medicaid recipient is clued in on, just because it does get a little technical. Again, those that are seeking the coverage possibly because they might have had that conversation with a hospital or a provider's office when they were there with their financial assistance staff, but I would say most probably are not." – Medicaid Member Services representative*

> *"We have seen it [retroactive eligibility] utilized, especially when the program was first coming up and people were not aware that there was an option. I would say, generally, people might not be aware of their insurance options until they're in a healthcare need, so I don't know if it's necessarily Medicaid*

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

specific. I think that's probably more collective healthcare system based. At least what we see, it doesn't feel like a lack of education on the Medicaid Program. It feels just a little bit more of a lack of awareness of resources in general about health insurance and how to get services covered." – Medicaid Member Services representative

"So it's a little bit tough to say whether or not people know about it is a gauge of the effectiveness or anything like that because it does seem to us that when people are presented with a healthcare challenge, it's them navigating the whole process, not necessarily not aware of Medicaid members that have been on Medicaid, it's something that people know. Like I said, especially when we first were launching, we did see a lot of it because people didn't have other options before, so it was something that people seem to be aware of that they could apply." – Medicaid Member Services representative

Provider awareness

Interviewees described increased provider awareness through experience with the stipulations of the IWP retroactive eligibility policy, noting a motivation to avoid the consequence of unpaid services if care is provided to an uninsured person. Interviewees agreed that providers are likely to direct uninsured people to apply for Medicaid within the calendar month services are received to ensure compensation for care.

"I think most providers know if we're getting to the end of the month, we better be getting them coverage for this month if they're there. There's always going to be that fine line of, it was a weekend and it was the last day of the month and things like that, but I think they've probably learned the hard way since 2016 that that day is not going to be covered if you don't apply." – Income Maintenance worker

A representative from a provider association discussed the role of providers and clinic staff in operationalizing retroactive eligibility, reporting that providers are burdened with additional administrative work to verify member eligibility and funding care at the time of service.

WRE Quantitative results

Hypothesis 1: Eliminating retroactive eligibility will increase the likelihood of enrollment and enrollment continuity.

Primary Research Question 1.1: Are people subject to the waiver of retroactive eligibility more likely to enroll in Medicaid relative to members in the same programs prior to the waiver?

Subsidiary Research Question 1.1a: Are people subject to the waiver of retroactive eligibility more likely to enroll while still healthy relative to members in the same programs prior to the waiver?

The new enrollee survey is currently in field.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Subsidiary Research Question 1.1b: Are people subject to the waiver of retroactive eligibility more likely to enroll earlier?

The new enrollee survey is currently in field.

Primary Research Question 1.2: Do people subject to the waiver of retroactive eligibility have increased enrollment continuity relative to members in the same programs prior to the waiver?

Subsidiary Research Question 1.2a: Do people subject to the waiver of retroactive eligibility understand that they will not be covered during enrollment gaps?

The new enrollee survey is currently in field.

Subsidiary Research Question 1.2b: What are the barriers to timely renewal for those subject to the waiver of retroactive eligibility?

The new enrollee survey is currently in field.

Subsidiary Research Question 1.2c: Among members subject to the retroactive eligibility waiver, is timely renewal more likely by those who might be expected to value coverage highly, relative to those who might value coverage less?

The new enrollee survey is currently in field.

Subsidiary Research Question 1.2d: Are people subject to the waiver of retroactive eligibility more likely to remain continuously enrolled relative to members in the same programs prior to the waiver?

Dataset complete, analyses underway.

Subsidiary Research Question 1.2e: Are people subject to the waiver of retroactive eligibility more likely to re-enroll relative to members in the same programs prior to the waiver?

Dataset complete, analyses underway

Hypothesis 2: Eliminating retroactive eligibility will not increase negative financial impacts on members.

Primary Research Question 2.1: Are there any negative financial impacts on consumers because of the waiver of retroactive eligibility relative to members in the same programs prior to the waiver?

Subsidiary Research Question 2.1a: Do beneficiaries subject to the waiver of retroactive eligibility experience greater 'medical debt' relative to members in the same programs prior to the waiver?

Data has been curated.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

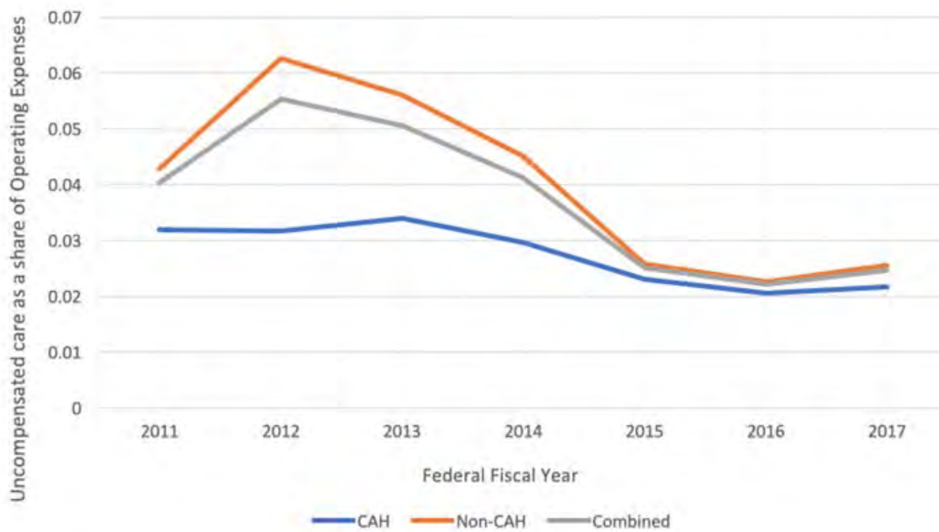
Subsidiary Research Question 2.1b:Do hospitals experience higher rates of uncompensated care after the enactment of the waiver of retroactive eligibility?

HCRIS Data has been curated, analyses underway.

Preliminary data through 2017 are provided below. Our data encompassed 116 Iowa hospitals. 82 of the hospitals were designated CAHs and 34 hospitals were not designated CAHs. Iowa expanded Medicaid under the ACA January 1st, 2014, between fiscal year 2013 and 2014. Source: CMS Hospital Cost Report Information System 2011-2017. These results were previously published in a Policy Brief entitled 'The effects of the ACA on uncompensated care, bad debt, and charity care in Iowa Critical Access Hospitals'.

Figure 27 - Figure 29 provide insights into the positive effects that the ACA had on Critical Access Hospitals, an important health asset in rural states such as Iowa. The results lay the groundwork for expected results related to the waiver of retroactive eligibility. We would anticipate that eliminating retroactive eligibility would initally result in an increase in uncompensated care and charity care as hospitals are not reimbursed for care provided prior to the member application date. However, as hospitals adapt, as has been indicated in the process evaluation, we anticipate that the rate of uncompensated care and charity care will stabilize at or near the 2017 rates.

Figure 27. Uncompensated Care as a Share of Operating Expenses by Fiscal Year for Iowa Hospitals



The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Figure 28. Charity Care as a Share of Operating Expenses per Fiscal Year

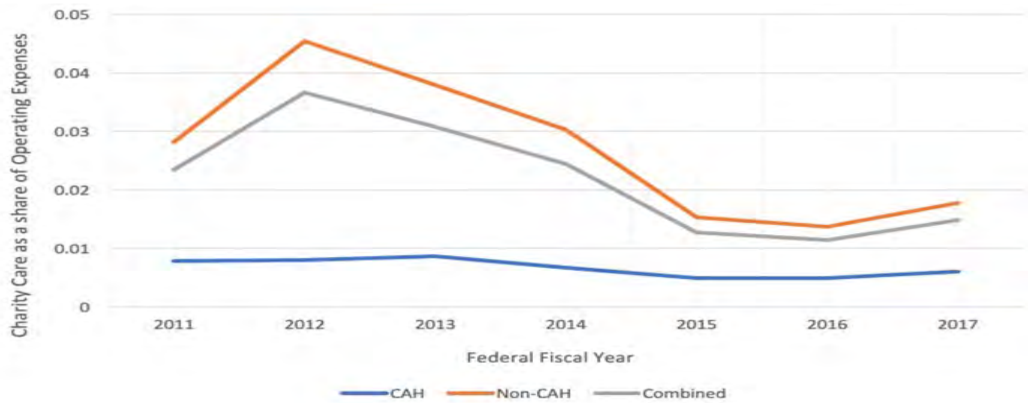
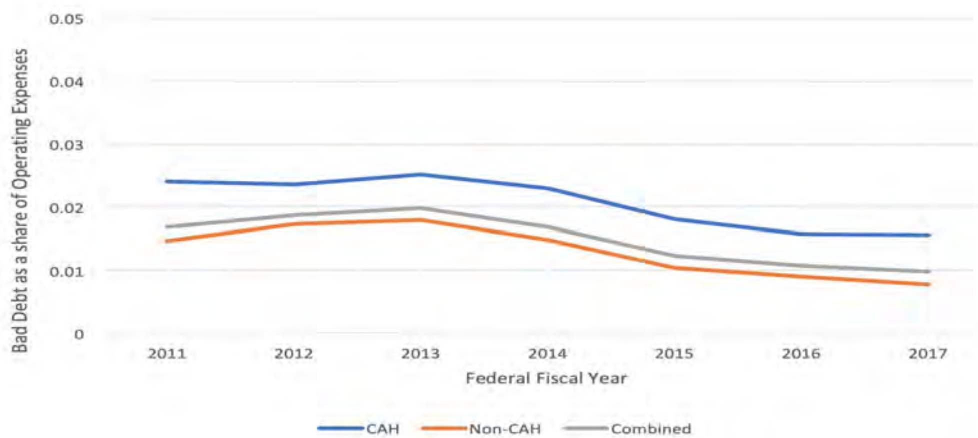


Figure 29. Bad Debt as a Share of Operating Expenses per Fiscal Year



Hypothesis 3: Eliminating retroactive eligibility will improve member health.

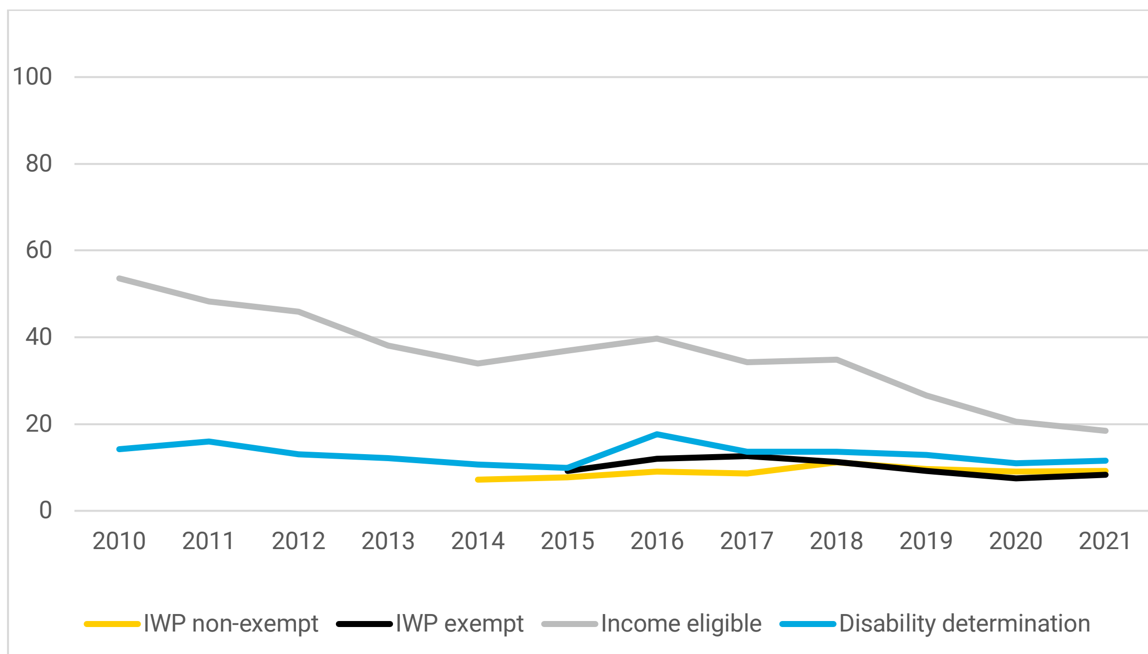
Primary Research Question 3.1: Do people who are subject to waiver of retroactive eligibility have better health outcomes?

Preliminary data has been analyzed to determine the pattern of ED visits per 1,000 member months for 4 specific groups. We included IWP members who were not exempt from the Healthy Behaviors Incentive (HBI) requirements (would need a preventive visit to avoid a premium), IWP members who are exempt from the HBI requirements (medically exempt or in exempted population such as American Indian or FPL under 50%), adults in households that are income eligible for Medicaid, and adults in households who are eligible for Medicaid due to a disability determination.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Figure 30 shows the pattern of outpatient ED visits/1,000 member months for the period 2011-2021. The members enrolled due to a disability determination (DD) have a unique pattern. Prior to 2014 (year IWP was instituted) the trend is stable. There is a spike in outpatient ED visits for this group during 2016, the year Iowa Medicaid moved to an all MCO model of care. The outpatient ED rate for these members never returned to pre-MCO levels. For members enrolled due to income eligibility the outpatient ED rates have continued to fall over the 12 years shown in the trend. Rates for IWP non-exempt members and IWP exempt members have fallen since IWP began in 2014, with the greatest drop in the IWP exempt group.

Figure 30. Outpatient ED Rates by Program and Year



IWP exempt group rates begin in 2015 as HBI exemption was not determined until 1 year post HBI initiation 2014

Hypothesis 4: Eliminating retroactive eligibility will reduce the annual Medicaid services budget.

Primary Research Question 4.1: What are the effects on the Medicaid services budget?

This research question will not be addressed due to the effects of COVID-19 on costs.

Hypothesis 5: Providers will increase initiation of Medicaid applications for eligible patients/clients

Primary Research Question 5.1: Have health care providers increased the initiation of Medicaid applications for eligible patients/clients?

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Information provided through the process evaluation indicates that providers have increased their role in initiating Medicaid applications.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Cost Sharing

Executive summary

Key progress

- Medicaid emergency department data compiled for 2010-2022 with indicators as to whether the state considers the visit emergency and ACG level assignments for emergent level.
- Synthetic control analyses used to determine comparison states for emergency department comparisons: Kansas, Nebraska, Maine, and Utah.

Cost sharing general background information

Beginning on July 29, 2011 (prior to Iowa's 1115 waiver), the Iowa Medicaid program embarked on a policy to reduce unnecessary use of the ED through a tiered reimbursement strategy and a member cost sharing strategy for non-pregnant adults that required a $3 copayment for non-emergency care within the emergency room. (See Supplemental Materials for all related Informational Letters). The original information to Iowa Medicaid Hospitals (excluding Indian Health Services Providers) included the following description.

> **Copayment in the ER** - Effective September 1, 2011, Medicaid members (Including those on IowaCare) must pay a $3 copayment for each visit to a hospital ER for treatment of nonemergent** medical condition. The $3 copayment does not apply if the visit to the ER is for an emergent condition and/or results in a hospital admission. The exclusions applicable to all copayments still apply. The most common examples are: members under age 21; members who are pregnant; members presenting with an emergent condition; or members receiving family planning services. See 441 Iowa Administrative Code 79.1(13).
>
> **Changes to reimbursement of non-emergent** ER services** – Also effective September 1, 2011, if the ER visit does not result in an inpatient hospital admission and does not involve any emergent** condition, the payment depends on the referral (if any) and whether or not the member is participating in either the MediPASS or Lock-in program (note: these changes do not apply to members on IowaCare):
>
> i. Payment is made at 75 percent of the usual APC amount:
>
>   a. For members not participating in the MediPASS or Lock-in program who were referred to the ER by appropriate medical personnel (UB04 form locator 76++) or
>   b. For members participating in the MediPASS or Lock-in program referred to the ER by their MediPASS or Lock-in primary care physician (UB04 form locator 79++).

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

ii. Payment is made at 50 percent of the usual APC amount for members not participating in the MediPASS or Lock-in program who were not referred to the ER by appropriate medical personnel.
iii. No payment will be made for members participating in the MediPASS or Lock-in program who were not referred to the ER by their MediPASS or Lock-in primary care physician.

The copayment amount (when applicable) will be deducted after the payment reductions have been applied. No change to reimbursement of ER services - if the ER visit results in an inpatient hospital admission, the visit continues to be paid as part of the inpatient claim. If the ER visit does not result in an inpatient hospital admission but involved an emergent** condition, the ER claim is still paid at the full APC. Triage/assessment codes for any Medicaid member in an ER also continue to reimburse at the full (100%) fee schedule amount in all cases.

Originally, Iowa Medicaid sought to impose a $10 copayment for non-emergent use of the emergency room. However, this was reduced to $8. Iowa Medicaid provides a listing of the diagnosis codes that qualify as an emergency visit on the Medicaid 'Provider Claims and Billing' webpage. This page is updated at least annually but may be updated more frequently, for example, it was updated on April 1, 2020, to reflect emergency diagnoses related to COVID-19.

The $8 copayment was suspended during the PHE.

In a letter to the State Medicaid Director, Michael Randol, dated November 15, 2019, CMS outlined the following expectations/goals for the $8 ED copay.

Iowa believes this policy will help beneficiaries learn about the importance of choosing appropriate care in the appropriate setting-which is generally not the ED-by educating beneficiaries about the direct cost of health care services and the importance of seeking preventive services and similar care in the most appropriate setting. Receiving preventive and similar care in non-emergency settings can improve the health of beneficiaries, because they can build and maintain relationships with their regular treating providers. Over time, this may lead to the prevention and/or controlled maintenance of chronic disease, as prevention and health promotion are difficult to achieve and sustain through episodic ED visits. Additionally, this policy will improve the ability of beneficiaries who truly need emergency care to access it, by preserving ED and state fiscal resources for those who are truly in need of timely emergency care.

Cost sharing goals

- Educate members the ED is not the appropriate place for all care
- Educate members about the cost of emergency department care

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

- Build relationships with primary care providers improving preventive and chronic care
- Increase the availability of emergency departments for those who need them

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Figure 31. Cost Sharing Logic Model

Process		**Outcomes**		
Policy	**Process**	**Short term (Goals)**	**Intermediate**	Long-term
$8 copayment for non-emergent ED visit	Member understanding of $8 copayment Communication and implementation of non-emergent conditions $8 Copayment billing and collection process Provider understanding and implementation of $8 copayment	Understanding ER is not the appropriate place for all care Realization of cost for ER services Establishment of primary care regular source of care	Increased primary care utilization for non-emergent acute care Increased utilization of prevention/monitoring care Decreased ER utilization for non-emergent acute care Increase in beneficiary regular source of care	Improved self-ratings of physical/mental health Reduced avoidable inpatient admissions Improved ED availability for emergent care
Moderating factors: Existing chronic conditions, regular source of care, distance to providers, previous use of ED, demographic characteristics				

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Cost sharing evaluation design

Known implementation issues

The $8 copayment for non-emergent ED use has been in place since January 1, 2014. We originally began to assess this component during the first evaluation period. Previous analyses were halted when we discovered that there was a disconnect between the ED visit and the application of the copayment. We anticipated, at that time, that Iowa Medicaid would apply the copayment to the claims, however within the first 2 years we found less than 10 claims that had an $8 copayment attached. Consumer surveys indicated that members had a poor understanding of what constitutes emergent care and that they may be driven to the ED through providers such as nurse triage programs and physicians on-call for practices. Since April 2016, the MCOs have been responsible for enforcing this $8 copayment within the claims/encounter process. We anticipate that we will see more claims with the $8 copayment attached. Additionally, we are working to integrate the diagnosis codes for non-emergent visits into existing algorithms to better estimate the degree of ED use for 'non-emergent' care as defined by Iowa Medicaid.

Many of the analyses rest on determining whether an ED visit is non-emergent. We originally experimented with using the New York University Emergency Department algorithm to assign outpatient ED visits. This algorithm indicates what proportion of the visit can be attributed as non-emergent, emergent/primary care treatable, ED care needed preventable/avoidable, and ED care needed not preventable or avoidable. This method required that we determine a cutoff related to the proportion of the visit attributed as non-emergent. Our results would differ given changes in the cutoff levels. Visits that were attributed to injury, mental health related, alcohol related, or substance abuse related are not categorized in the algorithm. Additionally, this algorithm consistently resulted in approximately 16% of the visits being 'unclassified', leaving data 'on the table' that we could not use.

We are now utilizing 2 methods for assignment as non-emergent. First, we utilize the lists of emergent diagnoses that are provided by Iowa Medicaid. Lists from 2011 through present have been assimilated. Diagnoses are considered non-emergent if they do not appear on the state's 'emergency diagnosis' listing for the time period of the visit. Second, we are utilizing the John's Hopkins ACG software to assign visits to the following categories: non-emergent, emergent primary care treatable, emergent ED needed potentially avoidable, emergent ED needed not potentially avoidable. Additionally, visits are categorized into mental health/substance use, injury and unclassified. This method yields less than 1% of visits as unclassified.

Process evaluation

See General Methods: Process evaluation

Quantitative analyses

See General Methods: Empirical strategy

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Cost sharing target and comparison populations

IWP members

See discussion General Background Information: IWP members.

Comparison populations

Income eligible Medicaid members (IE)

See discussion General Background Information: Income eligible members.

Disability Determination Medicaid members (DD)

See discussion General Background Information: Members eligible due to a disability determination.

Other states

HCUP data for states that do and do not utilize an ED copayment will be compared to Iowa for the period CY 2014-2022.

Data sources

We will utilize data from the Iowa Medicaid Administrative files, Iowa Hospital Association, and Healthcare Cost & Utilization Project – HCUP. Descriptions of these data sources are found in Secondary Data.

Member surveys

Dr. Peter Damiano has worked with the developers of the Consumer Assessment of Healthcare Providers and Systems (CAHPS®) survey and utilized CAHPS survey measures for over 15 years to conduct enrollee surveys for Iowa Medicaid. This background will provide us with access to CAHPS enrollee survey results for both IowaCare enrollees and Medicaid enrollees for several years prior to the beginning of Iowa Wellness Plan. Surveys are completed every 18 months for a representative sample of Medicaid enrollees. In the past, specific questions related to ED use and beliefs around ED use have been included. These will be refined and include in future surveys.

Emergency Department use survey

The research team will develop a telephone survey to be administered to members who utilize the ED for non-emergent diagnoses in Spring 2024. We anticipate recruiting 50 members per month for 1 year. This should yield 300 completed surveys (100 per group) with sufficient power to detect moderate differences at .05.

Evaluation period

Pre- Post-Implementation period (CY 2012-2022)

Analyses involving state-level data will be conducted for the period CY 2012-2022. Though we do not have an adequate pre-implementation group for direct comparison to the IWP population, we will utilize pre-implementation trends for the adult members in income eligible categories.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Post-Implementation period (CY 2014-2022)

The post-implementation period provides a very interesting opportunity to assess the effect of the $8 copayment. The copayment was in place from January 2014-March 2020, then waived due to COVID-19 from March 2020 through end of PHE when it will be reinstated.

COVID-19 adjustments

During the COVID-19 pandemic Iowa Medicaid waived the $8 copayment for inappropriate ED use and updated the ICD-10 diagnosis codes that could be used to determine appropriate use to reflect COVID-related visits. Additionally, health care utilization, in particular ED use, was affected by a general avoidance of the ED to help hospitals preserve much needed PPE and lessen members' exposure to COVID-19. We will continue to monitor policies and activities, utilize the data to try to account for COVID-19 effects and monitor best practices as other researchers also adjust analyses for these effects. We are currently developing a regression model that will utilize this break in the policy to enhance our ability to determine the effects.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Cost Sharing Evaluation Measures Summary

Comparison Strategy	Outcomes measures(s)	Data sources	Analytic approach
Hypothesis 1: Members understand the $8 copayment for non-emergent use of the ER.			
Research Question 1: Do members understand the $8 copayment for non-emergent use of the ER?			
Study group: IWP members completing the consumer survey Two comparison groups: 1: FMAP adult members completing the consumer survey 2: SSI adult members completing the consumer survey	Sometimes health plans require members to pay part of cost when they use the emergency room. This is considered a copayment. Are you required to pay any part of the cost when you use the emergency room? *(Yes, No)* If yes, do you know how much you will need to pay? If yes, are there any reasons why you might not have to pay? What are these reasons?	Consumer survey	Descriptive analyses 2024
Hypothesis 2: Cost sharing improves member understanding of appropriate ER use.			
Research Question 2.1: Do members subject to an $8 copayment understand appropriate use of the ER better than members who are not subject to the copay?			
Study group: IWP members completing the consumer survey Two comparison groups: 1: FMAP adult members completing the consumer survey 2: SSI adult members completing the consumer survey	In the last 6 months, how many times did you go to an emergency room (ER) to get care for yourself. *(None, 1, 2, 3, 4, 5 to 9, 10 or more times)* Do you think the care you received at your most recent visit to the ER could have been provided in a doctor's office? *(Yes, No)* What was the main reason you did not go to a doctor's office or clinic for the care you received at your most recent visit to the ER? Choose only one response. *I did not have a doctor or clinic to go to; My insurance plan would not cover the care I needed if I went to a doctor's office or clinic; My doctor, nurse, or other health care provider told me to go to an ER for this care; My doctor's office or clinic was open, but I could not get an appointment; My doctor's office or clinic was not open when I needed care; I had transportation problems getting*	Consumer survey	Descriptive analyses; DID 2017 and 2024 consumer surveys

Comparison Strategy	Outcomes measures(s)	Data sources	Analytic approach
	to a doctor's office or clinic; My health problem was too serious for the doctor's office or clinic		
Research Question 2.2: Do members subject to an $8 copayment understand cost of the ER better than members who are not subject to the copay?			
For those indicating they had an ER visit in the last 6 months. Study group: IWP members completing the consumer survey indicating they understand the $8 copayment Comparison group: IWP members who said they did not understand the $8 copayment on the 2017 consumer survey	[Measure under development] Thinking back to the last time you went to the emergency room: How much did the care cost you? How much did the emergency room charge your insurance?	Consumer survey	Descriptive analyses 2024 Consumer survey
Research Question 2.3: Are members subject to an $8 copayment for non-emergent use of the ER less likely to use the ER for non-emergent care?			
Study group: IWP members who indicated they understood the $8 copayment on the 2024 consumer survey Comparison group: IWP members who said they did not understand the $8 copayment on the 2024 consumer survey	Member probability of a non-emergency ED visit Newly developed measure indicating whether there was a claim in measurement period for a non-emergent diagnosis which is defined as NOT on the list of emergency diagnoses provided by IDHS	2024 Consumer survey Medicaid claims	DID 1-year period surrounding the 2024 survey
Study group: IWP members Two comparison groups 1: FMAP adult members 2: SSI adult members	Rate of a non-emergency ED claims Newly developed measure indicating number of ED visits for a non-emergent diagnosis (see above) during the measurement period	Medicaid claims	CITS Pre-COVID PHE $8 copay present, COVID PHE $8 copay suspended, Post-COVID PHE $8 copay reinstated
	Rate of ER readmission 7 days and 30 days This measure has been used in other studies by the research team. It is based upon the hospital readmission measure in HEDIS but substitutes ED visit for hospitalization throughout.		
Comparable states with no copayment required	Rate of ER readmission 7 days and 30 days	HCUP ER files	Comparison of rates CY 2013 and CY 2014
	Rate of ER use for non-emergent acute care		

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Comparison Strategy	Outcomes measures(s)	Data sources	Analytic approach
Research Question 2.4: Are members subject to an $8 copayment for non-emergent use of the ER more likely to use the primary care providers for non-emergent care?			
Study group: IWP members Two comparison groups 1: FMAP adult members 2: SSI adult members	Rate of primary care provider office use for non-emergent acute care Newly developed measure indicating proportion of population that utilized an MD, DO, ARNP, PA, rural health clinic, FQHC or otherwise identified primary care clinic during the measurement year for non-emergent care.	Medicaid claims	CITS Pre-COVID PHE $8 copay present, COVID PHE $8 copay suspended, Post-COVID PHE $8 copay reinstated
Hypothesis 3: Members subject to cost sharing are more likely to establish and utilize of a regular source of care as compared to members not subject to cost sharing.			
Research Question 3.1: Are members who are subject to the $8 copayment for non-emergent ER use more likely to have a regular source of care than those not subject to the copayment?			
Study group: IWP members completing the consumer survey indicating they understand the $8 copayment Three comparison groups 1: FMAP adult members 2: SSI adult members 3: IWP members who said they did not understand the $8 copayment on the consumer survey	A personal doctor is the person you would see if you need a check-up, want advice about a health problem, or get sick or hurt. Do you have a personal doctor? (The answer to this question will focus on members who did not have a personal doctor in a 2017 survey.)	Consumer survey	DID 2017 and 2021 consumer surveys
Study group: IWP members Two comparison groups 1: FMAP adult members 2: SSI adult members	Utilization of a regular source of care New developed measure one visit to an MD, DO, ARNP, PA, rural health clinic, FQHC or otherwise identified primary care clinic during the measurement year for preventive care or 2 or more visits for acute care.	Medicaid claims	Means tests CY 2014-2022

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Comparison Strategy	Outcomes measures(s)	Data sources	Analytic approach
Research Question 3.2: Are members who are subject to the $8 copayment for non-emergent ER use more likely to receive preventive care and chronic care monitoring than those not subject to the copayment?			
Study group: IWP members Three comparison groups 1: FMAP adult members 2: SSI adult members 3:IowaCare members	Rates of annual well-person visit Based on HEDIS Adult Access to Ambulatory/Preventive Care (utilize the preventive codes only)	Medicaid claims	CITS Pre-IWP CY 2012-2013 Post-IWP CY 2014-2022
	Rates of HbA1c monitoring for persons with Diabetes HEDIS Comprehensive Diabetes Care measure component		DID CY 2014-2022
	Rates of primary care follow-up visit within 7 days of ER use Based on HEDIS Follow-up After Emergency Department Visit for Mental Illness and Emergency Department Utilization measures		DID CY 2014-2022
Hypothesis 4: Cost sharing improves long-term health care outcomes.			
Research Question 4.1: Do members who are subject to the $8 copayment for non-emergent ER use have more favorable long-term health care outcomes?			
Study group: IWP members Two comparison groups 1: FMAP adult members 2: SSI adult members	In general, how would you rate your overall health now? *(Excellent; Very good; Good; Fair; Poor)*	Consumer surveys	DID 2017 and 2021 consumer surveys
	In general, how would you rate your overall mental and emotional health now? *(Excellent; Very good; Good; Fair; Poor)*		Means tests 2017 and 2021 consumer surveys
	Rates of avoidable inpatient admissions AHRQ measure incorporating Ambulatory Care-Sensitive Condition	Medicaid claims	DID CY 2014-2022
Comparable states with no copayment required	Rates of avoidable inpatient admissions	HCUP ER files	Descriptive analyses CY 2012-2015

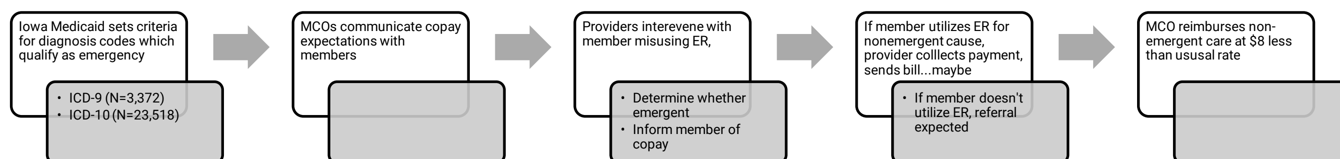
The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Cost Sharing Results

Cost sharing process evaluation

General

Figure 32. Cost Sharing Process as Described by Key Stakeholders



A large body of research shows premiums serve as a barrier to obtaining and maintaining Medicaid coverage. Cost sharing can decrease enrollment, decrease access to essential health care, and increase use of more expensive health care services such as the emergency department. States may also experience increased administrative burden when implementing cost sharing with enrollees. "Even relatively small levels of cost-sharing are associated with reduced care, including necessary services, as well as increased financial burden for families; and state savings from premiums and cost-sharing in Medicaid are limited."

$8 Copayment billing and collection process

Within the conversation about the effectiveness of the co-pay, stakeholders commented on the amount of the co-pay charged ($8) and perceptions about that amount, with one MCO representative saying, "I respect the amount. It's not a lot, but I think it's more than five bucks. It's more than a buck. It's enough to... It's $8. It's almost awkward. You almost have to think about it. Oh, I need to give you five and three?"

MCO representatives doubted the impact of the $8 copay, suggesting the amount was too nominal to impact member decision-making or incentivize enforcement, saying:

> *"I will say that it's been my observation historically, whether $8 is an effective deterrent or not. It's $8. It's $8. And then again, does the emergency room even try to collect it, how they use it…I would not say $8 is a material enough of a number to probably have an impact on that one way or the other." – MCO representative*

> *"Now, if an $8 copay has a negative impact or deterrent there, I don't believe so. I really don't." – MCO representative*

Regarding whether an $8 copay is substantive enough, stakeholders suggested that for low-income members, the amount could be effective in decisions about type of care, saying:

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

"$8 doesn't sound like a lot for someone that's working, but for someone who is not working, it may be impactful, and it may make them think twice." – MCO representative

"I think it's an interesting amount, and I don't know if it works in the Iowa Health and Wellness Program, but I am pretty confident that copays work in terms of helping people think through their decisions about do I go, or do I not go?" – MCO representative

Representatives from Iowa Medicaid and an MCO shared perceptions about whether a copay might interfere with necessary use of the emergency room, reporting that $8 was unlikely to cause financial strain or a barrier to needed care.

"Even prior to PHE, we never really heard any complaints about it or any hardship things." – Iowa Medicaid representative

"I worry a lot about copays, especially in emergent care. I think there's been enough research that says when a copay gets hefty enough, it can discourage people from early presentation of serious emergent care. I think the state put a lot of thought into what's too hefty and what's not hefty enough. I don't know the right answer, but $8 certainly seems like something that would get me thinking, but is also probably not a serious... barrier is too strong a word, but stepping stone... It's not a serious barrier to seeking care when you really need it." – Iowa Medicaid representative

Interviewees shared skepticism about whether members were solicited to pay or actually paid the $8 copay for non-emergent care, suggesting that the rationale behind cost sharing (promote member investment in healthcare decisions) is not consistently realized.

"So, I can tell you from my experience when I worked at our ER that they didn't charge copays. They asked, but nobody paid, and you can't deny care. Whether or not they ever got that $8 later, I don't know. Doubtful. Honestly, it was probably written off is my guess." – Clinic staff

"As far as the copays, I don't think that most people don't pay them." – Clinic staff

"I think it's accountability. I think that maybe for the people that are using the ER who shouldn't be, maybe they should, in my opinion, you only get two times and if it was an emergency, then you can't use the ER or you'll be billed and Medicaid won't pay for it type of thing. Make them accountable. Right now, I don't think there's any accountability. It's being paid for. They don't care how much it costs. The $8 copay, that's nothing if they pay it or not." – Clinic staff

"Yeah, $25 gift card is a lot cheaper than paying for an ER visit for a child that's vomiting, or you know what I'm saying?" – Clinic staff

One MCO representative shared the perception that determination of emergency care stems from location, which is not consistent with Informational Letter 2259 (issued August 10, 2021), which delineated appropriate **diagnosis codes** for full emergency room claim reimbursement to providers.

"The billing of these services are based on not the diagnosis in an ED, but the location. So, whether it's something that they should have gone to the emergency room or not, it's billed as an ED visit." – MCO representative

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Enforcement and collection

Representatives from MCOs reported that the **$8 copay** is deducted from the claim's reimbursement amount sent to providers, and members with questions about the co-pay usually interact with providers, except in cases of financial hardship, which can involve MCO support. One MCO representative also mentioned that collection of the copay due by IHAWP members is contingent on provider awareness of copay due at time of service.

> *"It's a deduction from the payment to the provider. So often they're probably calling whoever billed them for the $8 copay to ask questions about it. They also can be subject to have that waived if they say that they can't afford to pay that copay. So that's in place. They could call us to get support." – MCO representative*

> *"It [co-pay collection] would be based on that education and awareness of the Iowa Medicaid rules. Hopefully that's known upfront so they can collect that at the time of service. But yeah, if for some reason it's not at that point in time, we would basically short pay it by that copayment amount." – MCO representative*

> *"I think where the impact may be is, and you'd mentioned it a little bit, is administratively. It's the awareness of and the collection upfront of that copayment. So those who may not be aware or in tune with that and know that that's part of the Iowa Medicaid requirement, I think that's where we may have issue. Because obviously if we receive a claim and it was for non-emergent type services, but in an ER setting, we'll pay the claim, but we would still assume that the provider's going to have to go back and collect that copayment." – MCO representative*

> *"We don't have anybody from claims on specifically. At this point in time, I don't know. I do know that we have gotten claims where there's been an $8 copayment that was collected. I don't know if I have any specific detailed breakdowns as to the percentage that might be collected at the time of service versus unable to be collected versus collected post service. But we do know that there are situations where we have seen that sent over with the claim form where it was collected. So, our assumption is that the provider is collecting that in certain circumstances or at least certainly asking for it upfront." – MCO representative*

Interviewees were skeptical that providers expend effort in coordinating collection of the $8 copay from IHAWP members, suggesting that providers usually absorbed the loss of the $8 short payment in claims reimbursement. Interviewees shared that data tracking whether copays are collected is not available and few questions arise about provider collection.

> *"I don't think they are, in my experience. But there's higher dollar payments they're probably chasing, not from Medicaid necessarily, but other patients. That's probably one they're pretty willing to write off." – MCO representative*

> *"We'd work with the hospital if the hospital is truly chasing that payment. But we don't generally get a lot of questions about that non-emergent use cost share." – MCO representative*

> *"We don't know if a provider collects. If that's what the question is." – MCO representative*

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

"It could be that the providers are writing at all for all we know, but unfortunately, yeah, we don't have that level of insight." – MCO representative

"When providers call in, really within the calls they haven't called us and complained about the copay on the claims. So, I don't think it's very impactful, from what I've witnessed them calling in for." – MCO representative

"I would say whether the copay is collected or not does not impact our processes." – MCO representative

"I don't believe we collect that [receipt of copays]. We don't collect it and I'm not aware of any effort on behalf of the state." – MCO representative

"So, I can tell you from my experience when I worked at our ER that they didn't charge copays. They asked, but nobody paid, and you can't deny care. Whether or not they ever got that $8 later, I don't know. Doubtful. Honestly, it was probably written off is my guess." – Clinic staff

Interviewees discussed whether the $8 copay presented a financial strain for IHAWP members, noting that ensuring members won't avoid care due to cost as a priority. MCO representatives also mentioned various outlets for financial support in a Social Determinants of Health department and a grievance and appeal process to waive the copay.

"If the provider doesn't submit the claim, Member Services calls the billing company and handles the situation, so it is between the provider and the MCO not the provider and the member. We need to eliminate as much abrasion to the member as possible. We don't want them thinking next time that they can't seek services at an ER because of a previous bill situation." – MCO representative

"So, I think we might not, as the insurance company, always know about the times when a member does declare a hardship. I think they were probably directly calling the hospital to say, "Hey, I can't afford $8." And if that's not successful, then they could reach out to us, and we expect them to file a grievance with us. And that would lead our grievance team to go on behalf of them, reach out to the provider to work through that if that was what was needed." – MCO representative

"If we do receive a phone call about that $8 being a deterrent, we do have a department in the quality team, it's called housing and resources for SDOH needs. So, we can refer them to our SDOH team, and they can help find resources that may be available to them to help them with that copay." – MCO representative

"And like we said, we do have that housing and resource team, so if we are aware, it is a deterrent then we can work with them and help with them." – MCO representative

"Yeah, we would usually engage our grievance and appeal staff. And I could say since we've been in Iowa now seven years, it's not happened as far as I'm aware. But there is an option if that were to occur where a member could say they couldn't afford it and we would work on behalf of them with the hospital to have that waived." – MCO representative

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Provider understanding and implementation of $8 copayment

A representative from Iowa Medicaid suggested that member utilization of emergency care is generally validated by providers, avoiding the imposition of a copay altogether, saying, "I think they are seen and, it sounds me, which I'm not real sure that there aren't very many that end up even owing that $8. I don't know numbers…Typically the hospital does not deem it as not an emergency."

Regarding the motivation of providers to enforce cost sharing and solicit copays from members, stakeholders acknowledged wide recognition of inefficiency, noting that the nominal amount of money to collect is not worthwhile for providers. One MCO stakeholder summarized, saying,

> *"ultimately a provider would be in the best position to answer that question because they're the one that would be collecting the copay or the cost share. I think from their experience and whether or not they actually collect them or not, or they simply waive it."*

Additionally, stakeholders report in cases that members don't pay the copay at time of admission, providers absorb the copay charged to members rather than collecting payment via billing, a decision which could vary by hospital size.

> *"It's not widely used. That it is at the discretion of the hospital. And they often do not seek that $8 reimbursement." – Iowa Medicaid representative*

> *"In terms of, if the provider actually goes and gets the $8, we really don't know. Presume not, because it's not worth the time to chase it. They're probably just writing it off is my guess. Yeah." – MCO representative*

> *"The estimate is that it cost about $9 to send a bill out. It's not uncommon for some providers to say, "If they didn't pay upfront, is it even worth sending a bill," or is there a level at which you write things off because it's costs more to try to collect it? Everybody has a different level. Is it at $5? Is it $8 or something? Depending on the healthcare organization, and again with the ER, typically you are not allowed to refuse service if they don't have the copay with them at the time, so I'm sure there are some that may make that as that it's not worth sending the bill out." – MCO representative*

> *"I think sometimes the hospitals have a hard time even collecting the $8. So, just because of all of the issues that come with it, patients won't always come in with the $8, and so you can't get it. And then when you go to bill them, there are lots of things that can happen just in that part of it." – Provider group representative*

A provider association representative suggested that better tracking of payments and follow-through from providers would be needed to understand the effectiveness of cost sharing, saying,

> *"I think that to answer that question really well, you'd have to see some kind of data on how often it's collected, as to compared to how many times is it paid and how many times should have been paid, would give you a better information than anything else."*

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Effectiveness

Interviewees discussed perceptions of the effectiveness of the cost sharing component of the IHAWP program in reducing preventative emergency room use, noting that member awareness of alternative care settings is an important factor in determining effectiveness. Interviewees shared other factors involved in a member's decision to use the emergency room (other than the $8 copay), including a lack of viable in-person alternatives (scarcity of urgent care options due to location or timing), experiencing severe symptoms or pain (not technically determined as emergent), and habitual or learned use of the emergency room for healthcare. An MCO representative noted a 24-hour nurse hot line available to members.

> *"I think probably sometimes it comes down to education on where their resources are, what's available to them, where there's an urgent care. And what emerging services are, and where their needs can be met otherwise. So sometimes there's a member education component to it." – MCO representative*

> *"I think that sometimes people don't understand what emergent means. It means something different to us than it does to them. Sometimes to a member an ear infection is emergent because their child's screaming and stuff, but that's not emergent to us. Right?" – MCO representative*

> *"I was going to say too it does have a lot to do with the educational piece and providing them the nearest urgent cares. And sometimes it's just out of habit. They're so used to doing it over time and maybe their older family members did it over time. And so, it's kind of this generational thing that kind of keeps occurring. But once they get that education and we send them where the locations are, sometimes that does help deter that and they use those avenues for the minor issues. Or they can call our nurse line. We have a 24-hour nurse line for questions and some members use it and some members don't. But it's there if they want to use it." – MCO representative*

Interviewees from both MCOs shared perceptions that the $8 copay requirement for non-emergent ER utilization was **not** an effective motivator to deter emergency department use among IHAWP members.

> *"Based on my experience and what I've seen in the past, it's [$8 copay] generally not a deterrent from use of the emergency department compared to members who don't have cost sharing, I guess that is."- MCO representative*

> *"I don't think it's a deterrent in the way it's probably intended to be a deterrent." - MCO representative*

> *"From my perspective, I don't think so. I don't know if our member services team, if we ever hear much about members saying, well, I don't want to go to the ER for emergency services because I have to pay a copay." - MCO representative*

An MCO representative described the various settings for care and options for member who are considering using the emergency room, saying,

> *"There's different levels of access 24 hours a day. We have emergency room, we have urgent cares and provider offices that stay open a little later, but if they're curious, they can call into our 800*

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

number and they can either ask for the nurse line or they can talk to member services and find out what's the available tool in their area. And then we have telehealth as well."

Another MCO representative talked about education efforts aimed at providers, aimed at increasing alternatives to IHAWP member ED use, saying,

"We do annual training across the state with all of our providers on all the services we provide in conjunction with the other MCOs and Iowa Medicaid. And at the provider level from [MCO name], we do have provider engagement staff that are nurses that go into provider offices, primary care providers, and OB-GYNs on the majority. And we educate on the same available benefits for members such as our telehealth, our 24-hour nurse line, and the availability. And then they know that the access to care regulations that they have, that they refer somebody to emergency room or that they have a 24 hour access on their phone system if it's an emergency, go to the emergency room, that kind of thing, they have some access and availability requirements to be part of our network." – MCO representative

Improved ED availability for emergent care

One interviewee suggested that providers may advise members to utilize the emergency room, in non-emergent situations, which could have been handled in less intensive settings, like urgent care clinics. Interviewees noted **same-day and after-hours access to the ER as important characteristics for members seeking care**.

"So, it's not just individual members, but even those providers. Because even they were using the ERs many times where they could have used urgent care clinics. Member stubs their toe or something, you don't need to take them to the ER. But they feel that they have to take them somewhere. They were using the ER instead of urgent cares." – MCO representative

"Well, they have most of the same services other than they may have to go to the hospital for something. But I think the access part is really big, and not only for our members, but for the providers that are serving our members…That they have somewhere they can take them into the evening versus just until 5:00." – MCO representative

[Prompt: Do you think that's another piece of it [non-emergent ED use] as far as having that same day access?] "Absolutely." – MCO representative

When discussing topics related to cost sharing and ER use, clinic staff shared perspectives about Medicaid member use of the ER (emergency vs. non-emergency) and about Medicaid members who have a PCP vs. members who do not have a PCP:

"Because honestly, most of the people, and I don't want to sound biased, but most of the people that would come to the ER that were on Medicaid truly didn't need to be in the ER. They needed to go through their doctor, but it was just easier for them to just go into the ER." – Clinic staff

"I think also people don't have PCPs, so because they don't have an identified PCP they just go to the ER. That's what they know. Because I know there's been… I feel like we get lots of new patients and that have not had a PCP, and it's like how have you not had a PCP? Also, that's probably something that they've not been used to. They have a primary care physician that is there for them to call. I think

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

that that also plays into it because then they're like, who do they call? They go to the ER because they don't have anyone else." – Clinic staff

Cost sharing quantitative results

Hypothesis 1: Members understand the $8 copayment for non-emergent use of the ER.

Research question 1: Do members understand the $8 copayment for non-emergent use of the ER?

Due to the PHE this question was not included on the 2021 consumer survey but will be included in the 2024 consumer survey.

Hypothesis 2: Cost sharing improves member understanding of appropriate ER use.

Research Question 2.1: Do members subject to an $8 copayment understand appropriate use of the ER better than members who are not subject to the copay?

Research Question 2.2: Do members subject to an $8 copayment understand cost of the ER better than members who are not subject to the copay?

Research Question 2.3: Are members subject to an $8 copayment for non-emergent use of the ER less likely to use the ER for non-emergent care?

Research Question 2.4: Are members subject to an $8 copayment for non-emergent use of the ER more likely to use the primary care providers for non-emergent care?

The research questions above are address through a surveys and outcomes analyses. Due to the PHE this question was not included on the 2021 consumer survey but will be included in the 2024 consumer survey. Datasets are currently being curated and cleaned for analyses.

Hypothesis 3: Members subject to cost sharing are more likely to establish and utilize a regular source of care as compared to members not subject to cost sharing.

Research Question 3.1: Are members who are subject to the $8 copayment for non-emergent ER use more likely to have a regular source of care than those not subject to the copayment?

Research Question 3.2: Are members who are subject to the $8 copayment for non-emergent ER use more likely to receive preventive care and chronic care monitoring than those not subject to the copayment?

Datasets are currently being curated and cleaned for analyses.

Hypothesis 4: Cost sharing improves long-term health care outcomes.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Research Question 4.1: Do members who are subject to the $8 copayment for non-emergent ER use have more favorable long-term health care outcomes?

Datasets are currently being curated and cleaned for analyses

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Cost and Sustainability

Executive Summary

Key progress

- Sources identified for administrative data related to state budgets.
- HCRIS data obtained, and preliminary analyses completed.

Cost and sustainability general background information

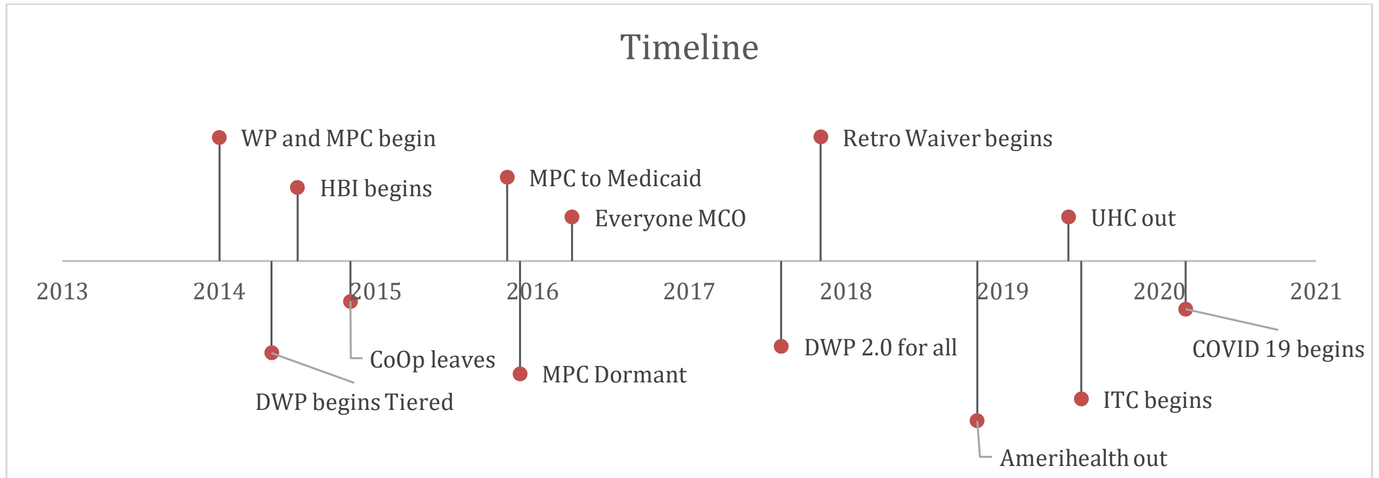
The most recent guidance from CMS indicates that evaluation questions regarding cost should focus on sustainability. In the past, the IWP evaluation has estimated cost effects, but without addressing whether the cost effects are sustainable for the state. Sustainability requires information on costs, but also information on revenue streams.

This evaluation has been placed on hold during the PHE as it is extremely difficult to understand the effects of the PHE on cost and revenue streams. We will collect information related to changes in revenue streams and costs during the next year with the intent of understanding whether and how these have changed over time. IWP costs and revenues will need to be separated from the costs and revenues of other Medicaid program components. Additionally, Iowa Medicaid is now part of a combined Iowa Department of Health and Human Services, which aligns the Iowa Department of Public Health with the Iowa Department of Human Services. This may make it more difficult to determine administrative costs going forward.

As can be seen from the timeline below, some state-level changes such as implementation of the MCOs, may be difficult to separate from IWP administrative costs. Additionally, the costs of MCO movement into and out of the program may result in additional administrative costs for IWP. The determination of what proportion of change costs should be accounted to IWP will be driven through our conversations with key Iowa Medicaid staff and estimates of the proportion of the affected population in IWP. Figure 33 provides a timeline of the changes that occurred within the IWP over time. These changes will be documented and addressed within the analyses.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Figure 33. Timeline of IWP Changes



WP=Wellness Plan, MPC=Marketplace Choice, DWP=Dental Wellness Plan, HBI=Healthy Behavior Initiative, UHC=UnitedHealthcare, ITC=Iowa Total Care

Cost and sustainability goals

The goals of the IWP program as they pertain to cost are likely going to impact the following:

1. Short term-increase FMAP payments and reduce bankruptcies
2. Intermediate term- Increased preventive care use, Decreased ED cost/use, Decreased inpatient admissions/cost, Decreased uncompensated care
3. Longer term-Statewide cost reductions

CMS guidance outlines the following key questions for investigation. (https://www.hhs.gov/guidance/sites/default/files/hhs-guidance-documents/ce-evaluation-design-guidance-sustainability-appendix_0.pdf)

1. What are the administrative costs to operate the demonstration?
2. What are the short- and long-term effects of eligibility and coverage policies on health service expenditures?
3. What are the impacts of eligibility and coverage policies on provider uncompensated care costs?

The model below provides a visual representation of Medicaid state costs and the results from the expansion. Though health care costs at the state level may be reduced through the expansion of health care coverage to additional Iowans, the effect on the Medicaid program will result in increased costs. To establish the sustainability of the change we have a few options: 1) determine whether the state revenues for the general fund are rising

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

proportionally to program costs, 2) determine whether state per adult health care costs are declining in comparison to anticipated increases due to additional coverage, 3) compare the increase in specific health care service costs in Iowa to other states.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Figure 34. Cost and Sustainability Logic Model

Process		**Outcomes**		
Policy	**Process**	**Short-term outcomes**	**Intermediate outcomes**	**Long-term outcomes**
Medicaid Expansion	Enabling legislation Increase in Administrative capacity Infrastructure changes Addition of contractors	Increased FMAP payments No change in proportion of general fund for Medicaid Decreased bankruptcies	Increased preventive care use Decreased ED cost/use Decreased inpatient admissions/cost Decreased uncompensated care	State-side Improvement of self-ratings of physical/mental health State-wide cost reductions Increases in private insurance coverage Increases in employment/job seekers
Moderating factors: Existing chronic conditions, communication regarding eligibility options and process, presence of Medicaid beneficiaries in the household				

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Cost and Sustainability Methodology

Evaluation design

Quantifying and evaluating the cost and sustainability of the Iowa Wellness Plan is being expanded for this waiver period to include state-level sustainability. Two phases of data collection will be utilized: Phase 1 to gather process information that will inform the analytical strategies (Phase 2).

Process analyses

The policy analysis focuses on understanding the cost and revenue streams associated with the Medicaid program in general and IWP in particular. We will use qualitative methods to conduct this portion of the evaluation, including document analysis and in-depth interviews. Due to the PHE interviews were suspended until 2023. We will assess the documents required in the final quarter of 2023.

Through telephone interviews with Iowa Medicaid staff, we will translate the past and current policies into a visual representation identifying the policy changes that might affect cost and revenues, with particular attention to the PHE. Documents related to policy changes and adjustments will be collected and reviewed. Special attention will be paid to the timing of changes so that we are able to include these in cost modelling as appropriate.

Policy changes and adaptations are translated into programs in unique and variable ways as administrative rules are written and interpreted by program leadership and staff. The timing of policy change and implementation is also variable. Our efforts will be focused on understanding the policy changes and adjustments and when they are fully implemented in the program. A good example of a policy change that we need to understand fully for this evaluation is the telehealth legislation and timing. Though legislation expanded telehealth in March 2020, this policy would not be considered fully implemented until we can establish a steady state for utilization of telehealth visits. Post PHE the telehealth policies are changing to become more restrictive which will affect costs.

Qualitative analyses

See discussion in Empirical Strategy.

Target and comparison populations

Iowa

Iowa has over 3 million residents with 36% living in rural areas. Prior to COVID-19 the unemployment rate hovered around 3.6% with the primary industries being manufacturing, finance and insurance, real estate, and health care. Farming ranks 8th in economic contribution in Iowa, though much of the manufacturing in the state is centered on meat processing (chickens, hogs) and the primary exports are farm related. 50% of the population is female, 90% are white, and 23% of the population is under 18 years of age,

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

while 17% are 65 and over. Iowa Medicaid provides dental coverage for adults and has a Medicaid Buy-in program for people with disabilities.

Comparison states

We have used synthetic controls to narrow the comparison states to Kansas, Maine, Nebraska, and Utah. These non-expansion states have comparable pre-expansion year trends and have available data for the period 2010-2022.

Target population: IWP members

See discussion in General Background Information: IWP members.

Comparison population

See discussion in General Background Information: Income eligible members and members due to a disability determination.

Data sources

We will utilize data from the Iowa Medicaid Administrative files, Iowa Hospital Association Files, HCRIS, Transformed Medicaid Statistical Information System - TMSIS, and Healthcare Cost and Utilization Project – HCUP. For a description of these data sources please see Secondary Data.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Cost and Sustainability Evaluation Methods Summary

Comparison Strategy	Outcomes measures(s)	Data sources	Analytic approach
Hypothesis 1: Ongoing administrative costs will increase due to implementation of IWP			
Primary Research Question 1.1: What are the administrative costs associated with IWP?			
Subsidiary Research Question 1.1a: How did the Medicaid program administrative costs change with implementation and ongoing support of IWP?			
Pre- and post-IWP state fiscal years	Administrative costs	MCO capitation payments/budget documents	Descriptive analyses SFY 2011-2021
Hypothesis 2.1: IWP will result in short-term outcomes supporting a sustainable program.			
Primary Research Question 2.1: What are the changes in revenue streams as a result of IWP?			
Subsidiary Research Question 2.1a: How do Federal Medical Assistance Percentage (FMAP) payments change as a result of IWP?			
Pre- and post-IWP state fiscal years	FMAP percentages	ASPE Website	Descriptive analyses SFY 2011-2021
	Proportion of Medicaid budget covered through FMAP payments	Iowa Medicaid budget documents	
Subsidiary Research Question 2.1b: How does the rate of individual bankruptcies in the state change with implementation of IWP?			
Pre- and post-IWP state fiscal years	Bankruptcy rates	State fiscal reports	Descriptive analyses SFY 2011-2021
Hypothesis 3: IWP results in intermediate outcomes supporting a sustainable program.			
Primary Research Question 3.1: How does IWP change healthcare expenditures?			
Subsidiary Research Question 3.1a: How does IWP change healthcare expenditures in the Medicaid program?			
Study group: IWP members Two comparison groups 1: FMAP adult members 2: SSI adult members	Per member per year (PMPY) expenditures on preventive care Total Medicaid reimbursement per person per year for services considered preventive such as annual well visit, monitoring labs, and vaccines.	Medicaid claims	CITS Pre-IWP CY 2012-2013 Post-IWP CY 2014-2021
	PMPY expenditures on ED visits Total Medicaid reimbursement per person per year for emergency department use not resulting in hospitalization		DID CY 2014-2021 DID CY 2014-2021

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Comparison Strategy	Outcomes measures(s)	Data sources	Analytic approach
	PMPM expenditures on inpatient admissions Total Medicaid reimbursement per person per year for hospitalizations		
Study group: Iowa pre- and post-IWP implementation Comparison group: comparable non-expansion states pre- and post-IWP implementation	PMPY expenditures on ED visits Total Medicaid reimbursement per person per year for emergency department use not resulting in hospitalization	TMSIS	DID CY 2015-2021 (year limitations due to cutover dates)
	PMPM expenditures on inpatient admissions Total Medicaid reimbursement per person per year for hospitalizations		
Subsidiary Research Question 3.1b: How does IWP change state-wide healthcare expenditures?			
Study group: Iowa pre- and post-IWP implementation Comparison group: comparable non-expansion states pre- and post-IWP implementation	Rate of self-pay/charity care	HCRIS	CITS Pre-IWP CY 2012-2013 Post-IWP CY 2014-2021
	Reported rates of uncompensated care		
Iowa Hospitals pre- and post-IWP	ED expenditures Total all-payor charges for ED care at Iowa hospitals	Iowa Hospital Association files	Descriptive analyses CY 2012-2021
	Inpatient expenditures Total all payor charges for hospitalizations at Iowa hospitals.		
Study group: Iowa pre- and post-IWP implementation Comparison group: comparable non-expansion states pre- and post-IWP implementation	ED expenditures Total all-payor charges for ED care at Iowa hospitals	HCUP	CITS Pre-IWP CY 2012-2013 Post-IWP CY 2014-2021
	Inpatient expenditures Total all payor charges for hospitalizations at Iowa hospitals.		

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

<table>
<tr><th>Comparison Strategy</th><th>Outcomes measures(s)</th><th>Data sources</th><th>Analytic approach</th></tr>
<tr><td colspan="4">Primary Research Question 3.2: How does IWP change healthcare utilization?</td></tr>
<tr><td colspan="4">Subsidiary Research Question 3.2a: How does IWP change healthcare utilization in the Medicaid program?</td></tr>
<tr><td rowspan="2">Study group: IWP members

Three comparison groups
1: FMAP adult members
2: SSI adult members</td><td>Preventive care utilization
Whether or not member obtain an annual wellness exam.</td><td rowspan="3">Medicaid claims</td><td rowspan="2">CITS
Pre-IWP CY 2012-2013
Post-IWP CY 2014-2021</td></tr>
<tr><td>Avoidable hospitalizations</td></tr>
<tr><td>Members who used the ED during the calendar year
Study group: IWP members

Two comparison groups
1: FMAP adult members
2: SSI adult members</td><td>Non-emergent ED use
Whether or not ED visit was for a non-emergent reason as defined by the IDHS.</td><td rowspan="3">DID</td></tr>
<tr><td rowspan="2">Study group: Iowa pre- and post-IWP implementation

Comparison group: comparable non-expansion states pre- and post-IWP implementation</td><td>Non-emergent ED use</td><td>TMSIS</td></tr>
<tr><td>Avoidable hospitalizations</td><td>TMSIS/HCUP</td></tr>
<tr><td colspan="4">Subsidiary Research Question 3.2b: How does IWP change healthcare utilization in Iowa?</td></tr>
<tr><td>Study group: Iowa pre- and post-IWP implementation

Comparison group: comparable non-expansion states pre- and post-IWP implementation</td><td>Preventive care utilization</td><td>BRFSS</td><td rowspan="3">CITS</td></tr>
<tr><td rowspan="2">Iowa Hospitals pre- and post-IWP</td><td>Non-emergent ED use</td><td rowspan="2">Iowa Hospital Association Files</td></tr>
<tr><td>Avoidable hospitalizations</td></tr>
</table>

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Comparison Strategy	Outcomes measures(s)	Data sources	Analytic approach
Study group: Iowa pre- and post-IWP implementation Comparison group: comparable non-expansion states pre- and post-IWP implementation	Non-emergent ED use	HCUP	DID
	Avoidable hospitalizations		
Hypothesis 4: IWP results in long-term outcomes supporting a sustainable program.			
Primary Research Question 4.1: What are the long-term, state-wide changes resulting from IWP?			
Study group: Iowa pre- and post-IWP implementation Comparison group: comparable non-expansion states pre- and post-IWP implementation	Self-ratings of physical health	BRFSS	CITS
	Self-ratings of mental health		
	Annual average (median) per person healthcare expenditures	ACS	
	Rate of private insurance coverage		
	Rates of unemployment		

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Cost and sustainability results

Hypothesis 1: Ongoing administrative costs will increase due to implementation of IWP.

Primary Research Question 1.1: What are the administrative costs associated with IWP?

Subsidiary Research Question 1.1a: How did the Medicaid program administrative costs change with implementation and ongoing support of IWP?

We are working with the IDHHS to gather historical documents related to this question.

Subsidiary Research Question 1.1b: How do the contractor/agency/provider costs change after implementation of IWP?

We are removing this subsidiary question from the evaluation as it has proven nearly impossible to gather the required information.

Hypothesis 2: IWP will result in short-term outcomes supporting a sustainable program.

Primary Research Question 2.1: What are the changes in revenue streams as a result of IWP?

Subsidiary Research Question2.1a: How do Federal Medical Assistance Percentage (FMAP) payments change as a result of IWP?

We know that there is an increase of FMAP payments due to the enhanced ACA match. This data is being assimilated for analysis.

Subsidiary Research Question 2.1b: How does the rate of individual bankruptcies in the state change with implementation of IWP?

We are conducting an analysis of the impact of the Medicaid expansion in Iowa in 2014 on bankruptcy filings. The specific outcomes of interest are total bankruptcy filings, total personal bankruptcy filings, chapter 7 bankruptcy filings, and chapter 13 bankruptcy filings. Quarterly data are available from the US Bankruptcy Courts. In Iowa, the number of personal bankruptcy filings fell from 1,350 during the first quarter of 2013 to 1,076 during the first quarter of 2015. Chapter 7 is the most common type of bankruptcy in Iowa; due to the income eligibility requirements, chapter 7 is also the most applicable type of bankruptcy for low-income members who could be eligible for Medicaid after the expansion. The number of chapter 7 personal bankruptcy filings fell from 1,234 during the first quarter of 2013 to 972 during the first quarter of 2015. These decreases spanned the expansion of Medicaid in Iowa; but

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

there was an economic expansion, and the trends in states that did not expand Medicaid also show that bankruptcy filings decreased during this period. We are in the process of selecting the most appropriate comparison group for Iowa, based on the trends in bankruptcy filings prior to 2014, to determine the changes due to the expansion of Medicaid.

Hypothesis 3: IWP results in intermediate outcomes supporting a sustainable program.

Primary Research Question 3.1: How does IWP change healthcare expenditures?

Subsidiary Research Question 3.1a: How does IWP change healthcare expenditures in the Medicaid program?

We have created a longitudinal monthly dataset with all members eligible for at least one month for the period CY 2011-CY 2022. This dataset is the foundation for many of the outcome related questions within the evaluation, this one included. We will create a per member per month cost to add to this dataset. Though this does not provide true costs for all periods (MCO per capita costs are not included and would be relevant since 2016), this allows for comparisons of cost for care, which may be more relevant. Additionally, all costs will be adjusted to present day dollars.

Subsidiary Research Question 3.1b: How does IWP change state-wide healthcare expenditures?

Data related to state-wide healthcare expenditures has been difficult to obtain. We are anticipating a change to look at the state-wide cost of ED visits and inpatient visits as proxies for total expenditures. We would expect to see these reduced over time due to the improved access provided through IWP.

Primary Research Question 3.2: How does IWP change healthcare utilization?

Subsidiary Research Question 3.2a: How does IWP change healthcare utilization in the Medicaid program?

Subsidiary Research Question 3.2b: How does IWP change healthcare utilization in Iowa?

See response to Subsidiary Question 3.1b.

Hypothesis 4: IWP results in long-term outcomes supporting a sustainable program.

Primary Research Question 4.1: What are the long-term, state-wide changes resulting from IWP?

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Non-Emergency Medical Transportation

Executive summary

2022 Member experience survey: Methods and results

In the summer of 2022, surveys were mailed to a random sample of IHAWP members who had been continuously enrolled in the IHAWP program for at least the previous six months. Potential respondents had the option to complete the survey online, in writing (mail-back) or via a phone follow up call. We also surveyed a sample of adults in the regular Medicaid program during this same time period, using the same methodology, to compare the responses with IHAWP members. The findings in this report are based on the experiences of 1,216 IHAWP members and 1,055 traditional Medicaid members. Traditional Medicaid members and IHAWP members who are medically frail or EPSDT-eligible have access to the NEMT benefit while all other IHAWP members do not receive this benefit under the waiver.

Key findings from the 2022 Survey

Unmet health care needs due to transportation

- IHAWP members and Medicaid members with full access to the NEMT benefit had similar rates of having an unmet health care need (routine or preventive medical, mental health, or dental care) due to transportation problems in the past 6 months (7% IHAWP and 9% Medicaid).
    - One in five IHAWP members with an unmet check-up or routine medical care need (20%) indicated that transportation problems were a reason for their unmet need. The rate was similar for Medicaid members at 24%.
    - Similarly, about one in five members with an unmet dental health care need indicated that transportation problems were a reason for their unmet need (22% IHAWP and 21% Medicaid).

Unmet need for transportation and concerns about cost

- Reported unmet need for transportation to health visits in the past 6 months was similar for both IHAWP (7%) and Medicaid members (9%).
- Around a third of all members indicated concern about the cost of paying for transportation to health visits and the rate was higher for traditional Medicaid (40%) than IHAWP (31%) despite full access to the NEMT benefit for Medicaid members.

Missed health appointment due to transportation

- About one-tenth of members reported missing a health appointment in the past 6 months due to transportation and the rate was higher in Medicaid (11%) than IHAWP (8%).

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

NEMT coverage awareness

- Among Medicaid members with full access to the NEMT benefit, 19% reported awareness that their health plan provided NEMT services. Fewer IHAWP members indicated that their health plan offered NEMT services (11%).

Subgroup analyses

- Unmet need for transportation to health visit rates in the past 6 months were the same for IHAWP and Medicaid members in rural areas (7%) and similar for those in non-rural areas (8% IHAWP and 10% Medicaid).
- IHAWP members were less likely than Medicaid members to report concerns about cost of transportation to health visits in both rural areas (33% IHAWP and 41% Medicaid) and non-rural areas (30% IHAWP and 39% Medicaid).
- Missed appointment due to transportation rates were similar for IHAWP vs. Medicaid in rural areas (7% vs. 9%) but lower for IHAWP than Medicaid members in non-rural areas (8% vs. 13%).
- Reported unmet need for transportation to health visit rates were overall much higher among members with an activity limitation than those without, but IHAWP vs. Medicaid unmet need rates were similar among those with an activity limitation (15% vs. 18%) and those without (4% vs. 6%).
- IHAWP members were less likely than Medicaid members to report concerns about cost of transportation to health visits for both those with activity limitation (46% IHAWP and 57% Medicaid) and those without (24% IHAWP and 34% Medicaid).
- Missed appointment due to transportation rates were not significantly different for IHAWP vs. Medicaid among those with activity limitation (18% vs. 23%), but significantly lower for IHAWP vs. Medicaid members for those without activity limitation (3% vs. 7%).

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

NEMT general background information

Programmatically, the IHAWP was designed to include a benefit structure more like commercial insurance than traditional Medicaid. Specifically, IHAWP benefits were based on the state of Iowa employees' commercial health insurance plan. The State of Iowa received a waiver from the Centers for Medicare and Medicaid Services (CMS), so they did not have to provide some of the extensive benefits traditionally associated with Medicaid under the State Plan. One change approved by CMS in 2014 was that Iowa Medicaid does not have to include non-emergency medical transportation (NEMT) as a benefit for IHAWP members. NEMT services continue to be available for other adults in the Medicaid program. IHAWP members are eligible for NEMT services only if they qualify as medically or EPSDT exempt. When the IHAWP waiver renewal was approved on January 1, 2020, the waiver of NEMT was extended through December 2024. Medically frail beneficiaries and those eligible for EPSDT services are exempt from this waiver.

The goals of the NEMT waiver as stated in the original "Iowa Wellness Plan 1115 Waiver Application" from August 2013 and the state's discussion in CMS's letter to the state granting the latest 1115 renewal are:

1. To align benefits with those specified by the enabling legislation and make the benefits consistent with those offered by commercial insurers.
2. To help Iowa improve the fiscal sustainability of its Medicaid program, without significant negative effects on beneficiary access to services.

This report presents results of NEMT, and transportation-related questions included in a 2022 survey with IHAWP and Medicaid members about their experiences with the program.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Figure 35. NEMT Logic Model

2020 NEMT WAIVER EVALUATION LOGIC MODEL

NEED(s): The Iowa Wellness Plan (IWP), provides comprehensive health coverage at low or no cost to low-income Iowans between the ages of 19 and 64. The IWP was designed to include a benefit structure more like commercial insurance than traditional Medicaid. Specifically, IWP benefits were based on the state of Iowa employees' commercial health insurance plan and therefore does not contain the extensive benefits traditionally associated with Medicaid under the State Plan; in particular, IWP does not include the non-emergency medical transportation (NEMT) benefit.

THEORY OF CHANGE: The IWP seeks to increase access for low-income Iowans to quality, affordable health care services and coverage. IWP members without a non-emergency transportation (NEMT) benefit will have equal or lower barriers to care resulting from lack of transportation. Thus, the state will continue testing the NEMT waiver because of implications that that the waiver might help Iowa to improve the fiscal sustainability of its Medicaid program, without significant negative effects on beneficiary access to services.

YOUR PLANNED WORK			YOUR INTENDED RESULTS		
Inputs	**Activities**	**Outputs**	**Short-Term Outcomes**	**Medium-Term Outcomes**	**Long-Term Outcomes**

IWP Members Subject to NEMT Waiver
• Adults ages 19-64
• Eligible for IWP coverage
• Income up to 138% FPL
• Not determined to be medically frail
• Not eligible for EPSDT services
 	
Stakeholder Collaboration
• CMS – federal government
• Iowa Department of Human Services
• Iowa Medicaid Enterprise (IME)
• Managed Care Organizations (MCOs)
  • Amerigroup
  • Iowa Total Care
• State Provider Associations
• Advocacy groups
 	
NEMT Service Broker
• TMS Management Group
 	
IWP Components
• Funding
• Program staff
• Program infrastructure
	Activities of NEMT Service Broker
	• Administered by TMS Management Group
	• Authorize transportation
	• Verify member and trip eligibility
	• Process transportation claims and reimbursements
	• Audit trips and claims
	
	Activities of IWP Members with NEMT Waiver
	• Contact MCO to determine eligibility for NEMT services
	• Obtain transportation to appointments without any support services
	
	Activities of IWP Members Eligible for NEMT benefit
	• Contact MCO to determine eligibility for NEMT services
	• Schedule NEMT trip reservation prior to appointment
	• Obtain care from providers in the state provider network
	• Obtain signature from provider to prove that the Member was at the appointment in order to get reimbursed
	• Submit a Mileage Reimbursement Trip Log and Claim Form by mail, fax or email
	• Wait for payment to be processed and issued to driver at the driver's address
	
	NEMT Waiver Evaluation Activities
	• Key Informant Interviews
	  • Annual interviews with key stakeholders
	  • Conducted w/ IME staff
	  • Conducted w/ MCOs
	• IWP Member Surveys
	  • Fielded every 18 months
	  • Includes NEMT-specific questions to assess transportation barriers and needs for those with and without NEMT coverage
		• Member awareness of NEMT benefit and NEMT waiver
		• Number of IWP members eligible for NEMT services
		• Number of IWP members ineligible for NEMT services
		• Member experiences with transportation access
		• Implementation of transportation services by MCOs and NEMT service broker
		• Educating members about available transportation for non-emergent medical services
		• Costs saved by Medicaid program related to NEMT waiver
			• No difference in access to covered services for those with/without NEMT benefit
			• No difference in access to the services beneficiaries must obtain to avoid premium
			• No difference in experience with transportation issues for chronic condition management
			• No difference in unmet need for transportation for those with/without NEMT benefit
				• Members without NEMT benefit will not report greater worry about ability to pay for cost of transportation to/from a health care visit	• Improved fiscal sustainability of Medicaid program without significant negative effects on beneficiary access to services

ASSUMPTIONS	EXTERNAL FACTORS
• IWP members are aware of NEMT • IWP members that do not qualify for NEMT can access transportation for preventative health appointments • IWP members value preventive health services • IWP members value health insurance coverage	• MCO changes within the state • Underlying health status of IWP members impacting non-emergent health needs • Barriers to transportation and other factors related to preventive appointment adherence (knowledge, access, ease of use, infrastructure, up-front cost, work or childcare coverage, reliability of service)

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

NEMT methodology

Member experience survey

Information about the potential impact on Medicaid members of IHAWP's waiver to provide NEMT and other transportation-related issues were collected as part of the 2022 Member Experience Survey, conducted during the summer/fall of 2022. This survey utilized a sequential mixed-mode strategy, combining mail (with web option) and a telephone follow-up to non-respondents. The sampling frame included 6,000 IHAWP members, and 6,000 traditional Medicaid members who were eligible as adult members of a family not covered due to pregnancy or a disability. The traditional Medicaid comparison group is primarily associated with families eligible through Temporary Assistance to Needy Families (TANF), which is termed the Family Investment Program (FIP) in Iowa. Random samples for each group were drawn from IHAWP and Medicaid enrollment data current as of June 2022. Members were considered eligible if they had been in their current plan for at least the previous six months, were between the ages of 19 and 64, living in Iowa, were not enrolled in Medicare, and with a phone number. To reduce respondent burden, we excluded members who had been selected for the HBI phone survey, and one person was selected per household to reduce the relatedness of the responses and respondent burden.

Surveys were first sent by mail on June 29, 2022. Respondents were given the option to complete the survey on paper or online by entering a unique access code. Nominal monetary pre-incentives were utilized to maximize response rates for mailed surveys. Both a pre-incentive and gift card lottery were used in the first mailing: each initial survey packet included a $2 bill and respondents who completed and returned the survey within two weeks of the mailing were entered into a random drawing for one of twenty $100 Walmart gift cards.

A reminder postcard was sent to the entire sample one week after the initial mailing. Five weeks after the first mailing (August 2, 2022), a second survey and cover letter were sent to those who had not responded to the initial mailing. Approximately 3 weeks after the second mailing, the phone follow-up for non-respondents began. At least two attempts were made to each viable number. The phone follow-up field period closed at the end of October.

Survey instrument

The foundation for the survey instrument was the most recent versions of the Consumer Assessment of Healthcare Providers and Systems (CAHPS®) 5.1 Health Plan Survey[1] and the

[1] Agency for Healthcare Research and Quality (AHRQ). CAHPS Surveys and Tools to Advance Patient-Centered Care. CAHPS Health Plan Survey. Available at https://cahps.ahrq.gov/surveys-guidance/hp/index.html

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

CAHPS Clinician and Group Survey.[2] Additional items were included to provide information about the following topic areas:

- Need and Unmet Need for Health Care Services (derived from National Health Interview Survey)
- Quality of Primary Care Delivery (derived from the CAHPS Patient-Centered Medical Home Item Set and Original items)
- Emergency Room Care and Hospitalizations (Original items)
- Mental Health and Emotional Health Care (Original Items)
- Non-Emergency Medical Transportation (Original Items)
- Functional Limitations (derived from the Behavioral Risk Factor Surveillance System)
- Chronic Physical and Mental Health Conditions (Original Items)
- Managed Care Organizations (Original Items)
- Dental Health Care (Original Items)

The full survey instrument can be found in the appendix of the Iowa Health and Wellness Plan 2022 Member Survey Report available here: https://doi.org/10.17077/rep.006599.

The results presented in this report focus on the transportation-related issues and the potential impact on other issues such as access to health care.

Response rates

There were 1,216 IHAWP members and 1,055 adult Medicaid members who responded to the survey for overall adjusted response rates of 26% for the IHAWP sample and 21% for the Medicaid sample [Table 29]. Response rates were adjusted by removing from the denominator those ineligible to complete a survey because of undeliverable survey, out-of-state addresses, or because the intended respondent was deceased or incarcerated.

Table 29. Survey Response Rates for IHAWP and Medicaid Members

Program	Total Sampled	Adjusted*	Completed	Adj. Response Rate*
IHAWP	6,000	4,668	1,216	26%
Medicaid	6,000	4,913	1,055	21%
Total	12,000	9581	2271	24%

**Adjusted for ineligibles: Removed respondents who no longer had a valid address or were out of Iowa or had died.*

A breakdown of responses by mode is provided in Table 30. IHAWP respondents were more likely to have completed the survey by mail than Medicaid respondents (67% and 56%

[2] AHRQ. CAHPS Surveys and Tools to Advance Patient-Centered Care. CAHPS Clinician and Group Survey. Available at https://cahps.ahrq.gov/surveys-guidance/cg/index.html

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

respectively). Medicaid respondents were more likely than IHAWP respondents to complete the survey by phone (27% and 18% respectively).

Table 30. Survey Responses by Mode for IHAWP and Medicaid Members*

Program	Mail	Online	Phone
IHAWP	67%	15%	18%
Medicaid	56%	17%	27%
Total	61%	16%	22%

** Statistically significant difference at p<.05*

Data analysis

Our primary analyses make comparisons between IHAWP and traditional Medicaid members for different transportation-related measures. We also conduct selected subgroup analyses, for example showing how transportation-related barriers to care and forgone health care due to transportation vary between IHAWP vs. Medicaid members with an activity limitation and for those without an activity limitation.

Data were tabulated and bivariate analyses (i.e., chi-square tests) were conducted using SPSS and Stata. Group differences are considered statistically significant if the p-value was less than 0.05. When there were statistically significant differences, they are noted in the text and within the relevant tables and figures.

The sample was randomly selected from all eligible members of IHAWP and Medicaid. Because all analyses compared IHAWP and Medicaid members, findings are not impacted by the sampling strategy, and we are reporting unweighted results in this report.

Limitations

There are some limitations with survey research that can affect the interpretation of the results. First, while a comparison is being made throughout between IHAWP and traditional Medicaid members, it is understood that these two groups differ significantly based on their Medicaid eligibility categories and thus their demographics. Traditional Medicaid members are initially eligible only up to 50% of the federal poverty level and tend to be women with families, whereas IHAWP members are eligible up to 133% of the federal poverty level and tend to be more likely single adults and male. Second, those who choose to respond to the survey may be different from those who choose not to respond, and this can create biased results. In this evaluation, respondents in both groups (IHAWP, traditional Medicaid) were more likely to be female, white, and older than those who did not respond to the surveys (See Table 31 and Table 32). Finally, respondents may have difficulty accurately remembering events which may introduce recall bias. This risk may not be high because of the relatively short time-period for recalling events in this survey (6 months).

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Table 31. Demographic Characteristics of IHAWP Respondents and Non-respondents*

	Respondents (n=1,216)	Non-respondents (n=4,784)	Total (n=6,000)
Age in Years†			
19-34	31%	51%	47%
35-54	38%	38%	38%
55-64	31%	12%	16%
Sex†			
Female	63%	53%	55%
Race/Ethnicity†			
White	68%	61%	62%
Black or African American	5%	11%	9%
Hispanic/Latino (all races)	7%	7%	7%
Other^	4%	6%	5%
Unknown	17%	16%	16%

** Demographic information is taken from Medicaid Eligibility data and does not necessarily match the self-reported demographic information provided by survey respondents*
† Statistically significant difference at p<.05.
^ Includes American Indian, Asian, Pacific Islander and multiple races

Table 32. Demographic Characteristics of Medicaid Respondents and Non-respondents*

	Respondents (n=1,055)	Non-respondents (n=4,945)	Total (n=6,000)
Age in Years†			
19-34	50%	58%	56%
35-54	46%	41%	32%
55-64	4%	1%	2%
Sex†			
Female	90%	86%	87%
Race/Ethnicity†			
White	65%	60%	61%
Black or African American	10%	14%	13%
Hispanic/Latino (all races)	9%	10%	9%
Other^	5%	7%	6%
Unknown	11%	11%	11%

** Demographic information is taken from Medicaid Eligibility data and does not necessarily match the self-reported demographic information provided by survey respondents*
† Statistically significant difference at p<.05.
^ Includes American Indian, Asian, Pacific Islander and multiple races

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

An updated list of the hypotheses, research questions, comparison strategy, outcome measures, data sources and analytic approaches that was included in the 2021 IHAWP evaluation plan that reflects methodologic adjustments that were made based on available data and other methodologic issues or items that have not yet been completed as part of this evaluation and may be included in the 2026 final evaluation report is provided below.

NEMT Evaluation Measures Summary

Comparison Strategy	Outcome Measures(s)	Data sources	Current Analytic Approach
Hypothesis 1: Wellness Plan members without a non-emergency transportation benefit will have equal or lower barriers to care resulting from lack of transportation.			
Research Question 1.1: Are adults in the IWP less likely to report barriers to care due to transportation than other adults in Medicaid?			
Adults in Medicaid	Member experiences with transportation issues to and from health care visits	IWP Member Survey	Chi-square test (Means tests)
Research Question 1.2: Are adults in the IWP less likely to report transportation-related barriers to complete HBI requirements than other adults in Medicaid who report awareness of the NEMT benefit?			
Adults in Medicaid	Member experiences with completing HBI requirements to avoid premiums	IWP Member Survey	Chi-square test (Means tests)
Research Question 1.3: Are adults in the IWP less likely to report barriers to care for chronic condition management due to transportation than other adults in Medicaid who report awareness of the NEMT benefit?			
Adults in Medicaid	Member experience with transportation issues for chronic condition management	IWP Member Survey	Chi-square test (Means tests)
Research Question 1.4: Are adults in the IWP less likely to report unmet need for transportation to health care visits than other adults in Medicaid who report awareness of the NEMT benefit?			
Adults in Medicaid	Member experience with unmet need for transportation	IWP Member Survey	Chi-square test (Means tests)
Research Question 1.5: Are adults in the IWP less likely to report worry about the ability to pay for cost of transportation than other adults in Medicaid who report awareness of the NEMT benefit?			
Adults in Medicaid	Member experience with cost of transportation	IWP Member Survey	Chi-square test (Means tests)

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Comparison Strategy	Outcome Measures(s)	Data sources	Current Analytic Approach
Hypothesis 2: Wellness Plan members without a non-emergency transportation benefit will have equal or lower rates of missed appointments due to access to transportation.			
Research Question 2.1: Are adults in the IWP less likely to report transportation-related missed appointments than other adults in Medicaid who receive the NEMT benefit?			
Adults in Medicaid	Member reports of transportation-related missed appointments	IWP Member Survey	Chi-square test (Means tests)
Hypothesis 3: Wellness Plan members without a non-emergency transportation benefit will report a lower awareness of the non-emergency transportation benefit as a part of their health care plan.			
Research Question 3.1: Do adults in the IWP less frequently report that their health care plan provides non-emergency transportation than other adults in Medicaid who receive the NEMT benefit?			
Adults in Medicaid	Member reports of health care plan providing NEMT	IWP Member Survey	Chi-square test (Means tests)
Hypothesis 4: Wellness plan members without a non-emergency transportation benefit will report similar experiences with health care-related transportation regardless of their location or disability status.			
Research Question 4.1: Do adults in the IWP who live in rural areas report similar experiences with health-care related transportation as other adults in Medicaid who receive the NEMT benefit?			
Adults in Medicaid	Subgroup analyses of 1-3 by rurality	IWP Member Survey	Chi-square test (Means tests)
Research Question 4.2: Do adults in the IWP who have limitations to activities of daily living (ADLs) report similar experiences with health-care related transportation as other adults in Medicaid who receive the NEMT benefit?			
Adults in Medicaid	Subgroup analyses of 1-3 by ADLs	IWP Member Survey	Chi-square test (Means tests)

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

NEMT quantitative results

This section presents results of the analyses associated with each of the hypotheses and research question proposed for this evaluation. Modifications to the methods originally proposed in the 2021 evaluation plan were noted in the previous methods tables.

Hypothesis 1: Wellness Plan members without a non-emergency transportation benefit will have equal or lower barriers to care resulting from lack of transportation.

Research Question 1.1: Are adults in the IWP less likely to report barriers to care due to transportation than other adults in Medicaid?

Barriers to care were assessed with four questions about unmet needs for health care services that also had follow-up questions asking members to select from a checklist the reasons they did not get the care they needed. Transportation problems were included in the list of possible reasons they did not get each type of care they needed. Members were asked if in the last 6 months they:

Had a time when a check-up or routine care was needed but they were unable to get it.

Had a time when preventive care (e.g., check-up, physical exam, mammogram, or pap smear test) was needed but they were unable to get it.

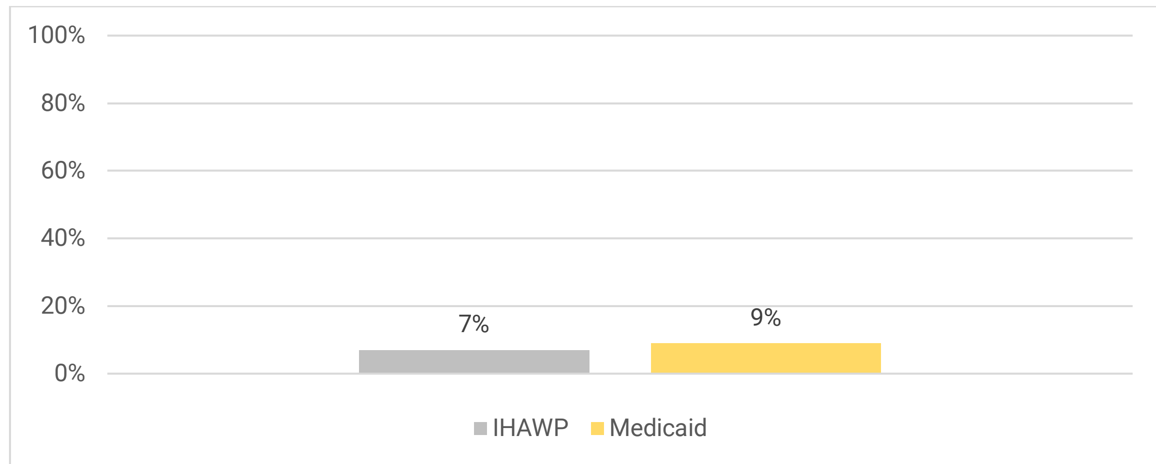
Had a time when treatment or counseling for a mental or behavioral health problem was needed but they were unable to get it (asked of those who first indicated a need for mental health services).

Had a time when dental care was needed but they were unable to get it.

An indicator of unmet health care need due to transportation problems was constructed to show the proportion of respondents who had any unmet care need (check-up or routine care, preventive care, mental health care, dental care) attributed to transportation issues. Overall, 7% of IHAWP members reported having any unmet health care need due to transportation problems and 9% of Medicaid members reported an unmet health care need due to transportation (Figure 36). This difference was not statistically significant.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

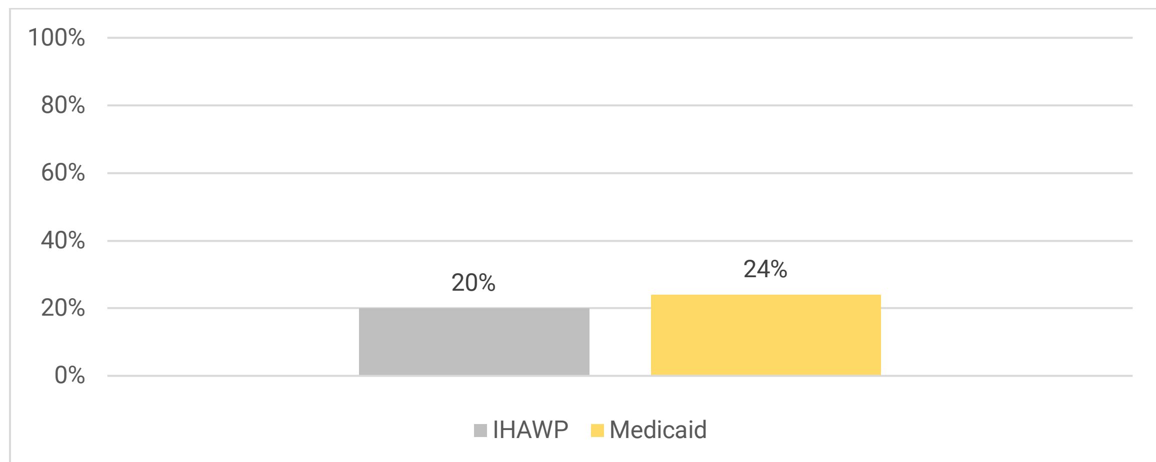
Figure 36. Unmet Health Care Need Due to Transportation Problems in Past 6 Months (IHAWP vs. Medicaid)



Chi-square not significant.

Among respondents with an unmet health care need, comparisons were made between IHAWP and Medicaid for the proportion who selected transportation problems as one of the reasons for their unmet need. Figure 37 shows that 20% of IHAWP members indicated transportation problems as a reason for their unmet check-up or routine medical care need and this did not differ significantly compared with 24% for Medicaid members. Figure 38 shows a similar pattern for selecting transportation problems as a reason for unmet preventive medical care needs (23% IHAWP vs. 18% Medicaid, chi-square not significant).

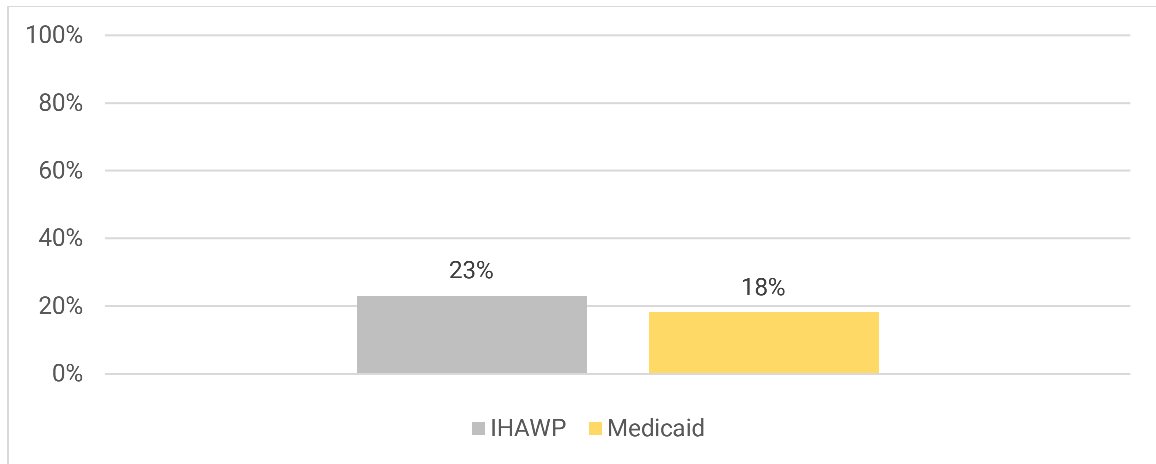
Figure 37. Transportation Problems as a Reason for Unmet Check-up or Routine Medical Care Need



Chi-square not significant. Sample includes only respondents with an unmet check-up or routine medical care need (IHAWP N=123, Medicaid N=132).

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

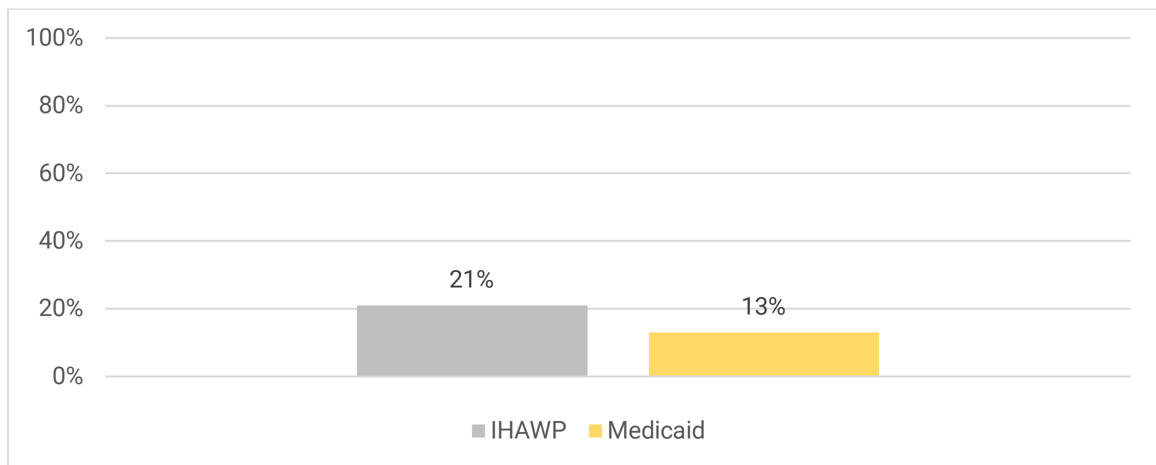
Figure 38. Transportation Problems as a Reason for Unmet Preventive Medical Care Need



Chi-square not significant. Sample includes only respondents with an unmet preventive medical care need (IHAWP N=86, Medicaid N=73).

Among those with an unmet mental health care need, 21% of IHAWP members selected transportation problems as one of the reasons for their unmet need and 13% percent of Medicaid members selected transportation problems as a reason for their unmet need (Figure 39). This difference was not statistically significant.

Figure 39. Transportation Problems as a Reason for Unmet Mental Health Care Need

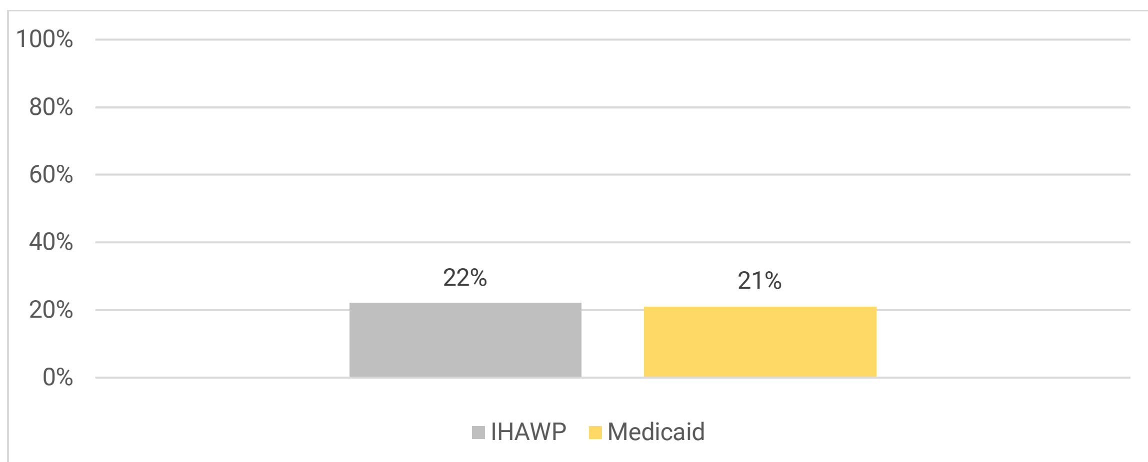


Chi-square not significant. Sample includes only respondents with an unmet mental health care need (IHAWP N=72, Medicaid N=102).

Figure 40 shows that among those with an unmet dental care need, just over 20% of respondents in each program indicated travel distance or transportation problems as a reason for their unmet need (22% IHAWP vs. 21% Medicaid, chi-square not significant).

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Figure 40. Travel Distance or Transportation Problems as a Reason for Unmet Dental Care Need



Chi-square not significant. Sample includes only respondents with an unmet dental care need (IHAWP N=295, Medicaid N=327).

Research Question 1.2: Are adults in the IWP less likely to report transportation-related barriers to complete HBI requirements than other adults in Medicaid who report awareness of the NEMT benefit?

Due to the Public Health Emergency, when the HBI requirements were waived, this question was not relevant and thus not included in the 2022 Member Experience Survey.

Research Question 1.3: Are adults in the IWP less likely to report barriers to care for chronic condition management due to transportation than other adults in Medicaid who report awareness of the NEMT benefit?

This question was not included in the 2022 Member Experience Survey and will be considered for inclusion in the next member survey.

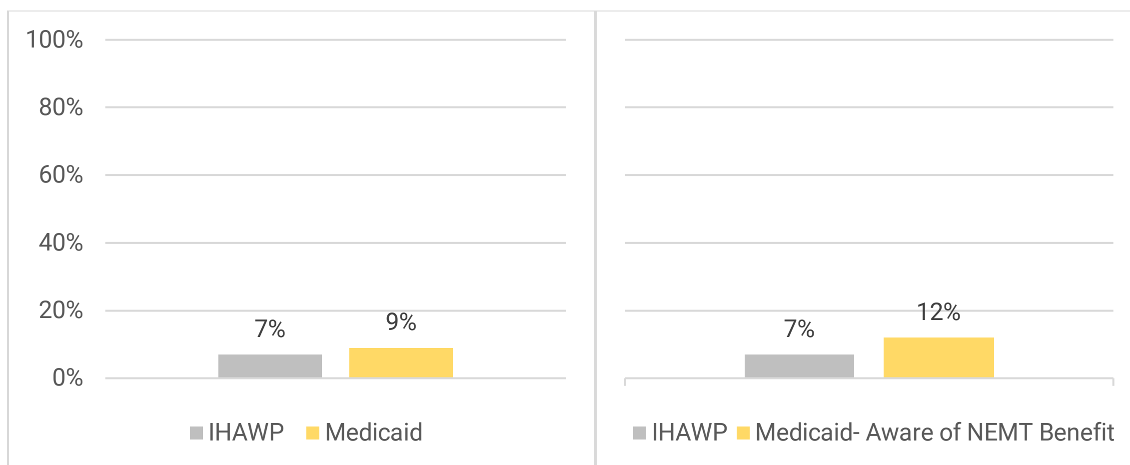
Research Question 1.4: Are adults in the IWP less likely to report unmet need for transportation to health care visits than other adults in Medicaid who report awareness of the NEMT benefit?

All respondents were asked if they had any time in the past 6 months when they needed transportation to a health care visit but couldn't get it for any reason. Figure 41 shows that comparing IHAWP members to all Medicaid members, the reported unmet need for transportation in the past 6 months was similar (7% IHAWP and 9% Medicaid). Comparing IHAWP members to the subgroup of Medicaid members who indicated knowing that their health plan offered NEMT services, unmet need rates were higher among the Medicaid group aware of the NEMT benefit (12% vs. 7% for IHAWP, chi-square $p<.05$). Analyses in a prior NEMT evaluation report revealed that Medicaid members who

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

were Black or Hispanic, female, and in worse health were more likely to report awareness of the NEMT benefit.

Figure 41. Unmet Need for Transportation to Health Care Visits in Past 6 Months (IHAWP vs. Medicaid and IHAWP vs. Medicaid Aware of NEMT Benefit)



Chi-square not significant for IHAWP vs Medicaid. Chi-square p<.05 for IHAWP vs. Medicaid members aware of the NEMT benefit.

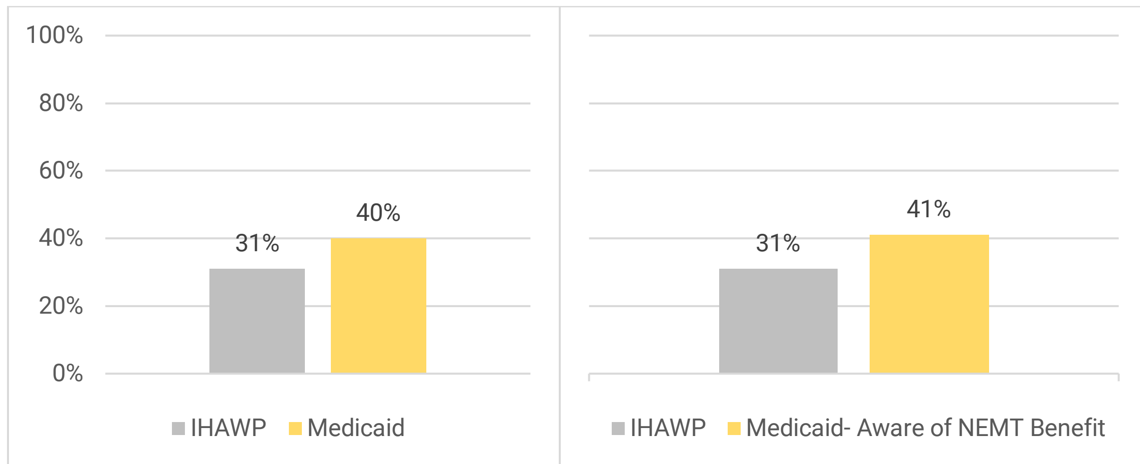
Research Question 1.5: Are adults in the IWP less likely to report worry about the ability to pay for cost of transportation than other adults in Medicaid who report awareness of the NEMT benefit?

Respondents were asked how much they worried about their ability to pay for the cost of transportation to health care visits in the past 6 months. Responses of a little, somewhat, or a great deal were coded as expressing worry over their ability to pay for transportation.

Figure 42 shows that around one-third of all members expressed concern about the ability to pay for the cost of health care-related transportation, but significantly fewer IHAWP members expressed concern (31%) compared to Medicaid members (40%). This difference was also significant compared to the subgroup of Medicaid members who reported awareness of the NEMT benefit (31% vs. 41%).

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Figure 42. Worry about Cost of Transportation to Health Visits in Past Months (IHAWP vs. Medicaid and IHAWP vs. Medicaid Aware of NEMT Benefit)



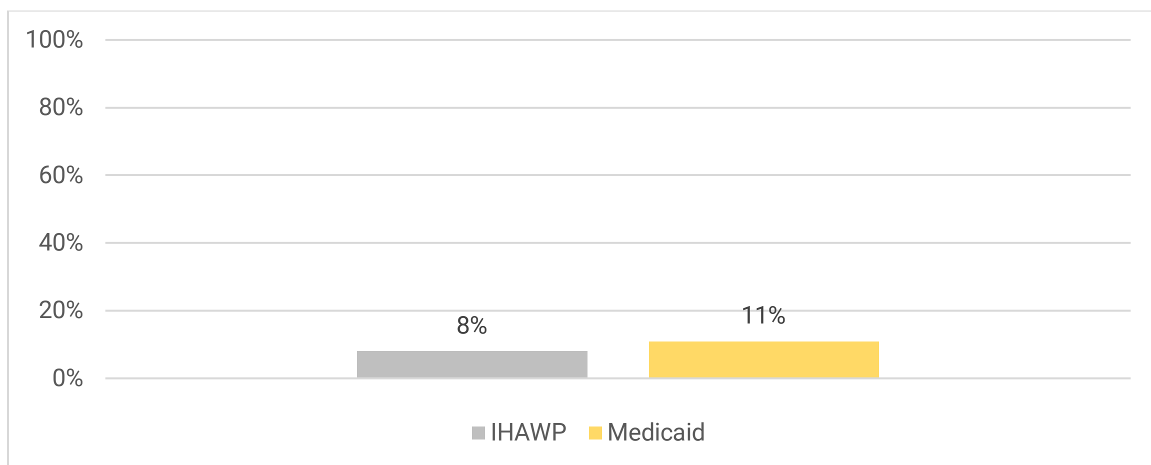
Chi-square p<.05 for IHAWP vs. Medicaid and IHAWP vs. Medicaid members aware of the NEMT benefit.

Hypothesis 2: Wellness Plan members without a non-emergency transportation benefit will have equal or lower rates of missed appointments due to access to transportation.

Research Question 2.1: Are adults in the IWP less likely to report transportation-related missed appointments than other adults in Medicaid who receive the NEMT benefit?

About one-tenth of members reported having missed an appointment for a regular health care visit in the past 6 months due to problems with transportation, however, fewer IHAWP members (8%) reported missing an appointment than Medicaid members (11%) and this difference was found to be statistically significant (p<.05, Figure 43).

Figure 43. Reported Missed Appointment(s) Due to Transportation Problems in Past 6 Months (IHAWP vs. Medicaid)



Chi-square p<.05.

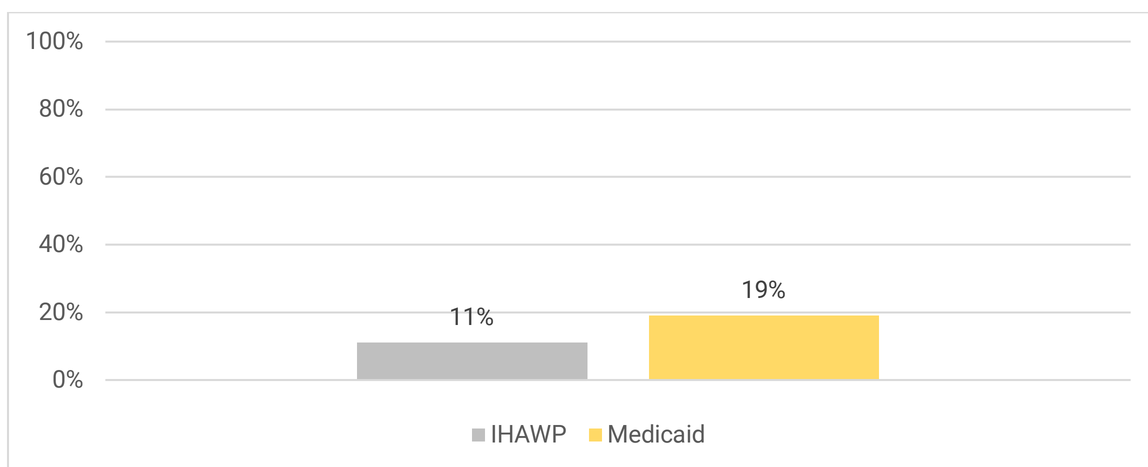
The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Hypothesis 3: Wellness Plan members without a non-emergency transportation benefit will report a lower awareness of the non-emergency transportation benefit as a part of their health care plan.

Research Question 3.1: Do adults in the IWP less frequently report that their health care plan provides non-emergency transportation than other adults in Medicaid who receive the NEMT benefit?

Figure 44 summarizes responses for IHAWP and Medicaid members to the question: Does your MCO/Medicaid provide transportation services for regular health care visits? Fewer IHAWP than Medicaid members indicated that their health plan offered NEMT services (11% IHAWP, 19% Medicaid) and this difference was found to be statistically significant.

Figure 44. Thought Health Plan Provided NEMT Services (IHAWP vs. Medicaid)



Chi-square p<.05.

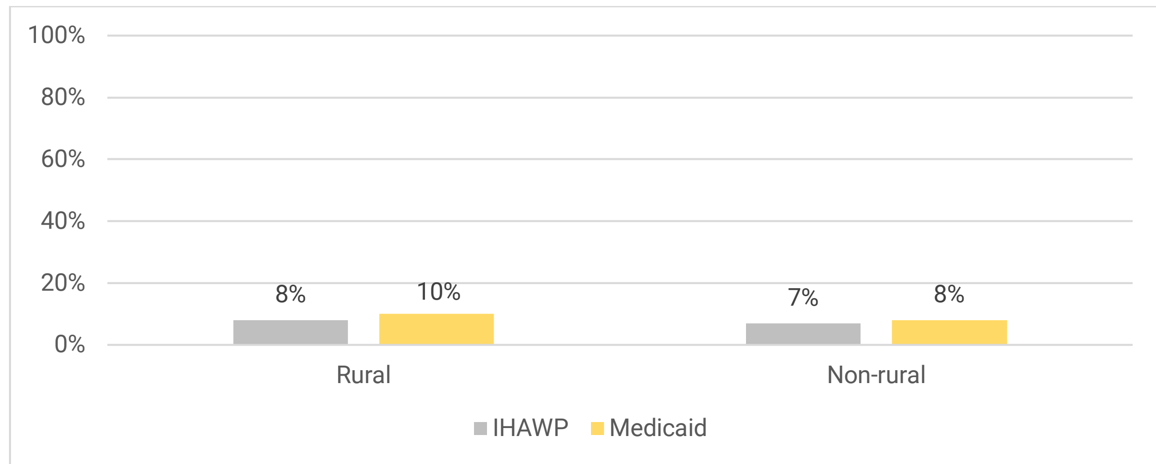
Hypothesis 4: Wellness plan members without a non-emergency transportation benefit will report similar experiences with health care-related transportation regardless of their location or disability status.

Research Question 4.1: Do adults in the IWP who live in rural areas report similar experiences with health-care related transportation as other adults in Medicaid who receive the NEMT benefit?

Figure 45 shows rates of reported unmet health care needs due to transportation problems for IHAWP vs. Medicaid members in rural areas and those in non-rural areas. Among those residing in rural areas, 8% of IHAWP members reported an unmet health care need (routine or preventive medical care, mental health care, or dental care) due to transportation problems in the past 6 months. The rate for rural Medicaid members was 10% and not significantly different compared to IHAWP.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

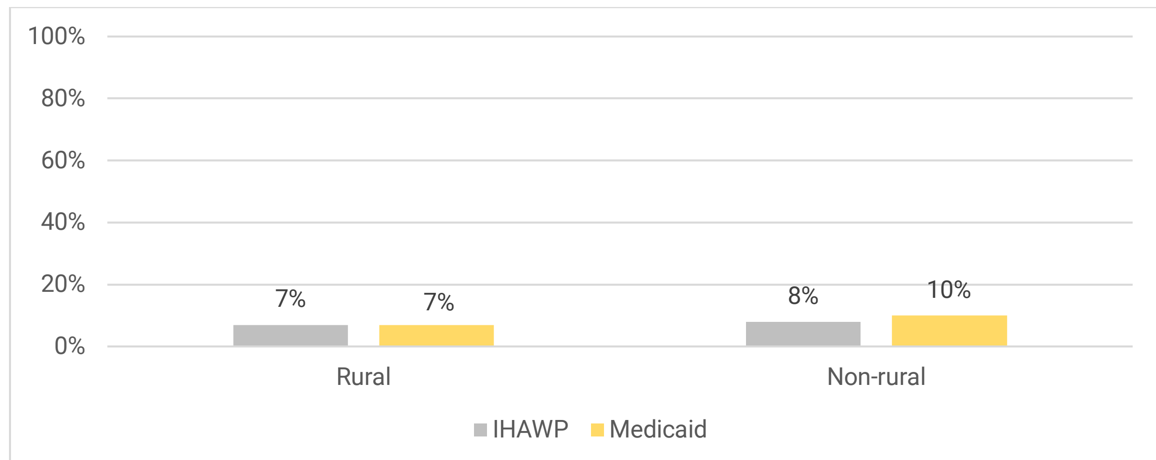
Figure 45. Unmet Health Care Need Due to Transportation Problems in Past 6 Months (IHAWP vs. Medicaid by Rural and Non-Rural Location)



Chi-square tests for IHAWP vs. Medicaid not significant.

Figure 46 shows that reported rates of unmet need for transportation to health care visits in the past 6 months were 7% for both IHAWP and Medicaid members living in rural areas. These rates were slightly higher in non-rural areas but not significantly different for IHAWP (8%) vs. Medicaid members (10%).

Figure 46. Unmet Need for Transportation to Health Visits in Past 6 Months (IHAWP vs. Medicaid by Rural and Non-Rural Location)

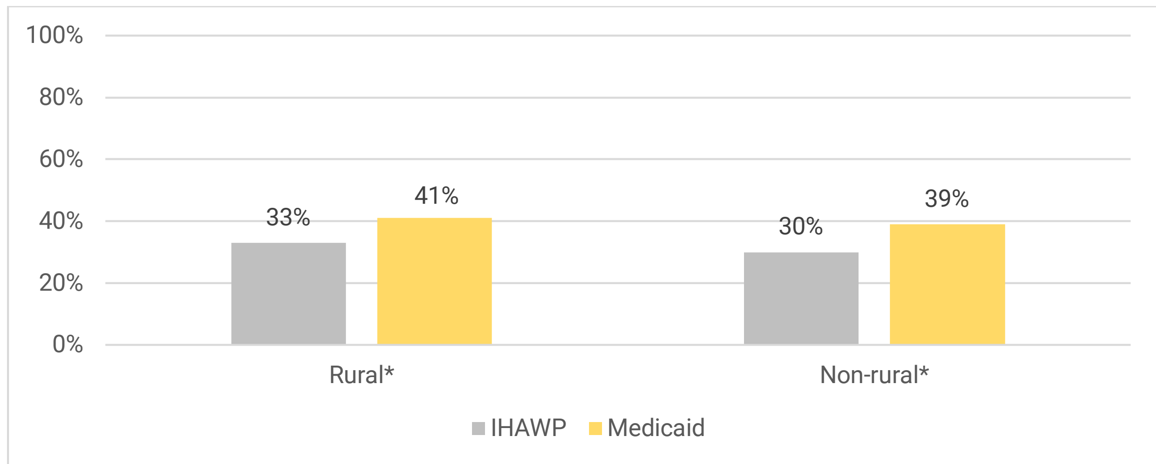


Chi-square tests for IHAWP vs. Medicaid not significant.

Figure 47 shows that having concerns about the cost of transportation to health care visits was less frequent for IHAWP members in rural areas (33%) than for Medicaid members in rural areas (41%). A similar pattern was found for IHAWP vs. Medicaid members in non-rural areas (30% vs. 39%).

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

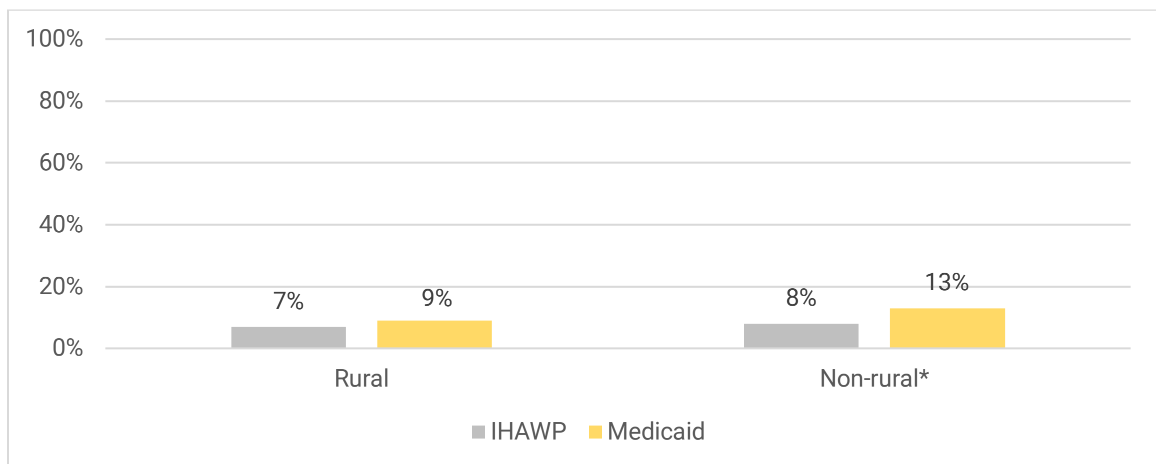
Figure 47. Worry about Cost of Transportation to Health Visits in Past 6 Months (IHAWP vs. Medicaid by Rural and Non-Rural Location)



* Chi-square p<.05 for tests comparing IHAWP vs. Medicaid.

Reported missed appointments due to transportation problems in the past 6 months were more frequent in Medicaid (13%) than in IHAWP (8%) for those living in non-rural areas (Figure 48). Rates were similar between IHAWP (7%) and Medicaid members (9%) living in rural areas.

Figure 48. Reported Missed Appointments(s) Due to Transportation Problems in Past 6 Months (IHAWP vs. Medicaid by Rural and Non-Rural Location)



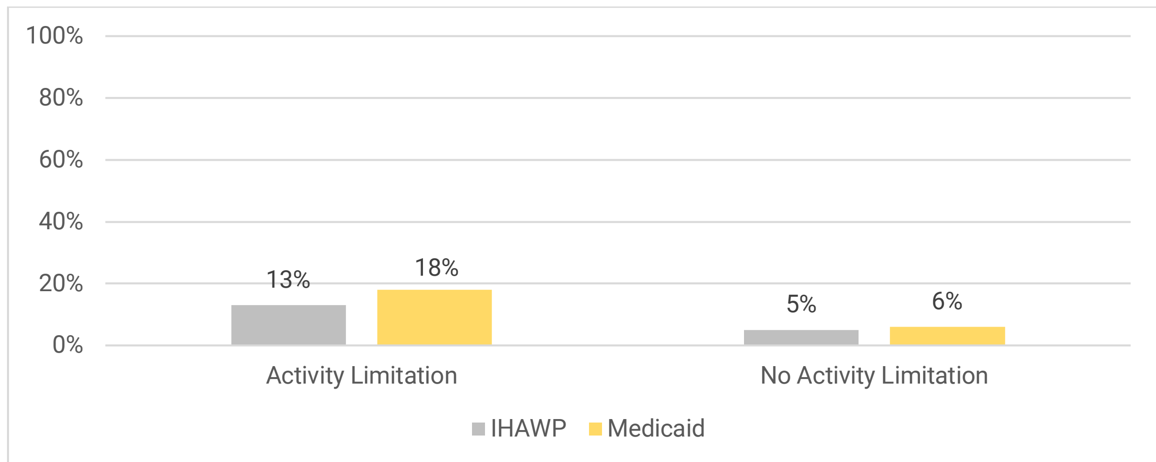
** Chi-square p<.05 for IHAWP vs. Medicaid in urban/suburban locations.*

Research Question 4.2: Do adults in the IWP who have limitations to activities of daily living report similar experiences with health-care related transportation as other adults in Medicaid who receive the NEMT benefit?

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Figure 49 shows rates of reported unmet health care needs due to transportation problems for IHAWP vs. Medicaid members with an activity limitation and those without. Among those with an activity limitation, 13% of IHAWP members reported an unmet health care need (routine or preventive medical care, mental health care, or dental care) due to transportation problems in the past 6 months. The rate for Medicaid members was 18% and not significantly different compared to IHAWP.

Figure 49. Unmet Health Care Need Due to Transportation Problems in Past 6 Months (IHAWP vs. Medicaid by Activity Limitation Status)

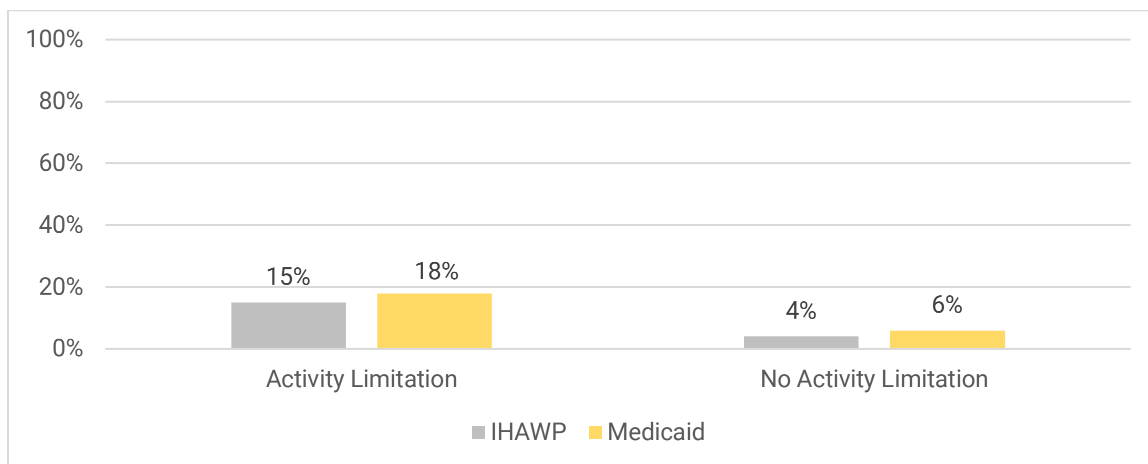


Chi-square tests for IHAWP vs. Medicaid not significant.

Figure 50 shows that reported rates of unmet need for transportation to health care visits in the past 6 months were high for both IHAWP (15%) and Medicaid members (18%) with an activity limitation. These rates were lower among those without an activity limitation and not significantly different for IHAWP (4%) vs. Medicaid members (6%).

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

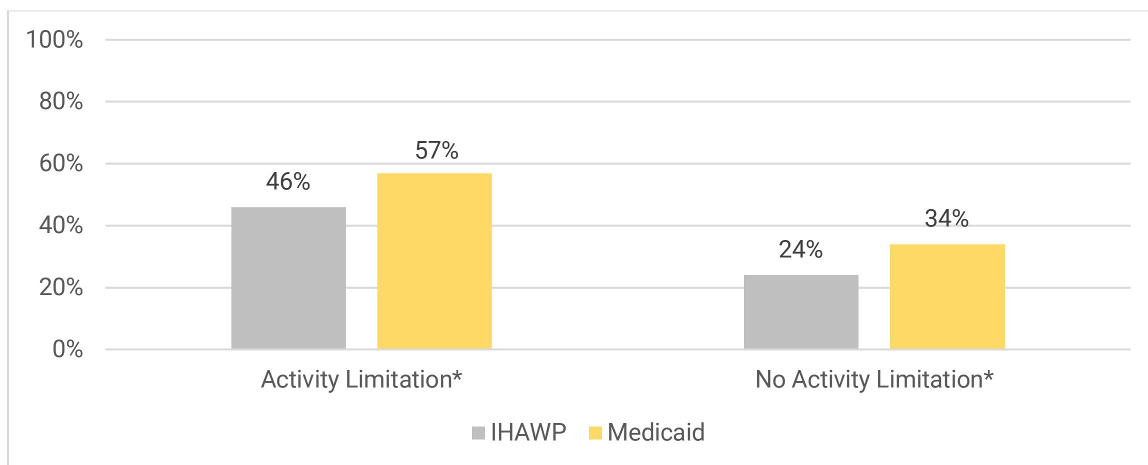
Figure 50. Unmet Need for Transportation to Health Visits in Past 6 Months (IHAWP vs. Medicaid by Activity Limitation Status)



Chi-square tests for IHAWP vs. Medicaid not significant.

Figure 51 shows that having concerns about the cost of transportation to health care visits was common among those with an activity limitation. Cost concerns were more frequent for Medicaid members with an activity limitation (57%) than for IHAWP members with an activity limitation (46%). Overall rates were lower among those without an activity limitation and less frequent in IHAWP (24%) than in Medicaid (34%).

Figure 51. Worry about Cost of Transportation to Health Visits in Past 6 Months (IHAWP vs. Medicaid by Activity Limitation Status)



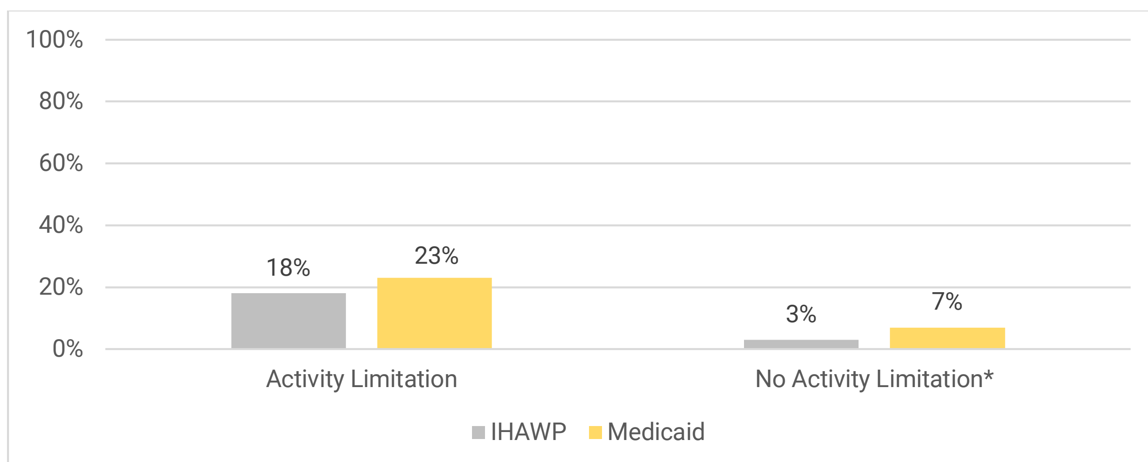
** Chi-square p<.05 for tests comparing IHAWP vs. Medicaid.*

Reported missed appointments due to transportation problems in the past 6 months were more frequent in Medicaid (7%) than in IHAWP (3%) for those without an activity limitation (Figure 52). Among those with an activity limitation, 23% of Medicaid members

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

reported missed appointments due to transportation problems and this was not significantly different from 18% for IHAWP members with activity limitation.

Figure 52. Missed Appointment(s) Due to Transportation Problems in Past 6 Months (IHAWP vs. Medicaid by Activity Limitation Status)



** Chi-square p<.05 for IHAWP vs. Medicaid among those with no activity limitation.*

NEMT Process evaluation

Barriers to care due to the NEMT Waiver

One MCO representative shared perceptions of the impact of transportation barriers, saying,

> *"I think just if I'm speaking for members specifically who don't have that [NEMT] benefit, I would say it's a huge barrier for a lot of people."*

An MCO representative described the disparity in transportation benefits as a notable difference between Iowa's Medicaid plans, saying,

> *"One of the biggest distinctions and one of the biggest challenges with membership that is in the non-medically exempt categorization is that they don't have the transportation benefit, and it's not covered for them."*

In contrast to perceptions of a low prevalence of unmet transportation need voiced by some key stakeholders, an MCO representative described transportation as "It's the number one [barrier]" and linked the lack of transportation benefit to "almost seven years of member frustration." In addition, a provider association representative described transportation for IHAWP members as 'huge' and 'always a concern', saying,

> *"For a lot of the patients, some of the things that they need, they have to go somewhere else; they have to go to University of Iowa or somewhere. And so, finding help and finding reliable transportation to get them to those appointments is always a concern. Whenever you're out listening to people talk about barriers to care, it always seems to be able to get the patients connected with some kind of reliable transportation."*

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Interviewees shared various perceptions of a **high level of need for reliable transportation amongst IHAWP members**, especially those who do not have a social support network.

"In Member Services, it's [transportation] a big deal. We get numerous calls a day from Iowa Health and Wellness, and unless they are medically exempt or frail, they don't have that transportation benefit and it is a big issue with them." – MCO representative

[Prompt: Do you have any idea how people's own limitations and transportation affects their access to preventative healthcare?] "From our aspect, I think it affects it greatly. They're calling up and they're determining they don't have it, then some of them don't have friends, family, neighbors that are willing to assist them. So, I think it's a big, big issue." – MCO representative

Of informal supports, another provider association representative exemplified the disruption a healthcare appointment can cause IHAWP members without reliable transportation,

"We ran into some problems with the transportation just not showing up. And then not only is that person not able to get back home or to pick up their kids from school or to get back to work."

Awareness of NEMT being waived for IHAWP members

A representative from an MCO commented on the level of awareness of IHAWP members in benefits available to them, saying "Every once in a while, we will see it where maybe even it's that a member doesn't realize they don't have the transportation benefit. They think they do." Communication with IHAWP members about transportation benefits is portrayed alongside more comprehensive coverage plans which do include transportation. Figure 58 shows the table of contents for each MCO's member handbook, both of which list "Transportation benefits" under "Covered Benefits and Services." Within each of the 90- and 133-page member handbooks, groups which are eligible for transportation benefits are accurately delineated, but it is conceivable that IHAWP members might infer that their coverage includes a transportation benefit.

Figure 53. Iowa MCO Member Handbooks, Excerpts from Table of Contents (Amerigroup left, Iowa Total Care right)

COVERED BENEFITS AND SERVICES	Covered Benefits and Services
Medical benefits	Medical Benefits
Vision benefits	Vision Services
Transportation benefits	Transportation Benefits
Dental benefits	Dental Benefits

Additional marketing material distributed by MCOs may contribute to member misinterpretations about transportation benefits. For example, Figure 59 shows a brochure advertising transportation service to Iowa Total Care members, with an asterisk noting restrictions (e.g., not applicable to IHAWP members).

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Figure 54. Excerpt from Iowa Total Care Promotional Brochure Advertising Transportation Services

Caseworkers were reported to find the lack of NEMT for IHAWP members to be confusing for members and attempt to assist when possible. An MCO representative described how the identification of a transportation barrier can trigger a more holistic needs assessment, sometimes resulting in members qualifying for more comprehensive benefits by enrolling in medically exempt status, which includes the NEMT benefit, saying,

> *"If a member really is needing care and transportation's the barrier, oftentimes I think we see that there are other pieces missing too. And so, getting them on that medically exempt status really does help them. And so, if we can see that they have other qualifying types of factors, we would really help them to get that benefit added so that we can try and round out how they're getting their care."*

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Member Experiences

ME Executive Summary

2022 Consumer Survey

In the summer of 2022, surveys were mailed to a random sample of IHAWP members who had been continuously enrolled in the IHAWP or Medicaid program for at least the previous six months. Potential respondents had an option to complete the survey online. We also surveyed a sample of adults in the regular Medicaid program during this same period of time, using the same methodology, to compare with IHAWP members. The survey instruments were based on the most recent versions of the Consumer Assessment of Healthcare Providers and Systems (CAHPS®) 5.1 Health Plan survey and the CAHPS Clinician and Group Survey. A number of original items were added to provide additional information specific to the IHAWP. Findings in this report are based on the experiences of 1,216 IHAWP members and 1,055 traditional Medicaid members. The experiences of IHAWP members are compared to those of adults in Iowa's traditional Medicaid program.

2022 CAHPS Health Plan Survey Database

Findings in this report also make comparisons between IHAWP members from the 2022 Consumer Survey and adult Medicaid members from the 2022 CAHPS Health Plan Survey Database. This national benchmarking database is comprised of CAHPS survey responses submitted by various Medicaid survey sponsors from across the US. The 2022 results are based on survey data collected from 50,336 adult Medicaid respondents between July 2021 and July 2022.

Key findings from the IHAWP Member Survey

IHAWP members vs. CAHPS adult Medicaid members

- IHAWP members in the 2022 Consumer Survey had similar access to timely care services compared to adults in Medicaid from the 2022 National CAHPS Benchmarking Database.
    - 58% of IHAWP members who needed urgent care reported that they always got care for their illness, injury, or condition as soon as needed. The rate was similar for adult Medicaid members in CAHPS at 59%.
    - Just over half of IHAWP members (53%) and CAHPS adult Medicaid members (52%) with a need for routine care reported always getting a check-up or routine care as soon as needed.
    - About half of IHAWP members (51%) and CAHPS adult Medicaid members (50%) with a need for specialist care reported always getting care as soon as needed.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

- IHAWP members in the Consumer Survey reported the same rate of flu shot vaccination as adult Medicaid members in CAHPS (40%).
- Adults in Medicaid from the CAHPS database were slightly more likely to report having a personal doctor (81%) than IHAWP members (78%).
  - Among those with a personal doctor, the same rate of IHAWP and CAHPS adult Medicaid members said their doctor usually or always communicated well (93%).
  - Favorable ratings of their personal doctor were also similar for those in IHAWP and CAHPS adult Medicaid.
- Adults in Medicaid from the CAHPS database were slightly more likely to rate their overall health care favorably (56%) than IHAWP members (52%).

IHAWP members vs. traditional Medicaid members in 2022 Consumer Survey

- Just under half of both IHAWP and traditional Medicaid members (49%) reported receiving preventive care in the past 6 months.
  - Less than one-tenth (7%) of both IHAWP and Medicaid members reported not being able to get preventive care when it was needed.
- Medicaid members reported higher rates of unmet need for prescription medication than IHAWP members.
  - Among those with a need for prescription medication, roughly 3 in 10 Medicaid members reported an unmet need for a prescription medication in the past six months (27%) compared to 2 in 10 IHAWP members (21%).
- More IHAWP members reported receipt of a flu shot (40%) than Medicaid members (31%).
- Fewer IHAWP members (41%) reported being informed by their doctor's office about what to do if they needed after-hours care than Medicaid members (49%).
- A smaller proportion of IHAWP members used the emergency department in the past 6 months (26%) than Medicaid members (32%).
  - Of those who used the ED, significantly more Medicaid members (46%) than IHAWP members (37%) reported that the care they received in the ED could have been provided in a doctor's office.
- Similar rates of IHAWP and Medicaid members (8% and 9%, respectively) reported any hospital stays in the previous six-month period. There were no significant differences between IHAWP and Medicaid members regarding potentially avoidable readmissions.
- Almost half of IHAWP (48%) and Medicaid members (45%) with a health visit reported receiving self-management support from their provider to help take care of their own health.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

- About half of both IHAWP and Medicaid members (50% and 51%, respectively) reported talking with someone from their doctor's office about things in life that worried them or caused them stress.
- Reported rates of usually or always receiving good care coordination were similar between IHAWP (80%) and traditional Medicaid members (78%). About half of both IHAWP and Medicaid members rated their health care plan favorably (50% and 47%, respectively).

Member experiences general background information

The experiences of members of the Iowa Health and Wellness Plan (IHAWP) is an important aspect of the overall evaluation of the IHAWP program, as mentioned in both the STCs and other CMS correspondence with Iowa Medicaid. The topic areas of interest include access to care, coverage gaps and churning, and quality of care. These are all areas that would be expected to improve because of Medicaid coverage gained by the IHAWP population.

This is an interim report to the Centers for Medicare and Medicaid Services (CMS) as part of the evaluation of the Iowa Health and Wellness Plan (IHAWP) being conducted by researchers at the University of Iowa for the Iowa Department of Health and Human Services. This report is specific to the evaluation of member experiences associated with the IHAWP program. The content of this report is based on a plan to evaluate the IHAWP that was approved by CMS in 2021.

Member experiences goals

The goals being evaluated for this portion of the IHAWP evaluation derive from the expansion of eligibility to populations not previously eligible for Medicaid coverage, those between 0-138% FPL not categorically eligible for Medicaid. This increased coverage has the following goals:

- Goal 1: IHAWP members will have increased access to covered services.
- Goal 2: IHAWP members will experience consistent, reliable coverage.
- Goal 3: IHAWP members will experience improved quality of care.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Figure 55. Member Experiences Logic Model

<table>
<tr><th colspan="6">LOGIC MODEL FOR MEDICAID EVALUATION: ASSESSING ONGOING EXPERIENCES OF IWP MEMBERS</th></tr>
<tr><td colspan="6">NEED(s): The Iowa Wellness Plan (IWP), Iowa's version of Medicaid expansion, provides comprehensive health coverage at low or no cost to low-income Iowans between the ages of 19 and 64. Iowa and CMS will continue to evaluate the effectiveness of various policies that are designed to improve the health of Medicaid beneficiaries.</td></tr>
<tr><td colspan="6">THEORY OF CHANGE: The IWP seeks to increase access for low-income Iowans to quality, affordable health care services and coverage. Through the expansion of eligibility to populations not previously eligible for Medicaid coverage, their will be both a decrease in the number of uninsured Iowans as well as in increase in the access to care, quality of care and other positive implications of having health care coverage.</td></tr>
<tr><td colspan="3">YOUR PLANNED WORK</td><td colspan="3">YOUR INTENDED RESULTS</td></tr>
<tr><td>Inputs</td><td>Activities</td><td>Participation</td><td>Short-Term Outcomes</td><td>Medium-Term Outcomes</td><td>Long-Term Outcomes</td></tr>
<tr>
<td>Eligible IWP Members:
• Adults ages 19-64
• Income up to 138% FPL

Stakeholder Collaboration
• CMS – federal government
• Iowa Department of Human Services
• Iowa Medicaid Enterprise (IME)
• Managed Care Organizations (MCOs)
  • Amerigroup
  • Iowa Total Care
• State Provider Associations
• Advocacy groups

IWP Components
• Funding
• Program staff
• Program infrastructure

Outside Data Sources:
• National CAHPS Benchmarking Database</td>
<td>Activities of IWP Members
• Yearly wellness exam (WE)
  • Preventive exam from a plan-enrolled physician
  • Dental well exam from a plan-enrolled dental provider
• Health risk assessment (HRA) survey tool

Additional Activities:
• IWP education and promotion by MCOs, DHS, & providers
• Financial hardship waiver

Medicaid Evaluation Activities
• IWP Member Surveys
  • Fielded every 18 months
  • Survey foundation will be based on the CAHPS survey
  • Mailed to stratified random sample of 1500 members to each of the following groups:
    • Amerigroup
    • Iowa Total Care
    • Traditional state Medicaid plan
  • Survey eligibility: Members must have been enrolled in IWP for at least the previous 6 months
  • Follow-up survey to be mailed + telephone follow up</td>
<td>•Completion of WE
•Completion of HRA
•Completion of both: wellness exam and HRA

•Demographics of members that are more likely to complete both required activities
•Demographics of members who are less likely to complete required activities</td>
<td>IWP members will have equal or greater access to primary care and specialty services
• Increased likelihood of having an ambulatory or preventive care visit
• Greater access to urgent care
• Greater access to routine care
• Increased likelihood to get timely appointments, answers to questions, and have less time in waiting room
• Increased likelihood to know what to do to obtain care after regular office hours
• Increased likelihood to report greater access to specialist care
• Increased likelihood to report greater access to prescription medication

IWP members will have equal or greater access to preventive care services
• Increased likelihood for women aged 50-64 to have had a breast cancer screening
• Increased likelihood for women aged 21-64 to have had a cervical cancer screening
• Increased likelihood for adults to have had a flu shot in the past year
• Increased likelihood for adults with diabetes to have had Hemoglobin A1c testing
• Increased likelihood to report greater access to preventive care

IWP members will have equal or greater access to mental and behavioral health services
• Increased likelihood for adults with major depressive disorder to have higher anti-depressant medication management
• Increased likelihood to to utilize mental health services
• Increased likelihood to report greater access to preventive care</td>
<td>IWP members will have equal or greater access to care, resulting in equal or lower use of emergency department services for non-emergent care
• Increased likelihood to have fewer non-emergent ED visits
• Increased likelihood to have fewer follow-up ED visits
• Increased likelihood to utilize ambulatory care

IWP members will experience equal or less churning
• Decreased likelihood to have gaps in health insurance coverage over the past 12 months
• Increased likelihood of having higher rates of consecutive coverage
• Decreased likelihood change plans or lose eligibility during the year</td>
<td>IWP members will maintain continuous access to a regular source of care when their eligibility status changes
• Increased likelihood to have a personal doctor than other adults
• Increased likelihood to have a positive experience with changing personal doctor/PCP

IWP members will have equal or better quality of care
• Decreased likelihood to receive antibiotic treatment for acute bronchitis
• Increased likelihood for adults aged 40-64 with COPD to have pharmacotherapeutic management of COPD exacerbation
• Increased likelihood for adults to self-report receipt of flu shot
• Decreased likelihood to report visiting the ED

IWP members will have equal or lower rates of hospital admissions
• Decreased likelihood to have hospital admissions for COPD, diabetes short-term complications, CHF, or asthma
• Decreased likelihood to utilize general hospital/acute care
• Decreased likelihood to have an acute readmission within 30 days of being discharged for acute inpatient stay
• Decreased likelihood to to have a self-reported hospitalization in the previous 6 months
• Decreased likelihood to have a self-reported 30-day hospital readmission in the previous 6 months

IWP members will report equal or greater satisfaction with the care provided
• Increased likelihood to report that their personal doctor communicated well with them during office visits
• Increased likelihood to report that their provider supported them in taking care of their own health
• Increased likelihood to report that their provider paid attention to their mental or emotional health
• Increased likelihood to report that their provider talked with them about their prescription medications
• Increased likelihood to report that their provider paid attention to their care they received from other providers
• Increased likelihood to report higher ratings of their personal doctor
• Increased likelihood to report higher ratings of their overall care
• Increased likelihood to report higher ratings of their health plan</td>
</tr>
<tr>
<td colspan="3">ASSUMPTIONS
• IWP members are aware of IWP program requirements
• IWP members value preventive health services
• IWP members value health insurance coverage</td>
<td colspan="3">EXTERNAL FACTORS
• MCO changes within the state
• Underlying health status of IWP members impacting health needs
• Barriers to transportation and other factors related to seeking out care and preventive services (knowledge, access, ease of use, infrastructure, up-front cost, work or childcare coverage, reliability of service)</td>
</tr>
</table>

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Member experiences methodology

The information and data presented in this report indicate the current status of the analytic methods and results that are derived from three primary data sources used for our IHAWP evaluation research: 1) the IHAWP Consumer survey 2) the 2022 CAHPS Health Plan Survey Database, and 3) Medicaid claims and eligibility files provided to the evaluators by the Iowa Medicaid program.

Data sources

Member Experiences Survey

See description under Member Experiences Survey NEMT.

2022 CAHPS Health Plan Survey Database

The CAHPS Health Plan Survey Database collects standardized information on enrollee experiences with health plans and their services. Various survey sponsors across the United States, including State Medicaid agencies, CHIP programs, and individual health plans voluntarily submit data collected using the CAHPS Health Plan Survey instrument to be included in the database. The 2022 results are based on survey data collected between July 2021 and July 2022.

For adult Medicaid enrollees included in the 2022 database, all information was collected using the 5.1 version of the CAHPS Health Plan Survey and supplemental items from the Healthcare Effectiveness Data and Information Set were also included. A total of 50,336 adult Medicaid enrollees who participated in CAHPS surveys conducted by various State Medicaid survey sponsors across many different states in the US are included in the database. For basic demographics of the adult Medicaid sample, 60% were female, 41% had some college or higher education, and 64% were age 45 years or over.

Data Analysis

There were two main ways we focused our comparative analysis: 1) comparisons between members of IHAWP and adult members of the traditional Medicaid program in the 2022 Consumer Survey, and 2) comparisons between IHAWP members and national data on adult Medicaid recipients from the 2022 CAHPS Health Plan Survey database.

Data were tabulated and bivariate analyses were conducted using SPSS and Stata. Chi-square tests were used to examine differences between IHAWP members and traditional Medicaid members in the Consumer Survey. One sample z-tests for proportion were used to examine differences between IHAWP members and adult Medicaid enrollees from CAHPS National Benchmarking data. Group differences were considered statistically significant if the p-value was less than 0.05.

The Consumer Survey sample was randomly selected from all eligible members of IHAWP and Medicaid. Because all analyses compared IHAWP and Medicaid members, findings are

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

not impacted by the sampling strategy, and we are reporting unweighted results in this report.

Limitations

While the CAHPS Health Plan Survey Database is commonly used as a source of national benchmarking data, it is important to note that organizations from across the country voluntarily contribute data to the CAHPS database. Health plans choose whether or not to participate in the database. Therefore, data cannot be assumed to be representative of all US Medicaid enrollee populations.

Iowa Medicaid administrative data

See discussion under Secondary data.

Emergency Department Use Survey

The survey team is developing a telephone survey to be administered to members who utilize the ED for non-emergent diagnoses. We anticipate recruiting 50 members per month for 1 year. This should yield 300 completed surveys (100 per group) with sufficient power to detect moderate differences at .05.

Analyses

See discussion under Empirical Strategy in General Methods.

Evaluation measures summary

Table 38-Table 40 present an updated list of the hypotheses, research questions, comparison strategy, outcome measures, data sources and analytic approach that was included in the 2021 IHAWP evaluation plan.

Any variances from the approved 2021 IHAWP evaluation plan design in the tables that follow reflect methodologic adjustments that were made based on available data and other methodologic issues (e.g., where CAHPS benchmarking data is no longer available). For example, “National CAHPS benchmarking database” was changed to “Medicaid” because the data are no longer available in the National CAHPS benchmarking database. Therefore, we modified the methods to be a comparison of IHAWP to Medicaid. Other items were struck through because they were either redundant or no longer possible. Items that have not yet been completed as part of this evaluation may be included in the 2026 final evaluation report. Where methods are updated, the original language from the 2021 IHAWP evaluation is included in parentheses.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Member Experiences Evaluation Measures Summary – Access to Care

Current Comparison Strategy (Originally Proposed)	Current Outcome Measure(s) (Originally Proposed)	Data sources	Current Analytic Approach (Originally Proposed)
Hypothesis 1.1: Wellness Plan members will have equal or greater access to primary care and specialty services.			
Research Question 1.1.1: Are adults in the IHAWP more likely to have had an ambulatory or preventive care visit than other adults in Medicaid?			
Study group: IHAWP members Comparison group: FMAP adult members	Percent of members who had an ambulatory care visit in the measurement year *(HEDIS AAP)*	Medicaid claims	Means tests CY 2014-2022
	Whether a member had an ambulatory or preventive care visit *(HEDIS AAP)*		DID CY 2014-2022
Research Question 1.1.2: Are adults in the IHAWP more likely to report greater access to urgent care (UC) than other adults in national estimates from National CAHPS Benchmarking Database?			
Adults in national estimates from National CAHPS Benchmarking Database	Single item assessing timely access to UC *(Composite of two CAHPS questions rating timely access to UC and unmet need for UC)*	Member Survey	Z-test (Means tests)
Research Question 1.1.3: Are adults in the IHAWP more likely to report greater access to routine care (RC) than other adults in national estimates from National CAHPS Benchmarking Database?			
Adults in national estimates from National CAHPS Benchmarking Database	Item assessing timely access to RC *(Composite of two CAHPS questions rating timely access to RC and unmet need for RC)*	Member Survey	Z-test (Means tests)
Research Question 1.1.4: Are adults in the IHAWP more likely to get timely appointments, answers to questions, and have less time in waiting room than other adults in national estimates from National CAHPS Benchmarking Database?			
Adults in national estimates from National CAHPS Benchmarking Database	Two-item CAHPS composite, "Getting Care Quickly." *(Composite of three CAHPS questions 1) member experience with getting appointments for care in a timely manner, 2) time spent waiting for their appointment, and 3) receiving timely answers to their questions.)*	Member Survey	Z-test (DID)
Research Question 1.1.5: Are adults in the IHAWP more likely to know what to do to obtain care after regular office hours than other adults in Medicaid?			
Adults in Medicaid (Adults in national estimates from National CAHPS Benchmarking Database)	Member experience with knowing what to do to obtain care after regular office hours *(CAHPS question)*	Member Survey	Chi-square test (DID)

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Current Comparison Strategy (Originally Proposed)	Current Outcome Measure(s) (Originally Proposed)	Data sources	Current Analytic Approach (Originally Proposed)
Research Question 1.1.6: Are adults in the IHAWP more likely to report greater access to specialist care than other adults national estimates from National CAHPS Benchmarking Database?			
Adults in national estimates from National CAHPS Benchmarking Database	Item assessing timely access to specialist care *(Composite of two CAHPS questions rating access to and unmet need for care from a specialist)*	Member Survey	Z-test (DID)
Research Question 1.1.7: Are adults in the IHAWP more likely to report greater access to prescription medication than other adults in Medicaid? (national estimates from National CAHPS Benchmarking Database?			
Adults in Medicaid (Adults in national estimates from National CAHPS Benchmarking Database)	Two items assessing access to and unmet need for prescription medication. *(Composite of two CAHPS questions rating access to and unmet need for prescription medication)*	Member Survey	Chi-Square tests (DID)
Hypothesis 1.2: Wellness Plan members will have equal or greater access to preventive care services.			
Research Question 1.2.1: Are women aged 50-64 in the IHAWP more likely to have had a breast cancer screening than other adults in Medicaid?			
Study group: Female IHAWP members 50-64 yrs.	Percent of women 50-64 years of age who had a mammogram to screen for breast cancer *(HEDIS BCS)* during the measurement year	Medicaid claims	Means tests CY 2014-2022
Comparison group: Female FMAP members 50-64 yrs.	Whether a woman 50-64 years of age had a mammogram to screen for breast cancer *(HEDIS BCS)* during the measurement period		DID CY 2014-2022
Research Question 1.2.2: Are women aged 21-64 in the IHAWP more likely to have had a cervical cancer screening than other adults in Medicaid?			
Study group: Female IHAWP members 21-64 yrs. Comparison group: Female FMAP members 21-64 yrs.	Percent of women 21-64 years of age who were screened for cervical cancer *(HEDIS CCS)* in the measurement year or the 2 years prior to the measurement year	Medicaid claims	Means tests CY 2017-2022
Adults in Medicaid	Whether a woman 21-64 years of age was screened for cervical cancer *(HEDIS CCS)* in the measurement year or the 2 years prior to the measurement year		DID CY 2017-2022

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Current Comparison Strategy (Originally Proposed)	Current Outcome Measure(s) (Originally Proposed)	Data sources	Current Analytic Approach (Originally Proposed)
Research Question 1.2.3: Are adults in the IHAWP more likely to have had a flu shot in the past year than other adults in national estimates from National CAHPS Benchmarking Database?			
Adults in national estimates from National CAHPS Benchmarking Database	Percent of members 21-64 years of age who received an influenza vaccination *(CAHPS question)*	Member Survey	Z-test (Means tests)
Research Question 1.2.4: Are adults with diabetes in the IHAWP more likely to have had Hemoglobin A1c testing than other adults with diabetes in Medicaid?			
For those identified as having diabetes Study group: IHAWP members 2 comparison groups: FMAP adult members SSI adult members	Percent of members with type 1 or type 2 diabetes who had Hemoglobin A1c testing *(HEDIS CDC)* during the measurement year	Medicaid claims	Means tests CY 2012-2022
	Whether a member with type 1 or type 2 diabetes had Hemoglobin A1c testing *(HEDIS CDC)* during the measurement period		CITS Pre-IHAWP CY 2011-2013 Post-IHAWP CY 2014-2022
Research Question 1.2.5: Are adults in the IHAWP more likely to report greater access to preventive care than other adults in Medicaid? national estimates from National CAHPS Benchmarking Database?			
Adults in Medicaid (Adults in national estimates from National CAHPS Benchmarking Database)	Two items assessing access to and unmet need for preventive care *(CAHPS question)*	Member Survey	Chi-square tests (DID)
Hypothesis 1.3: Wellness Plan members will have equal or greater access to mental and behavioral health services.			
Research Question 1.3.1: Are adults in IHAWP with major depressive disorder more likely to have higher anti-depressant medication management than other adults with major depressive disorder in Medicaid?			
For those identified as having major depressive disorder	Percent of members with major depressive disorder who remained on antidepressant medication *(HEDIS AMM)*	Medicaid claims	Means tests CY 2015-2022

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Current Comparison Strategy (Originally Proposed)	Current Outcome Measure(s) (Originally Proposed)	Data sources	Current Analytic Approach (Originally Proposed)
Study group: IHAWP members 2 comparison groups FMAP adult members SSI adult members	Time to first lapse in anti-depressant medication *Newly developed measure identifying continuous use of anti-depressant medication utilizing medication lists from HEDIS AMM*		Survival analyses CY 2015-2022
Research Question 1.3.2: Are adults in the IHAWP more likely to utilize mental health services than other adults in Medicaid?			
Study group: IHAWP members 2 comparison groups: FMAP adult members SSI adult members	Percent of members receiving any mental health services *Newly developed measure utilizing HEDIS FUH Mental Health Diagnosis Value Set*		Means tests CY 2014-2022
For those identified as having mental health diagnosis Study group: IHAWP members Two comparison groups 1: FMAP adult members 2: SSI adult members	Whether member with mental health diagnosis received mental health services	Medicaid claims	DID CY 2015-2022
Members having an ED visit for a mental health illness Study group: IHAWP members 2 comparison groups FMAP adult members SSI adult members	Whether member had a follow-up visit after ED visit for mental illness *(HEDIS FUM)*		

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Current Comparison Strategy (Originally Proposed)	Current Outcome Measure(s) (Originally Proposed)	Data sources	Current Analytic Approach (Originally Proposed)
~~Research Question 1.3.3: Are adults in the IHAWP more likely to have greater access to preventive care than other adults in national estimates from National CAHPS Benchmarking Database?~~ (Redundant item)			
~~Adults in national estimates from National CAHPS Benchmarking Database~~	~~Access to and unmet need for preventive care (CAHPS question)~~	~~Member Survey~~	~~DID~~
Hypothesis 1.4: Wellness Plan members will have equal or greater access to care, resulting in equal or lower use of emergency department services for non-emergent care.			
Research Question 1.4.1: Are adults in the IHAWP more likely to have fewer non-emergent ED visits than other adults in Medicaid?			
Study group: IHAWP members Comparison group: FMAP adult members	Number of non-emergent ED visits per 1,000 member months *(HEDIS AMB)* in the measurement year	Medicaid claims	Means tests CY 2014-2022
	Whether member had a non-emergent ED visit *(HEDIS AMB)* in the measurement period		DID CY 2014-2022
Research Question 1.4.2: Are adults in the IHAWP more likely to have fewer follow-up ED visits than other adults in Medicaid?			
Study group: IHAWP members Comparison group: FMAP adult members	Percent of members with ED visit within the first 30 days after index ED visit in the measurement year *Newly developed measure using the structure of hospital readmission from HEDIS and ED value set to define the visits*	Medicaid claims	Means tests CY 2014-2022
Research Question 1.4.3: Are adults in the IHAWP more likely to utilize ambulatory care than other adults in Medicaid?			
Study group: IHAWP members Comparison group: FMAP adult members	Rate of outpatient and emergency department visits per 1,000 member months *(HEDIS AMB)*	Medicaid claims	Means tests CY 2014-2022
Research Question 1.4.4: What other circumstances are associated with overutilization of ED?			
Members utilizing the ED ED providers	Identification of facilitators and barriers to other types of care and factors related to non-emergent ED use (e.g., knowledge of alternatives, access, ease of use, up-front cost, work or childcare coverage, financial stress)	Qualitative member interviews, ED provider interviews	Qualitative thematic coding

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Member Experiences Evaluation Measures Summary – Coverage Continuity

Current Comparison Strategy (Originally Proposed)	Current Outcome Measure(s) (Originally Proposed)	Data sources	Current Analytic Approach (Originally Proposed)
Hypothesis 2.1: Wellness Plan members will experience equal or less churning.			
Research Question 2.1.1: Are adults in the IHAWP less likely to have gaps in health insurance coverage over the past 12 months than other adults in Medicaid?			
Study group: IHAWP members Comparison group: FMAP adult members	Number of months in the previous year when the respondent did not have health insurance coverage *(Developed for IHAWP evaluation)*	Member Survey	DID
Research Question 2.1.2: Are adults in the IHAWP more likely to have higher rates of consecutive coverage than other adults in Medicaid?			
Study group: IHAWP members Comparison group: FMAP adult members IowaCare members	Percent of members with 6 months continuous eligibility and 12 months continuous eligibility *(Developed for IHAWP evaluation)*	Enrollment files	CITS Pre–CY 2010-2013 Post–CY 2014-2021
Research Question 2.1.3: Are adults in the IHAWP less likely to change plans or lose eligibility during the year than other adults in Medicaid?			
Study group: IHAWP members Comparison group: FMAP adult members IowaCare members	Whether member did not change plans or lose eligibility, changed plans or lost eligibility once, changed plans or lost eligibility 2-3 times or changed plans or lost eligibility 4 or more times *(Developed for IHAWP evaluation)*	Enrollment files	CITS Pre–CY 2010-2013 Post–CY 2014-2021
Hypothesis 2.2: Wellness Plan members will maintain continuous access to a regular source of care when their eligibility status changes.			
Research Question 2.2.1: Are adults in the IHAWP more likely to have a personal doctor than other adults in national estimates from National CAHPS Benchmarking Database?			
Adults in national estimates from National CAHPS Benchmarking Database	The percent who respond that they currently have a personal doctor *(CAHPS question)*	Member Survey	Z-test (Means tests)

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Current Comparison Strategy (Originally Proposed)	Current Outcome Measure(s) (Originally Proposed)	Data sources	Current Analytic Approach (Originally Proposed)
Research Question 2.2.2: Are adults in the IHAWP more likely to have an easier time changing personal doctor/PCP than other adults in Medicaid/(than in prior years)?			
Study group: IHAWP members Comparison group: Adults in Medicaid (FMAP adult members)	Item addressing ease of changing personal doctor (for those who attempted to change personal doctors). *(Member experiences with changing personal doctor/primary care provider-Developed for IHAWP evaluation)*	Member Survey	Chi-square test (DID)

Member Experiences Evaluation Measures Summary – Quality of Care

Current Comparison Strategy	Current Outcome Measure(s)	Data sources	Current Analytic Approach
Hypothesis 3.1: Wellness Plan members will have equal or better quality of care.			
Research Question 3.1.1: Are adults in the IHAWP less likely to receive antibiotic treatment for acute bronchitis than other adults in Medicaid?			
Study group: IHAWP members 2 Comparison groups: FMAP adult members SSI adult members	The percent of members 19–64 years of age who were enrolled for at least 11 months during the measurement year with a diagnosis of acute bronchitis who were not dispensed an antibiotic prescription (HEDIS AAB)	Medicaid claims	Means tests CY 2014-2022
Research Question 3.1.2: Are adults aged 40-64 with COPD in IHAWP more likely to have pharmacotherapeutic management of COPD exacerbation than other adults in Medicaid?			
Study group: IHAWP members 2 Comparison groups: FMAP adult members SSI adult members	The percent of COPD exacerbations for members age 40-64 years of age who had an acute inpatient discharge or emergency department visit during the first 11 months of the measurement year and who were enrolled for at least 30 days following the inpatient stay or emergency department visit and who were dispensed appropriate medications (PQI)	Medicaid claims	Means tests CY 2014-2022

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Current Comparison Strategy	Current Outcome Measure(s)	Data sources	Current Analytic Approach
Research Question 3.1.3: Are adults in the IHAWP more likely to self-report receipt of flu shot than other adults in Medicaid?			
Study group: IHAWP members Comparison group: Adults in Medicaid (FMAP adult members, SSI adult members)	Percent of respondents who reported having a flu shot *(CAHPS question)*	Member Survey	Chi-Square test (Means tests)
Research Question 3.1.4: Are adults in the IHAWP less likely to report visiting the ED for non-emergent care than other adults in Medicaid?			
Study group: IHAWP members Comparison group: Adults in Medicaid (FMAP adult members, SSI adult members)	Percent of respondents who reported that the care they received at their most recent visit to the emergency room could have been provided in a doctor's office if one was available at the time *(Developed for IHAWP evaluation)*	Member Survey	Chi-Square test (Means tests)
Hypothesis 3.2: Wellness Plan members will have equal or lower rates of hospital admissions.			
Research Question 3.2.1: Are adults in the IHAWP less likely to have hospital admissions for COPD, diabetes short-term complications, CHF or asthma than other adults in Medicaid?			
Study group: IHAWP members 2 Comparison groups: FMAP adult members SSI adult members	The number of discharges for COPD, CHF, short-term complications from diabetes or asthma per 100,000 Medicaid members *(PQI)*	Medicaid claims	Means tests CY 2014-2022
Research Question 3.2.2: Are adults in the IHAWP less likely to utilize general hospital/acute care than other adults in Medicaid?			
Study group: IHAWP members 2 Comparison groups: FMAP adult members SSI adult members	This measure summarizes utilization of acute inpatient care and services in the following categories: total inpatient, surgery and medicine using number of discharges per 1000 member months, number of days stay per 1000 member months and average length of stay for all members who were enrolled for at least 1 month during the measurement year *(HEDIS IHU)*	Medicaid claims	Means tests CY 2014-2022

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Current Comparison Strategy	Current Outcome Measure(s)	Data sources	Current Analytic Approach
Research Question 3.2.3: Are adults in the IHAWP less likely to have an acute readmission within 30 days of being discharged for acute inpatient stay than other adults in Medicaid?			
Study group: IHAWP members 2 Comparison groups: FMAP adult members SSI adult members	For members age 19-64 years who were enrolled for at least on month during the measurement year, the number of acute inpatient stays during the measurement year that were followed by an acute readmission for any diagnosis within 30 days and the predicted probability of an acute readmission *(Developed for IHAWP evaluation)*	Medicaid claims	Means tests CY 2014-2022
Research Question 3.2.4: Are adults in the IHAWP less likely to have a self-reported hospitalization in the previous 6 months than other adults in Medicaid?			
Study group: IHAWP members Comparison groups: FMAP adult members SSI adult members	Hospitalization reported in the previous 6 months *(Developed for IHAWP evaluation)*	Member Survey	Chi-Square test (Means tests)
Research Question 3.2.5: Are adults in the IHAWP less likely to have a self-reported 30-day hospital readmission in the previous 6 months than other adults in Medicaid?			
Study group: IHAWP members Comparison groups: FMAP adult members SSI adult members	30-day readmissions reported in last 6 months *(Developed for IHAWP evaluation)*	Member Survey	Chi-Square test (Means tests)
Hypothesis 3.3: Wellness Plan members will report equal or greater satisfaction with the care provided.			
Research Question 3.3.1: Are adults in the IHAWP more likely to report that their personal doctor communicated well with them during office visits than other adults in national estimates from National CAHPS Benchmarking Database?			
Adults in national estimates from National CAHPS Benchmarking Database	This is a CAHPS composite measure designed to assess respondent perception of how well their personal doctor communicated with them during office visits.	Member Survey	Z-test (Means tests)

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Current Comparison Strategy	Current Outcome Measure(s)	Data sources	Current Analytic Approach
Research Question 3.3.2: Are adults in the IHAWP more likely to report that their provider supported them in taking care of their own health than other adults in Medicaid?			
Adults in Medicaid (Adults in national estimates from National CAHPS Benchmarking Database)	This is a CAHPS Patient-Centered Medical Home (PCMH) composite measure designed to assess respondent perception of how well their provider supported them in taking care of their own health.	Member Survey	Z-test (Means tests)
Research Question 3.3.3: Are adults in the IHAWP more likely to report that their provider paid attention to their mental or emotional health than other adults in Medicaid?			
Adults in Medicaid (Adults in national estimates from National CAHPS Benchmarking Database)	This is a CAHPS PCMH composite measure designed to assess respondent perception of how well their provider paid attention to their mental or emotional health.	Member Survey	Chi-Square test (DID)
~~Research Question 3.3.4: Are adults in the IHAWP more likely to report that their provider talked with them about their prescription medications than other adults in national estimates from National CAHPS Benchmarking Database?~~ (Redundant item)			
~~Adults in national estimates from National CAHPS Benchmarking Database~~	~~This is a CAHPS PCMH composite measure designed to assess respondent perception of how well their provider talked with them about their prescription medications which is the CAHPS way to assess the shared decision-making component of the PCMH.~~	~~Member Survey~~	~~DID~~
Research Question 3.3.5: Are adults in the IHAWP more likely to report that their provider paid attention to the care they received from other providers than other adults in national estimates from National CAHPS Benchmarking Database?			
Adults in Medicaid (Adults in national estimates from National CAHPS Benchmarking Database)	There are four individual items from the CAHPS PCMH items designed to assess respondent perception of their provider's attention to the care they received from other providers.	Member Survey	Chi Square-test (DID)
Research Question 3.3.6: Are adults in the IHAWP more likely to report higher ratings of their personal doctor than other adults in national estimates from National CAHPS Benchmarking Database?			
Adults in national estimates from National CAHPS Benchmarking Database	Rating of personal doctor on 0-10 scale *(CAHPS question)*	Member Survey	Z-test (Means tests)

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Current Comparison Strategy	Current Outcome Measure(s)	Data sources	Current Analytic Approach
Research Question 3.3.7: Are adults in the IHAWP more likely to report higher ratings of their overall care than other adults in national estimates from National CAHPS Benchmarking Database?			
Adults in national estimates from National CAHPS Benchmarking Database	Rating of all care received on 0-10 scale *(CAHPS question)*	Member Survey	Z-test (Means tests)
Research Question 3.3.8: Are adults in the IHAWP more likely to report higher ratings of their MCO health plan than other adults in national estimates from National CAHPS Benchmarking Database?			
Adults in Medicaid (Adults in national estimates from National CAHPS Benchmarking Database)	Rating of MCO health care plan on 0-10 scale *(CAHPS question)*	Member Survey	Chi-square test (Means tests)

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Member experiences results

Access to care

Hypothesis 1.1: Wellness Plan members will have equal or greater access to primary care and specialty services.

Research Question 1.1.1: Are adults in the IWP more likely to have had an ambulatory or preventive care visit than other adults in Medicaid?

Dataset is curated for the period 2011-2021. Preliminary model building is underway.

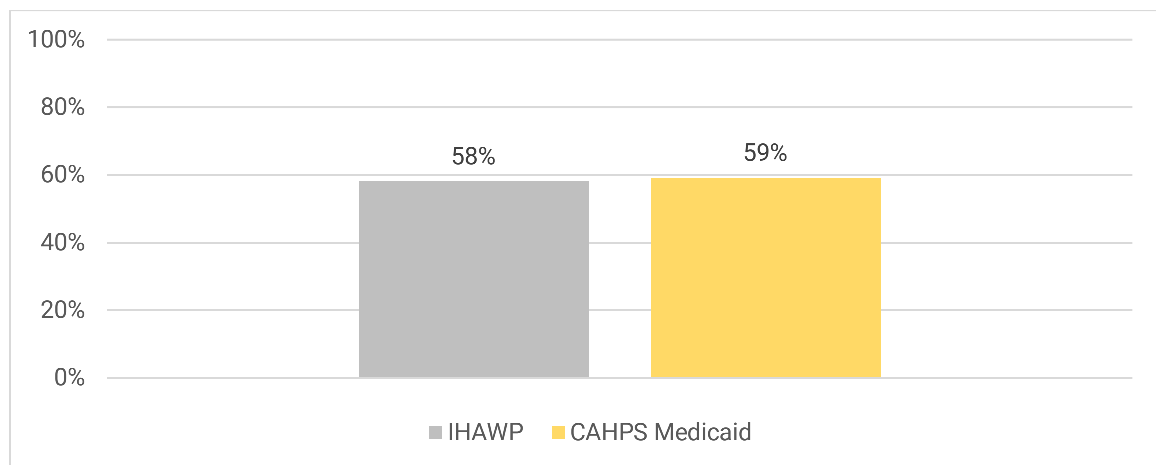
Research Question 1.1.2: Are adults in the IWP more likely to report greater access to urgent care than other adults in national estimates from National CAHPS Benchmarking Database?

Respondents were asked if they had an illness, injury, or condition that needed care right away in the last six months. Among those who responded yes, the following question was asked to assess access to urgent care:

In the last 6 months, was there any time when you needed care right away but could not get it for any reason?

Figure 56 shows the percent of IHAWP members and adult Medicaid members in the 2022 National CAHPS Benchmarking database who indicated always getting the care they needed right away. Rates very similar between the two groups with 58% of IHAWP members indicated always getting the care they needed right away compared to 59% of CAHPS Medicaid participants.

Figure 56. Always Got Care for Illness, Injury, or Condition as Soon as Needed in Past 6 Months



One sample z-test for proportion: not significant

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

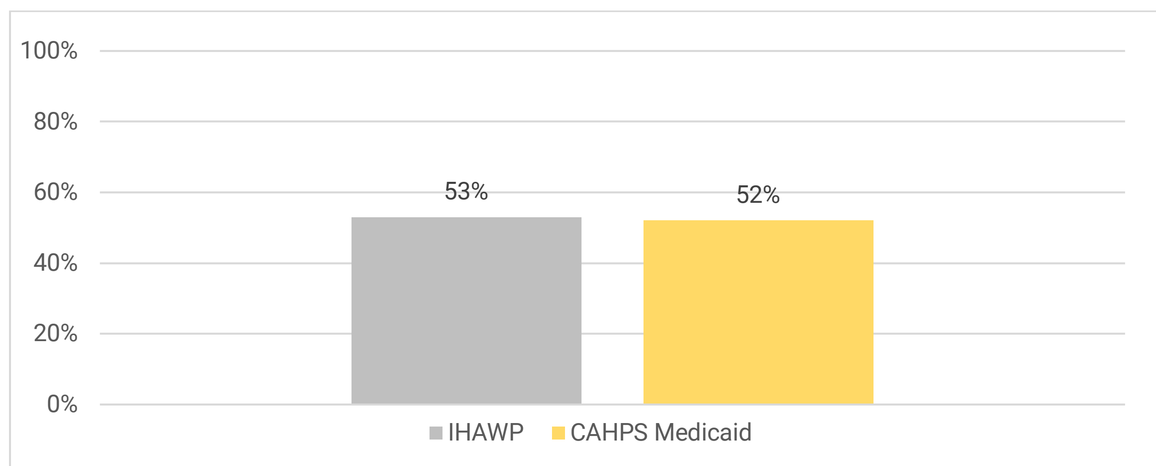
Research Question 1.1.3: Are adults in the IWP more likely to report greater access to routine care than other adults in national estimates from National CAHPS Benchmarking Database?

Respondents were asked if they made an appointment for a check-up or routine care in the last 6 months. Among those who responded yes, the following question was asked to assess access to routine care:

> *In the last 6 months, how often did you get an appointment for a check-up or routine care as soon as you needed?*

Figure 57 shows the percent of IHAWP members and adult Medicaid members in the 2022 National CAHPS Benchmarking database who indicated always getting a check-up or routine care appointment as soon as needed. Rates were very similar between the two groups with just over half of IHAWP members (53%) and CAHPS Medicaid participants (52%) reporting that they were able to get a check-up or routine care appointment as soon as they needed.

Figure 57. Always Got Check-up or Routine Care Appointment as Soon as Needed in Past 6 Months (IHAWP vs. CAHPS Medicaid)



One sample z-test for proportion: not significant

Research Question 1.1.4: Are adults in the IWP more likely to get timely appointments, answers to questions, and have less time in waiting room than other adults in national estimates from National CAHPS Benchmarking Database?

This question was not included in the 2022 Member Survey and will be considered for inclusion in the next member survey.

Research Question 1.1.5: Are adults in the IWP more likely to know what to do to obtain care after regular office hours than other adults in Medicaid?

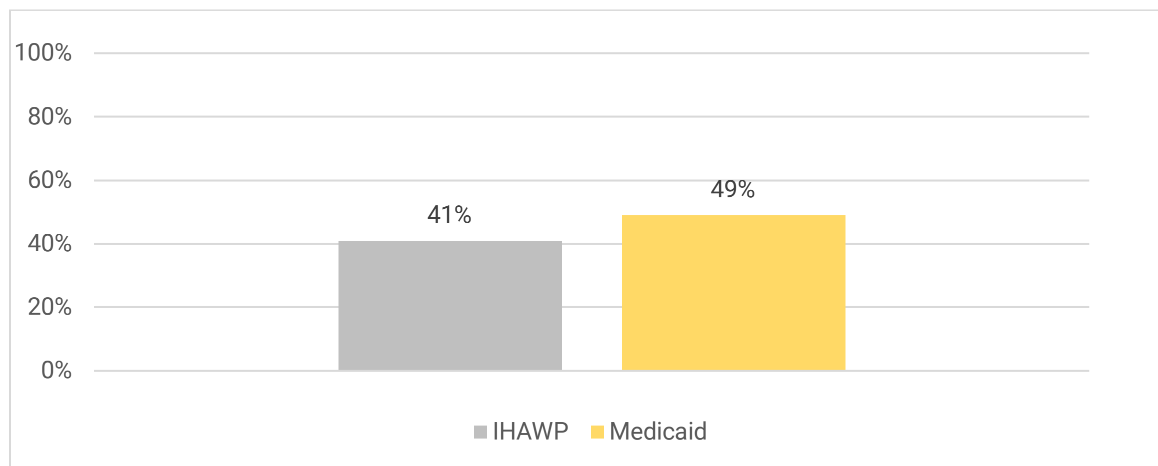
The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Access to after-hours care was assessed using one item that asked respondents whether a provider gave them information about how to access care after hours:

> *Did a doctor's office give you information about what to do if you needed care during evenings, weekends, or holidays?*

Figure 58 provides the percentages of IHAWP and Medicaid members who reported that they had been informed about how to access care after hours. Half of Medicaid members (49%) reported receiving information from their doctor's office about what to do if they needed care after-hours, which was significantly higher than reported by IHAWP members (41%).

Figure 58. Informed about After-Hours Care (IHAWP vs. Medicaid)



Chi-square p<.05

Research Question 1.1.6: Are adults in the IWP more likely to report greater access to specialist care than other adults in national estimates from National CAHPS Benchmarking Database?

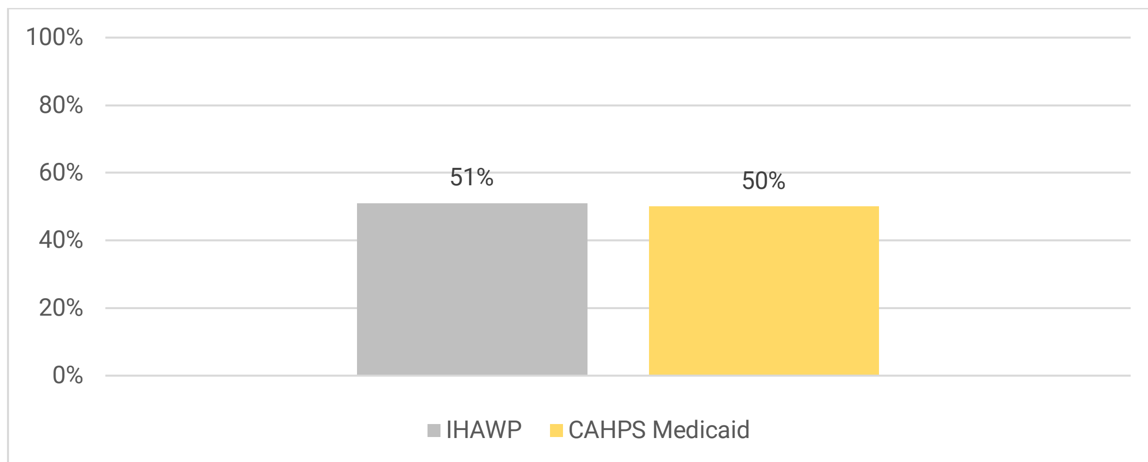
Respondents were asked if they needed specialist care in the last 6 months. Among those who responded yes, the following question was asked to assess access to specialist care:

> *In the last 6 months, how often did you get an appointment to see a specialist as soon as you needed?*

Figure 59 shows the percent of IHAWP members who indicated always getting specialist care as soon as they needed compared to results from the 2022 National CAHPS Benchmarking Database. Rates were very similar between the two comparison groups with just over half of IHAWP members (51%) reporting getting care from a specialist as soon as needed and half of CAHPS adult Medicaid participants (50%) reporting getting specialist care as soon as needed in the past 6 months.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Figure 59. Always Got Appointment with Specialist as Soon as Needed in Past 6 Months (IHAWP vs. CAHPS Medicaid)



One sample z-test for proportion: not significant

Research Question 1.1.7: Are adults in the IWP more likely to report greater access to prescription medication than other adults in Medicaid?

Member experiences with prescription medication were assessed by asking respondents if, in the last six months:

They (or a doctor) thought they needed prescription medication (Need); If YES:

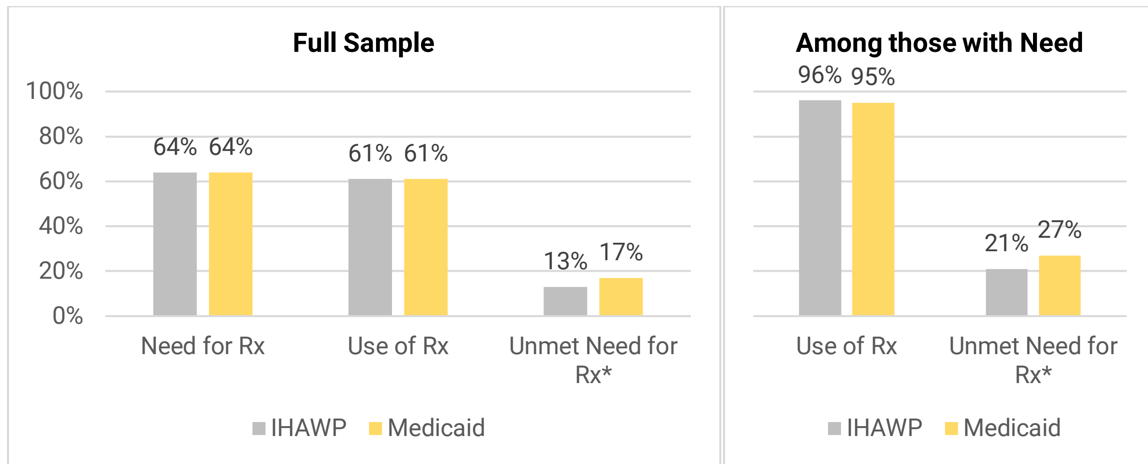
If they took any prescription medication, excluding birth control (Use)

If there was any time when prescription medication was needed but they were unable to get it (Unmet Need)

Figure 60 provides the results of the comparison between IHAWP and Medicaid member responses regarding prescription medications. Two-thirds of IHAWP and Medicaid members (64%) reported needing prescriptions in the last six months. When looking at the proportion who used a prescription medication, over three-fifths indicated use of prescriptions, with no significant differences between IHAWP and Medicaid (61%). The vast majority of those who expressed a need for prescriptions, indicated use of prescription medication, again with no difference between IHAWP and Medicaid members (96% and 95% respectively). IHAWP members reported significantly lower rates of unmet need for prescription medication: 13% of IHAWP members overall indicated that there was a time when they needed prescriptions but were unable to get them, while 17% of Medicaid members overall reported unmet need. Among those who indicated a need for prescription medications in the past six months, one-fifth of IHAWP members and a quarter of Medicaid members expressed an unmet need.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Figure 60. Access to and Use of Prescription Medication in Past 6 Months (IHAWP vs. Medicaid)



** Chi-square p<.05*
Chi-square not significant for indicators without asterisk

Hypothesis 1.2: Wellness Plan members will have equal or greater access to preventive care services.

Research Question 1.2.1: Are women aged 50-64 in the IWP more likely to have had a breast cancer screening than other adults in Medicaid?

Dataset is curated for the period 2011-2021. Additional data for 2022 and 2023 will be added in July 2024. Analyses will be completed by December 2024.

Research Question 1.2.2: Are women aged 21-64 in the IWP more likely to have had a cervical cancer screening than other adults in Medicaid?

Dataset is curated for the period 2011-2021. Additional data for 2022 and 2023 will be added in July 2024. Analyses will be completed by December 2024.

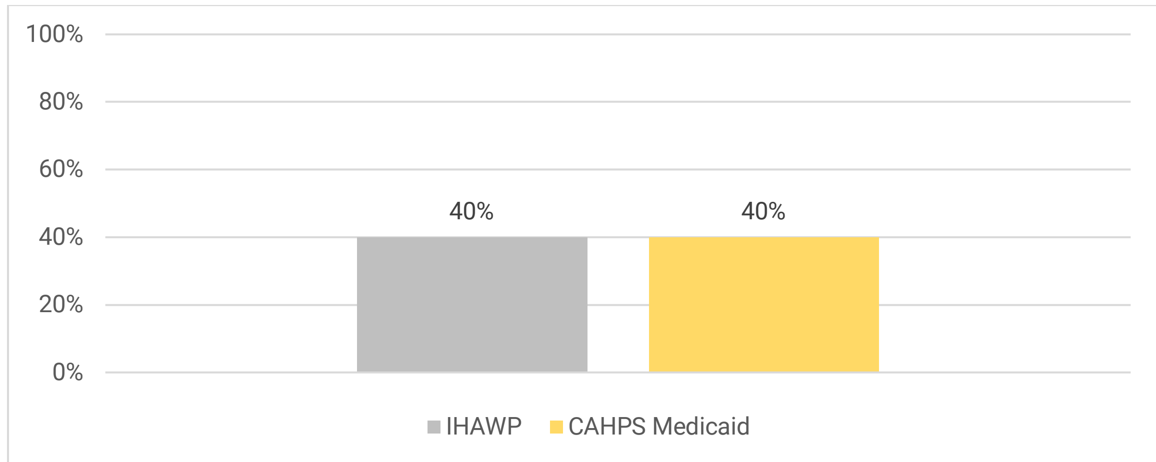
Research Question 1.2.3: Are adults in the IWP more likely to have had a flu shot in the past year than other adults in national estimates from National CAHPS Benchmarking Database?

Respondents in the 2022 Consumer Survey reported if they had received a flu shot since September and those in the 2022 National CAHPS Benchmarking Database reported whether they had received a flu shot since July (approximately the past year). There was

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

no difference between the two comparison groups with 40% of IHAWP members and 40% of CAHPS adult Medicaid participants reporting receipt of a flu shot (Figure 61).

Figure 61. Receipt of a Flu Vaccine (IHAWP vs. CAHPS Medicaid)



One sample z-test for proportion: not significant

Research Question 1.2.4: Are adults with diabetes in the IWP more likely to have had Hemoglobin A1c testing than other adults with diabetes in Medicaid?

Dataset is curated for the period 2011-2021. Additional data for 2022 and 2023 will be added in July 2024. Analyses will be completed by December 2024.

Research Question 1.2.5: Are adults in the IWP more likely to report greater access to preventive care than other adults in Medicaid?

Member experiences with preventive care were assessed by asking respondents if, in the last six months, they:

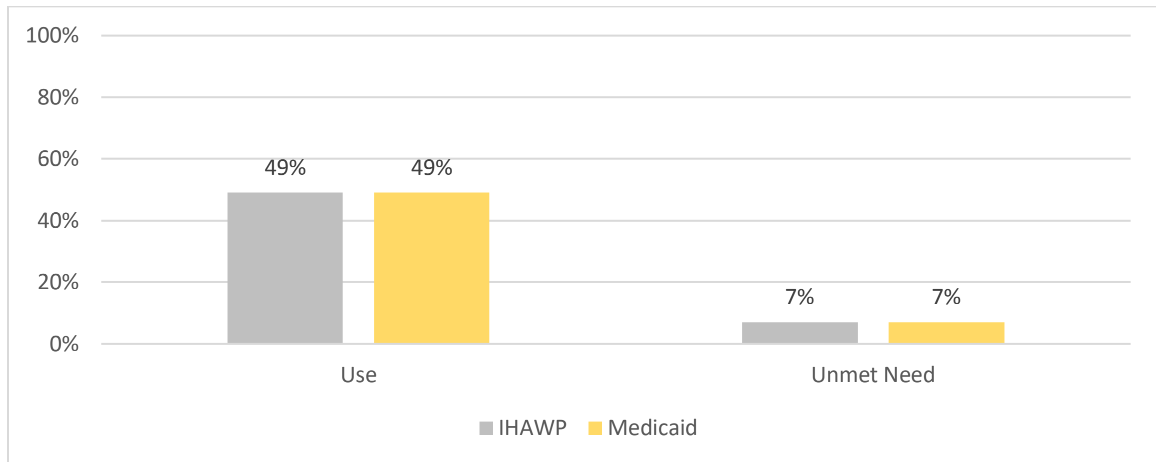
Got preventive care, such as a check-up, physical exam, mammogram, or Pap smear test (Use)

Had a time when preventive care was needed but they were unable to get it (Unmet Need)

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Just under half of both IHAWP and Medicaid members (49%) reported receiving preventive care (Figure 62). Less than one-tenth (7%) of both IHAWP and Medicaid members reported not being able to get preventive care when it was needed (unmet need).

Figure 62. Utilization and Unmet Need for Preventive Care in Past 6 Months (IHAWP vs. Medicaid)



Chi-square tests: not significant

Hypothesis 1.3: Wellness Plan members will have equal or greater access to mental and behavioral health services.

Research Question 1.3.1: Are adults in IWP with major depressive disorder more likely to have higher anti-depressant medication management than other adults with major depressive disorder in Medicaid?

Dataset is curated for the period 2011-2021. Additional data for 2022 and 2023 will be added in July 2024. Analyses will be completed by December 2024.

Research Question 1.3.2: Are adults in the IWP more likely to utilize mental health services than other adults in Medicaid?

Dataset is curated for the period 2011-2021. Preliminary model building is currently underway.

Research Question 1.3.3: Are adults in the IWP more likely to have greater access to preventive care than other adults in national estimates from National CAHPS Benchmarking Database?

This question is included in Research Question 1.2.5.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

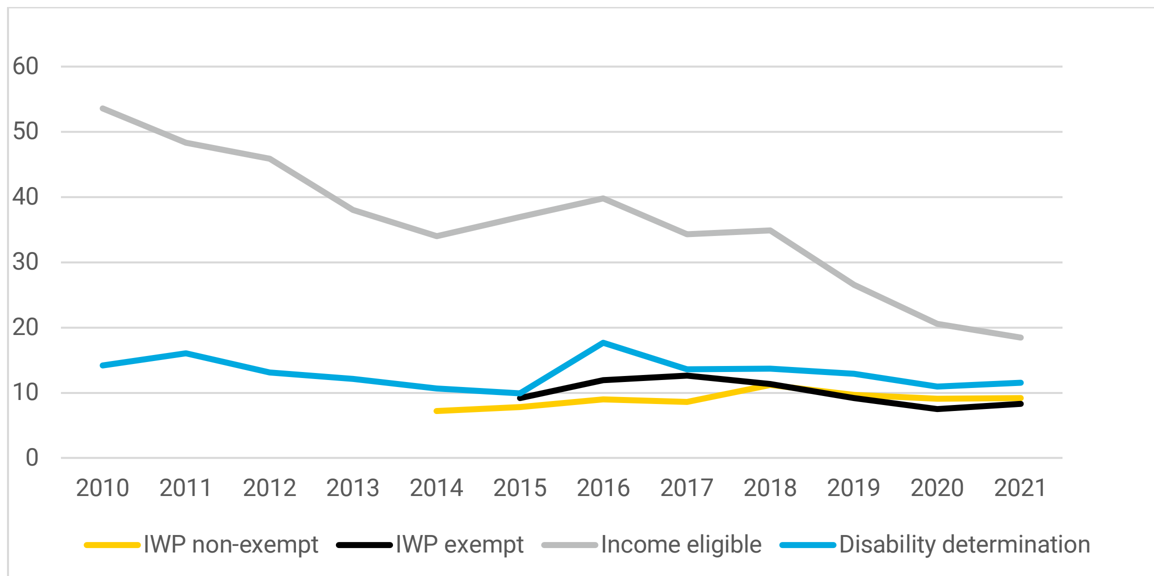
Hypothesis 1.4: Wellness Plan members will have equal or greater access to care, resulting in equal or lower use of emergency department services for non-emergent care.

Research Question 1.4.1: Are adults in the IWP more likely to have fewer non-emergent ED visits than other adults in Medicaid?

Preliminary data has been analyzed to determine the pattern of ED visits per 1,000 member months for 4 specific groups. We included IWP members who were not exempt from the Healthy Behaviors (HB) requirements (would need a preventive visit to avoid a premium), IWP members who are exempt from the HBI requirements (medically exempt or in exempted population such as American Indian or FPL under 50%), adults in households that are income eligible for Medicaid, and adults in households who are eligible for Medicaid due to a disability determination.

Figure 63 shows the pattern of outpatient ED visits/1,000 member months for the period 2011-2021. The members enrolled due to a disability determination (DD) have a unique pattern. Prior to 2014 (year IWP was instituted) the trend is stable. There is a spike in outpatient ED visits for this group during 2016, the year Iowa Medicaid moved to an all MCO model of care. The outpatient ED rate for these members never returned to pre-MCO levels. For members enrolled due to income eligibility the outpatient ED rates have continued to fall over the 12 years shown in the trend. Rates for IWP non-exempt members and IWP exempt members have fallen since IWP began in 2014, with the greatest drop in the IWP exempt group.

Figure 63. Outpatient ED Rates by Program and Year



IWP exempt group rates begin in 2015 as HBI exemption was not determined until 1 year post HBI initiation 2014

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Research Question 1.4.2: Are adults in the IWP more likely to have fewer follow-up ED visits than other adults in Medicaid?

Dataset is curated for the period 2011-2021. Preliminary model building is currently underway.

Research Question 1.4.3: Are adults in the IWP more likely to utilize ambulatory care than other adults in Medicaid?

Dataset is curated for the period 2011-2021. Preliminary model building is currently underway.

Research Question 1.4.4: What other circumstances are associated with overutilization of ED?

Dataset is curated for the period 2011-2021. Preliminary model building is currently underway.

Coverage continuity

Hypothesis 2.1: Wellness Plan members will experience equal or less churning.

Research Question 2.1.1: Are adults in the IWP less likely to have gaps in health insurance coverage over the past 12 months than other adults in Medicaid?

This question was not included in the 2022 Member Survey and will be considered for inclusion in the next member survey.

Research Question 2.1.2: Are adults in the IWP more likely to have higher rates of consecutive coverage than other adults in Medicaid?

The eligibility database is currently being analyzed to assess this question.

Research Question 2.1.3: Are adults in the IWP less likely to change plans or lose eligibility during the year than other adults in Medicaid?

The eligibility database is currently being analyzed to assess this question.

Hypothesis 2.2: Wellness Plan members will maintain continuous access to a regular source of care when their eligibility status changes.

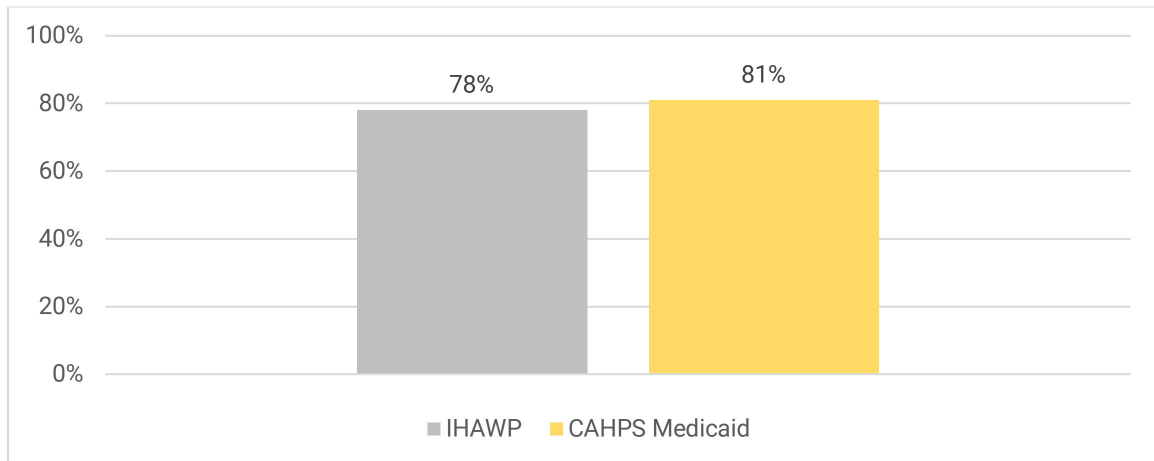
Research Question 2.2.1: Are adults in the IWP more likely to have a personal doctor than other adults in national estimates from National CAHPS Benchmarking Database?

Respondents reported if they had a personal doctor based on the following question: A personal doctor is the person you would see if you need a check-up, want advice about a health problem, or get sick or hurt. Do you have a personal doctor?

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Figure 64 shows that over three quarters of IHAWP respondents reported having a personal doctor (78%) and this was a slightly lower rate compared with adult Medicaid participants in the 2022 National CAHPS Benchmarking Database (81%).

Figure 64. Has a Personal Doctor (IHAWP vs. CAHPS Medicaid)

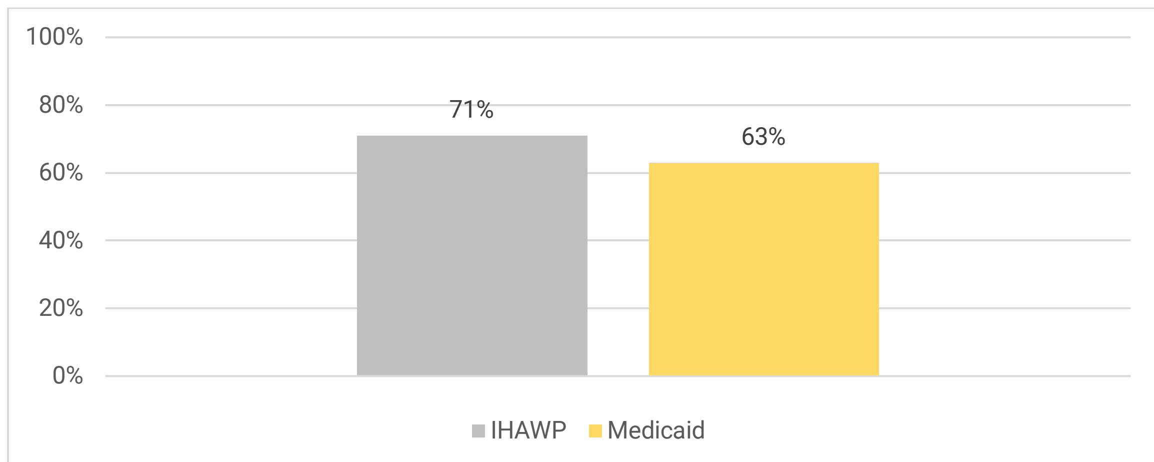


One sample z-test for proportion: p<.05

Research Question 2.2.2: Are adults in the IWP more likely to have a positive experience with changing personal doctor/PCP than other adults in Medicaid?

Fewer than one-tenth of IHAWP and Medicaid members reported attempting to change their personal doctor (8% IHAWP and Medicaid). Of those who did attempt to change their personal doctor, Figure 65 shows that a majority of IHAWP and Medicaid members reported that it was "very easy" or "somewhat easy" to find a new personal doctor (71% IHAWP and 63% Medicaid, chi-square not significant).

Figure 65. Somewhat or Very Easy to Change Personal Doctor (IHAWP vs. Medicaid)



Chi-square: not significant

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Quality of care

Hypothesis 3.1: Wellness Plan members will have equal or better quality of care.

Research Question 3.1.1: Are adults in the IWP less likely to receive antibiotic treatment for acute bronchitis than other adults in Medicaid?

Dataset is curated for the period 2011-2021. Preliminary model building is currently underway.

Research Question 3.1.2: Are adults aged 40-64 with COPD in IWP more likely to have pharmacotherapeutic management of COPD exacerbation than other adults in Medicaid?

Dataset is curated for the period 2011-2021. Preliminary model building is currently underway.

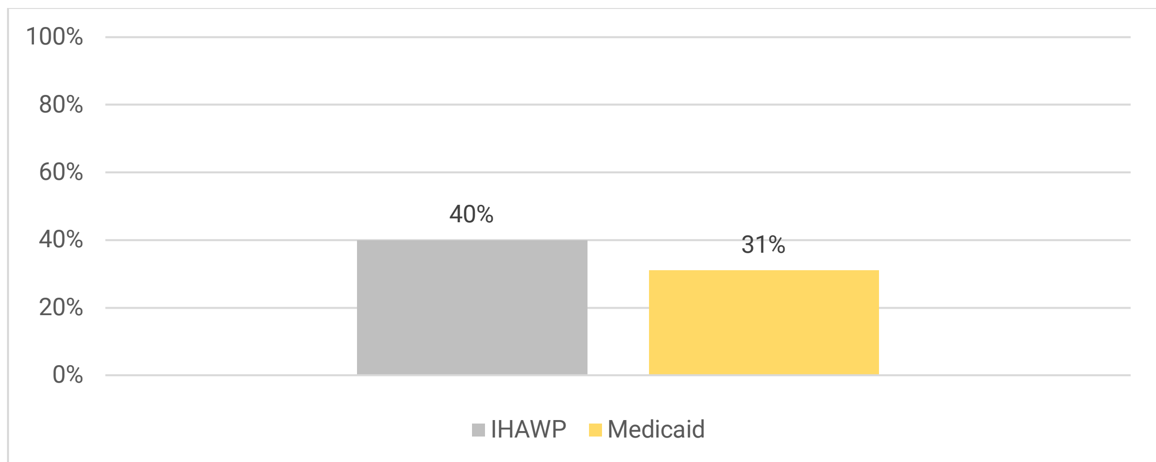
Research Question 3.1.3: Are adults in the IWP more likely to self-report receipt of flu shot than other adults in Medicaid?

Receipt of a flu vaccine was assessed using the item below.

Have you had a flu shot since September 1, 2021?

IHAWP members were significantly more likely to indicate receipt of a flu shot (40%) than Medicaid members (31%) (Figure 66).

Figure 66. Receipt of Flu Vaccine (IHAWP vs. Medicaid)



Chi-square p<.05

Research Question 3.1.4: Are adults in the IWP less likely to report visiting the ED for non-emergent care than other adults in Medicaid?

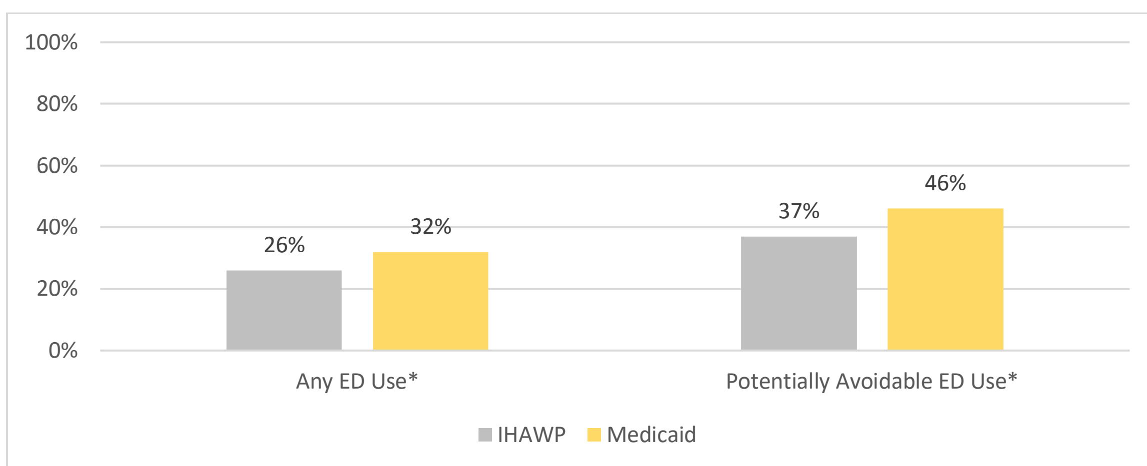
There were several questions in the survey that attempted to assess "appropriate" emergency department (ED) use. The surveys included a question asking those with at

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

least one ED visit whether the care from their most recent ED visit could have been provided in a doctor's office if one was available at the time. Affirmative responses to that question defined potentially "avoidable" ED use.

Figure 67 shows the ED experiences of IHAWP and Medicaid members. Around one-quarter (26%) of IHAWP members and around one-third of Medicaid members (32%) used the ED at least once in the six-month period, and that difference was significant. Significantly fewer IHAWP members (37%) compared to Medicaid members (46%) reported that the care at their last visit to the ED could have been provided in a doctor's office.

Figure 67. Emergency Department Use in Past 6 Months (IHAWP vs. Medicaid)



** Chi-square p<.05*

Hypothesis 3.2: Wellness Plan members will have equal or lower rates of hospital admissions.

Research Question 3.2.1: Are adults in the IWP less likely to have hospital admissions for COPD, diabetes short-term complications, CHF, or asthma than other adults in Medicaid?

Dataset is curated for the period 2011-2021. Preliminary model building is currently underway.

Research Question 3.2.2: Are adults in the IWP less likely to utilize general hospital/acute care than other adults in Medicaid?

Dataset is curated for the period 2011-2021. Preliminary model building is currently underway.

Research Question 3.2.3: Are adults in the IWP less likely to have an acute readmission within 30 days of being discharged for acute inpatient stay than other adults in Medicaid?

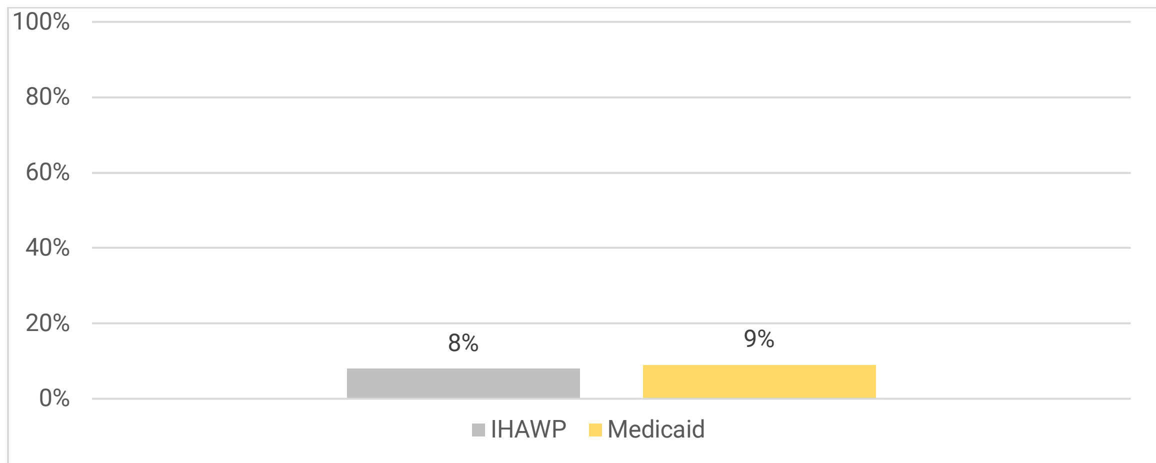
Dataset is being curated for the period 2011-2021.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Research Question 3.2.4: Are adults in the IWP less likely to have a self-reported hospitalization in the previous 6 months than other adults in Medicaid?

Respondents were asked how many nights they spent in the hospital for any reason in the six months prior to the survey. Figure 68 shows there was no significant difference between IHAWP members and Medicaid members with regard to hospital stays in the last six months. About one tenth (8% and 9% respectively) reported any hospital stays in the six-month period.

Figure 68. Any Hospitalization in Past 6 Months (IHAWP vs. Medicaid)



Chi-square: not significant

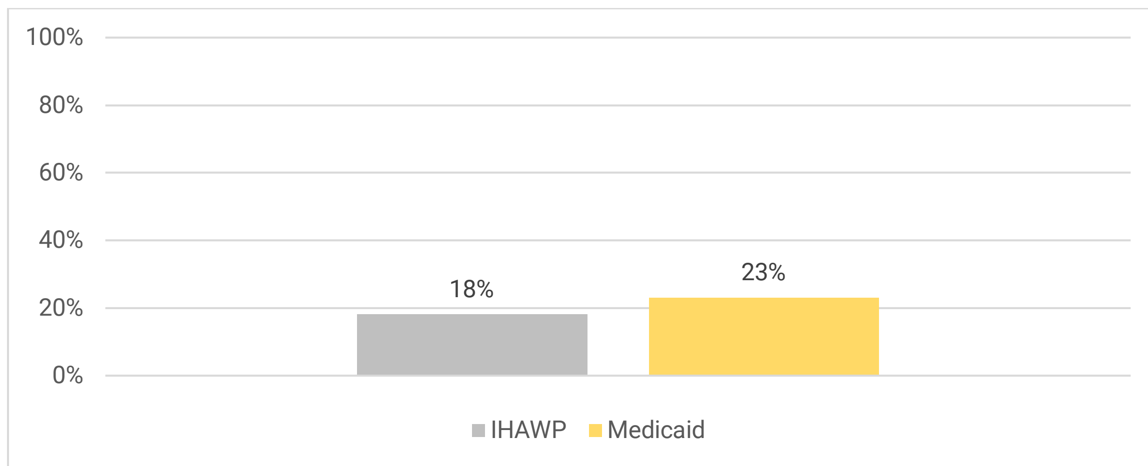
Research Question 3.2.5: Are adults in the IWP less likely to have a self-reported 30-day hospital readmission in the previous 6 months than other adults in Medicaid?

Among those who reported any hospitalization, potentially "avoidable" readmissions to the hospital were assessed by asking respondents if they ever had to go back into the hospital within 30 days of being allowed to go home because they were still sick or had a problem.

Figure 69 shows that 18% of IHAWP respondents reported a 30-day hospital readmission in the past 6 months compared with 23% of Medicaid respondents. This difference was not statistically significant.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Figure 69. 30-day Hospital Readmission Among Those with Any Hospitalization in Past 6 Months (IHAWP vs. Medicaid)



Chi-square: not significant

Hypothesis 3.3: Wellness Plan members will report equal or greater satisfaction with the care provided.

Research Question 3.3.1: Are adults in the IWP more likely to report that their personal doctor communicated well with them during office visits than other adults in national estimates from National CAHPS Benchmarking Database?

Communication between providers and patients was assessed using a CAHPS four-item composite measure comprised of the following questions (asked of those with a personal doctor):

How often did your personal doctor explain things in a way that was easy to understand?

How often did your personal doctor listen carefully to you?

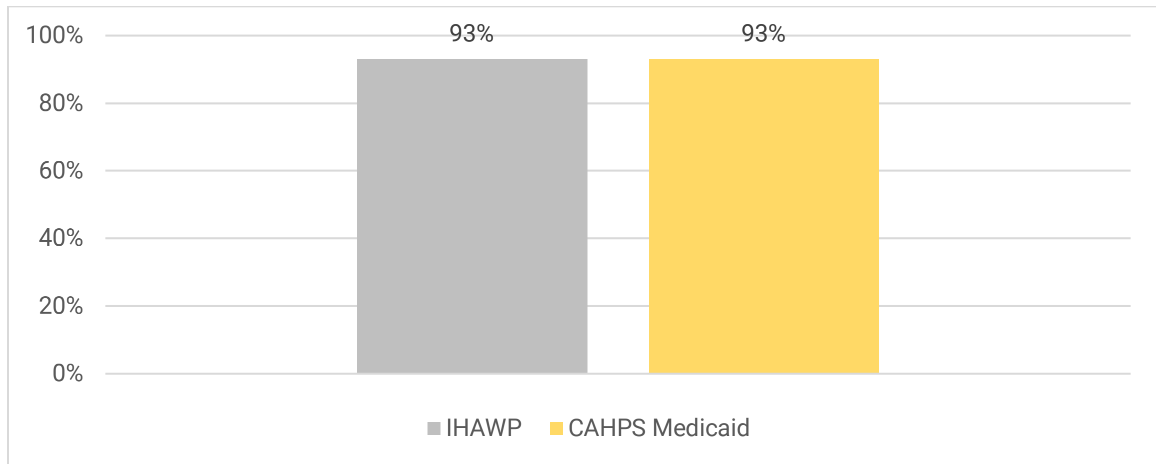
How often did your personal doctor show respect for what you had to say?

How often did your personal doctor spend enough time with you?

Figure 70 shows the proportion of respondents who reported that their personal doctor usually or always communicated well with them for IHAWP members and adult Medicaid recipients in the 2022 CAHPS National Benchmarking Database. Rates were the same between the two comparison groups with the vast majority of respondents in each group (93%) indicating that their personal doctor usually or always communicated well with them.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Figure 70. Personal Doctor Usually or Always Communicated Well (IHAWP vs. CAHPS Medicaid)



One sample z-test for proportion: not significant

Research Question 3.3.2: Are adults in the IWP more likely to report that their provider supported them in taking care of their own health than other adults in Medicaid?

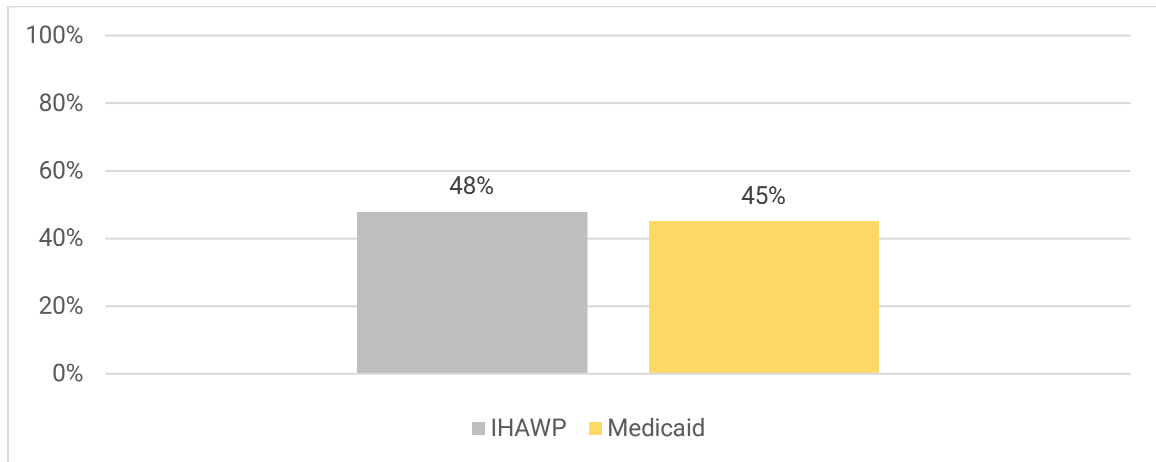
Self-Management Support was assessed using a two-item CAHPS composite measure comprised of the following questions asked of those with a health visit:

> *Did anyone in a doctor's office talk with you about specific goals for your health?*
>
> *Did anyone in a doctor's office ask you if there are things that make it hard for you to take care of your health?*

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Figure 71 provides a summary of the findings for IHAWP and Medicaid member receipt of self-management support. Almost half of IHAWP (48%) and Medicaid members (45%) with a health visit reported receiving self-management support from their provider.

Figure 71. Receipt of Self-Management Support Among Those with a Health Visit in Past 6 Months (IHAWP vs. Medicaid)



Chi-square: not significant

Research Question 3.3.3: Are adults in the IWP more likely to report that their provider paid attention to their mental or emotional health than other adults in national estimates from National CAHPS Benchmarking Database?

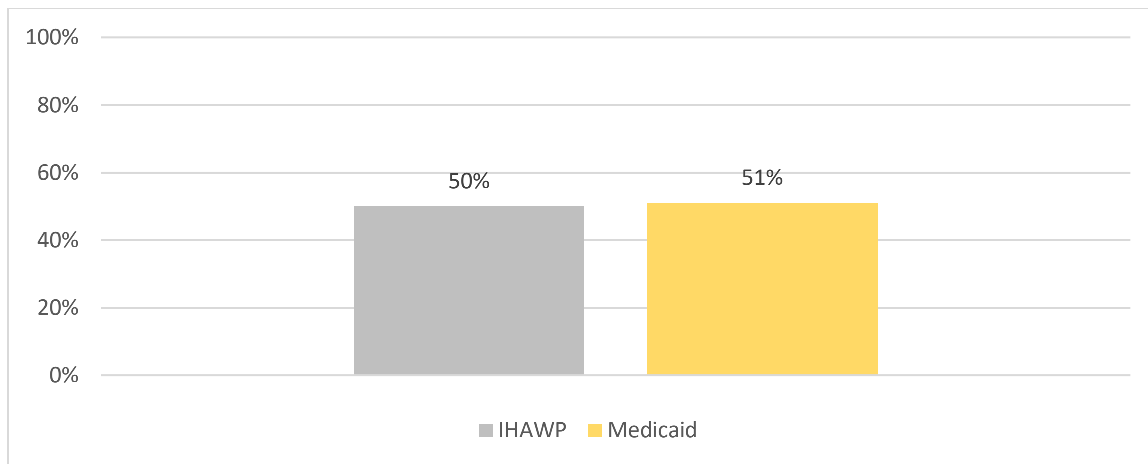
Respondents who reported a health care visit in the last six months were asked the following question about the attention their provider paid to their mental or emotional health during a doctor's visit:

> *Did you and anyone in a doctor's office talk about things in your life that worry you or cause you stress?*

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Figure 72 shows that about one-half of both IHAWP and Medicaid members (50 and 51%, respectively) reported talking with someone from their doctor's office about things in life that worried them or caused them stress.

Figure 72. Provider Paid Attention to Mental or Emotional Health Among Those with a Health Visit in Past 6 Months (IHAWP vs. Medicaid)



Chi-square: not significant

Research Question 3.3.4: Are adults in the IWP more likely to report that their provider talked with them about their prescription medications than other adults in national estimates from National CAHPS Benchmarking Database?

This question is included in the composite for Research Question 3.3.5.

Research Question 3.3.5: Are adults in the IWP more likely to report that their provider paid attention to the care they received from other providers than other adults in Medicaid?

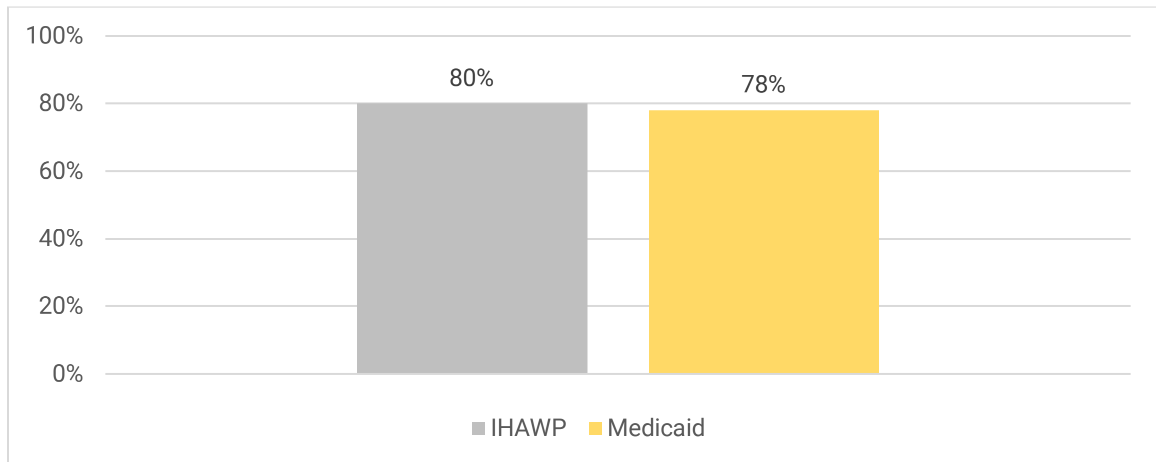
Care Coordination was assessed using four items from CAHPS related to different aspects of providing care coordination:

> *When your doctor's office ordered a blood test, x-ray, or other test for you, how often did someone from the doctor's office follow up to give you those results?*
>
> *How often did your personal doctor's office seem informed and up to date about the care you got from specialists?*
>
> *How often did your personal doctor seem to know the important information about your medical history?*
>
> *How often did you talk with someone from your doctor's office about all the prescription medicines you were taking?*

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Figure 73 provides a summary of the percentage of respondents who reported "usually" or "always" to the above measures assessing experiences with their doctor's office. IHAWP and Medicaid members' experiences were similar with regard to care coordination (80% IHAWP, 78% Medicaid).

Figure 73. Usually or Always Received Good Care Coordination (IHAWP vs. Medicaid)



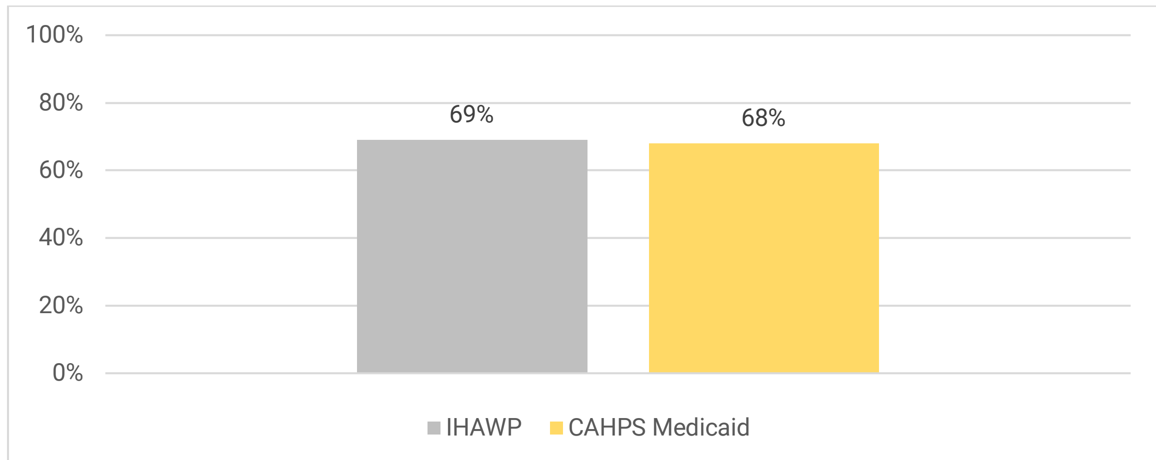
Chi-square: not significant

Research Question 3.3.6: Are adults in the IWP more likely to report higher ratings of their personal doctor than other adults in national estimates from National CAHPS Benchmarking Database?

Respondents were asked to rate their personal doctor on a 0 to 10 scale, where 0 was defined as the worst possible and 10 as the best possible. Figure 74 shows the percentage of IHAWP and CAHPS adult Medicaid respondents who rated their personal doctor as 9" or "10". Doctor ratings were similar between the two comparison groups with 69% of IHAWP respondents rating their doctor as 9 or 10 compared with 68% of adult Medicaid recipients in CAHPS.

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Figure 74. High Rating of Personal Doctor (IHAWP vs. CAHPS Medicaid)

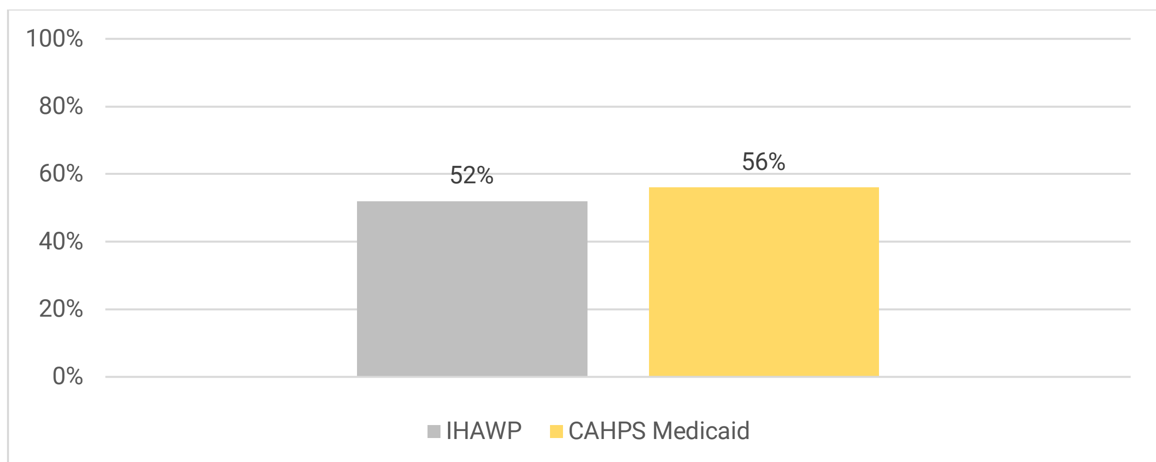


One sample z-test for proportion: not significant

Research Question 3.3.7: Are adults in the IWP more likely to report higher ratings of their overall care than other adults in national estimates from National CAHPS Benchmarking Database?

Respondents also rated all the health care they received on a 0 to 10 scale, where 0 was defined as the worst possible and 10 as the best possible. Figure 75 shows that a high rating of overall care was slightly more common among adult Medicaid recipients in CAHPS than among IHAWP members. Specifically, 56% of CAHPS adult Medicaid recipients gave a high rating of their overall care (9 or 10) compared with 52% of IHAWP respondents.

Figure 75. High Rating of Overall Health Care (IHAWP vs. CAHPS Medicaid)



One sample z-test for proportion: p<.05

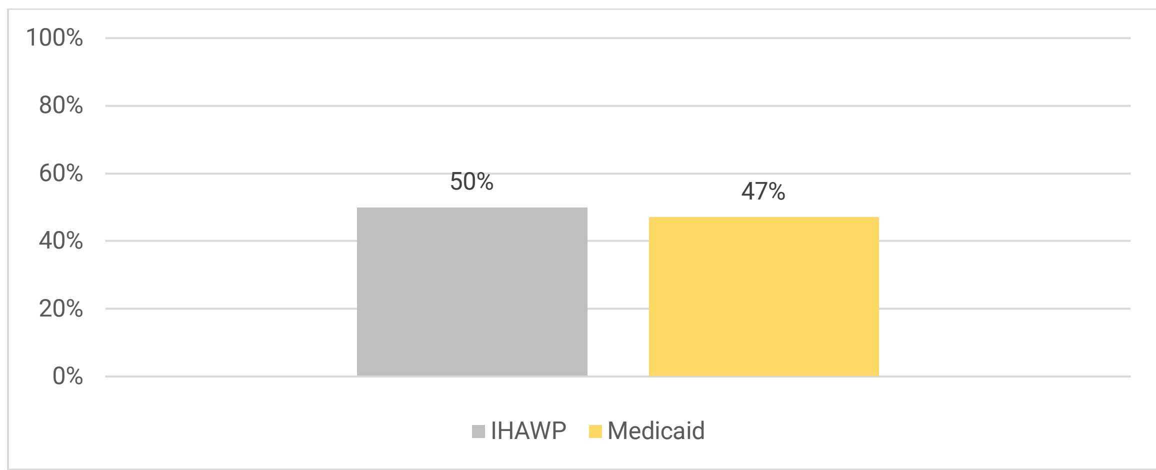
Research Question 3.3.8: Are adults in the IWP more likely to report higher ratings of their health plan than other adults in Medicaid?

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.

Respondents in the 2022 Consumer Survey were asked to rate their Medicaid MCO health plan on a 0 to 10 scale, where 0 was defined as the worst possible and 10 as the best possible.

Figure 76 provides a summary of the percentage of IHAWP and Medicaid respondents who rated their health plan as a "9" or "10" which indicates the highest possible ratings. Half of IHAWP members and nearly half of Medicaid members (47%) rated their health plan as 9 or 10 (chi-square not significant).

Figure 76. High Rating of Health Plan (IHAWP vs. Medicaid)



Chi-square: not significant

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact Office of Institutional Equity, the University of Iowa, 202 Jessup Hall, Iowa City, IA 52242-1316, 319-335-0705, oie-ui@uiowa.edu.