Iowa Medicaid Enterprise – Birth Certificate Match to Paid Claims Report

Access to prenatal care, selected behaviors, and selected birth outcomes by Medicaid status among Iowa resident births 2016 – 2020

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Division of Health Promotion & Chronic Disease Prevention, Bureau of Family Health

December 2021

IDPH
IOWA Department of PUBLIC HEALTH

Building Health Equity for Healthy Communities

Acknowledgements

Suggested Citation:
Iowa Department of Public Health. Division of Health Promotion & Chronic Disease Prevention, Bureau of Family Health. *Access to prenatal care, selected behaviors/conditions, and selected birth outcomes by Medicaid status, Iowa resident births 2016 – 2020.* Des Moines: Iowa Department of Public Health, 2021.

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Acknowledgements
The Iowa Department of Public Health acknowledges the Maternal and Child Health Epidemiology Program, Field Support Branch, Division of Reproductive Health, National Center for Chronic Disease Prevention and Public Health Promotion, Centers for Disease Control and Prevention for analytic support and preparation of this data report.

The Iowa Department of Public Health acknowledges feedback and input from the key staff members at the Iowa Department of Public Health including Kelsey Feller, Tabetha Gerdner, Molly Gosselink, Marcus Johnson-Miller, Jill Lange, Sylvia Navin, and Stephanie Trusty.

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Introduction and Highlights

Introduction

Report purpose: The purpose of this report is to highlight access to prenatal care, selected behaviors and birth outcomes of women whose labor and delivery costs were reimbursed by Medicaid, compared to women whose labor and delivery costs were not reimbursed by Medicaid.

Background: Medicaid is a state/federal program that provides health insurance for groups of low-income people, including pregnant women. Iowa Medicaid is administered by the Iowa Department of Human Services through the Iowa Medicaid Enterprise. In Iowa, pregnant women are eligible for Medicaid if their income is 375% of the federal poverty level or below.

Data Sources: Data for this report were derived from a matched file of the birth certificate and Medicaid paid claims for calendar years 2016 through 2020. Medicaid status was based on a paid claim of a delivery for relevant diagnostic related groups, and linked to a birth certificate. Birth certificate data were used to determine maternal demographic characteristics, cigarette smoking during pregnancy, prenatal care initiation and infant birth outcomes.

Access to the data used in this report is authorized pursuant to Contract Number MED-17-005 (Maternal and Child And Adolescent Health Omnibus), as amended, between the Iowa Department of Public Health (IDPH) and the Iowa Department of Human Services and Data Sharing Agreement number 588DSA2021-06 with the IDPH Bureau of Health Statistics.

Report highlights

- Forty percent (40.3%) of births to Iowa residents were reimbursed by Medicaid in 2020. The statistic has remained relatively consistent over the past 4 years (Table 1).
    - The percentage of Medicaid reimbursed deliveries is higher among Iowa populations of color (Figure 2), birthing people of younger than 24 (Figure 3), and those who resided in micropolitan counties Figure 4).

- Birthing people with Medicaid reimbursed births obtained early and adequate prenatal care at a significantly lower percentage than birthing people with other payment sources (Table 2).
    - The lowest percentages of those who obtained early and adequate prenatal care were among Native Hawaiian birthing people followed by Native American/American Indian and Black birthing people (Figure 5).

- Between 2016 and 2020, the percent of individuals who reported that they smoked cigarettes during their third trimester has decreased by 21% among both women with Medicaid reimbursed births and among women with other reimbursement types (Table 3).

- The percent of individuals who reported breastfeeding at hospital discharge is significantly lower among mothers with Medicaid reimbursed births compared to mothers with births reimbursed by other payment sources (Table 4).
    - The percent of birthing people with Medicaid reimbursed births who reported that they were breastfeeding their newborns at hospital discharge was highest among those who reported their race as “Other” and among Hispanic birthing people (Figure 9).

- Birthing people with Medicaid reimbursed births gave birth to low birth weight infants at a significantly higher percentage than birthing people with other payment sources for births in calendar years 2019 and 2020 (Table 5).

- The percent of infants born prematurely did not differ significantly among birthing people with Medicaid reimbursed births compared to birthing people with other payment sources for births, calendar year 2020 (Table 6).

Opportunities and initiatives to improve and support maternal and newborn health outcomes and behaviors

- IDPH launched the Iowa Maternal Quality Care Collaborative (IMQCC) in 2020. The IMQCC goal is to improve the quality, safety, and culture of maternal care provision for all Iowans by partnering with healthcare and community stakeholders, to develop and support data-driven and evidence-informed quality improvement initiatives, and to promote patient and family centered care.

- In 2021, IDPH, in collaboration with the IMQCC, launched a strategic planning process to guide state level work on behalf of maternal health outcomes. The 2021 Maternal Health Strategic Plan identifies strategic priorities to lead the state's maternal health efforts. Developed through engagement with community, clinical, and provider perspectives, and in alignment with national public health goals, these strategic priorities will guide IDPH efforts. The final plan was released in October 2021 and will be used as a resource to guide efforts to improve maternal outcomes and reduce maternal morbidity and mortality. Click on this link to access the plan and appendices: 2021 Maternal Health Strategic Plan

- Iowa was one of 18 states that received funding from the Health Resources and Services Administration – Maternal and Child Health Bureau to support the Children's Healthy Weight Collaborative and Innovation Network (CWH-CoIIN). The purpose of the CWH-CoIIN was to partner with and support states to adopt evidence-informed nutrition and breastfeeding policies and practices to increase the proportion of children ages 0-21 who fall within a health weight range.

    - Iowa's projects were to improve workforce equity by recruiting and providing Certified Lactation Consultant training to women of color to better support women in their communities with breastfeeding, develop a consistent breast pump distribution policy for WIC statewide, develop and provide education on women's rights for lactation support in the workplace, and train childcare providers to support working mothers who breastfeed.

    - As a result of the CWH-CoIIN, Bureau of Family Health Staff and WIC staff funded five women of color to become Certified Lactation Consultants and offered breastfeeding classes to 300 participants.

    - IDPH is also in the process of developing a strategic plan to address breastfeeding disparities and support breastfeeding among all Iowa families.

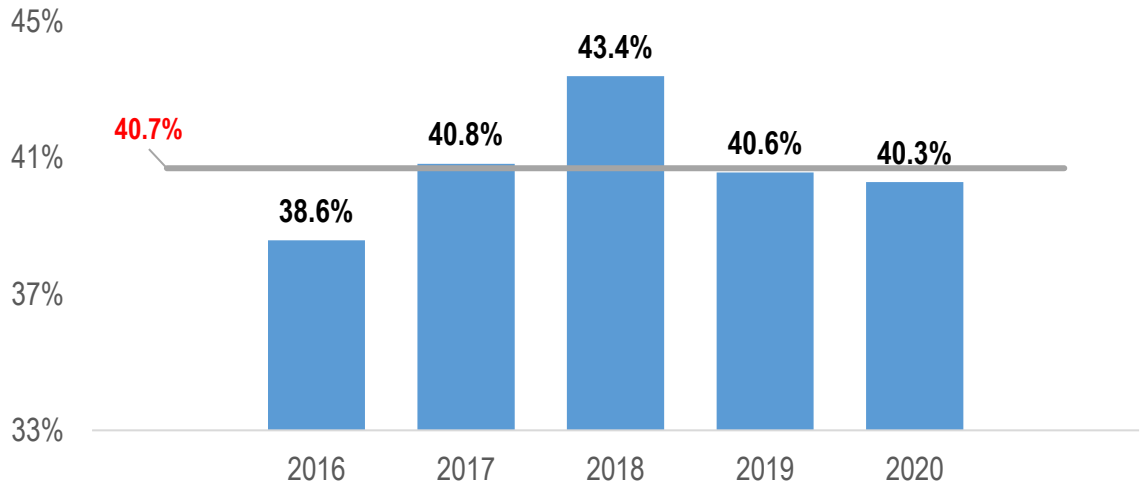
- The newly formed IDPH Task Force to address tobacco use among pregnant women is to reduce maternal smoking and tobacco use rates in Iowa through the implementation of best practices through sustainable internal and external collaborations. The Task Force objective are presented later in this document.

Medicaid reimbursed births among Iowa resident births, calendar years 2016-2020

Table 1. Number of resident births by Medicaid reimbursement status and State Total, 2016 - 2020, Iowa resident births

	Medicaid[1]		Non-Medicaid[2]	State Total[3]
Year	Number	%	Number	Number
2020	14,530	40.3	21,528	36,058
2019	15,255	40.6	22,342	37,597
2018	16,367	43.4	21,342	37,709
2017	15,683	40.8	22,725	38,408
2016	15,135	38.6	24,088	39,223

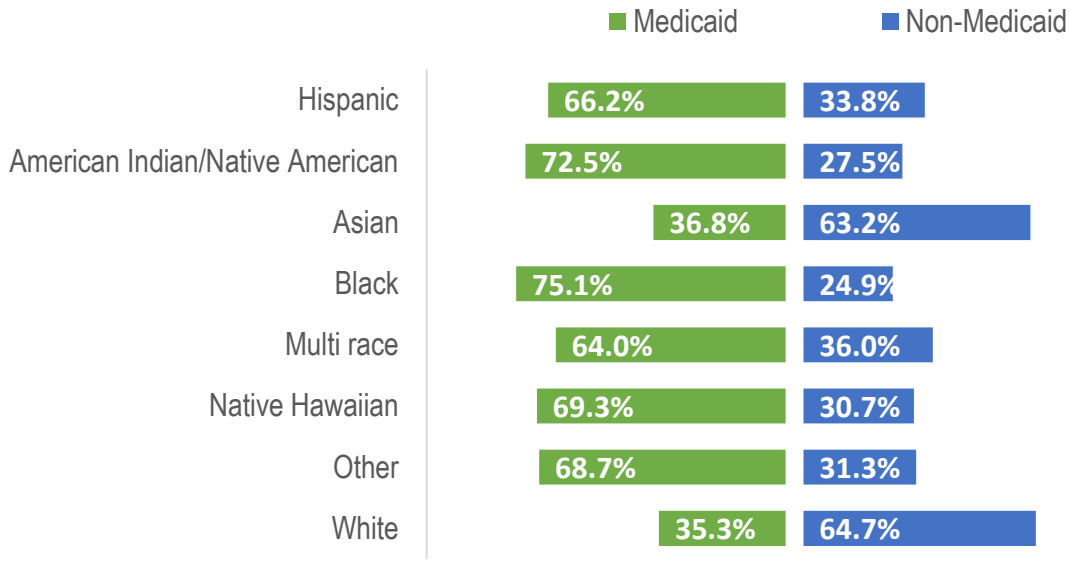
Figure 1. Medicaid is an important reimbursement source for maternal and newborn care in Iowa. The average percent of Medicaid reimbursed births was 40.7% from 2016 through 2020. In 2020, 40.3% (n=14,530) of births to Iowa residents were reimbursed by Medicaid (Table 1). The percent of Medicaid reimbursed births did not significantly change from 2019 to 2020.



[1] Medicaid status was determined by a linkage between Medicaid paid claims and the certificate of live birth
[2] Non-Medicaid status includes private insurance, self-pay, and other governmental payment sources
[3] State total refers to the combined total of Medicaid reimbursed births plus those births reimbursed by another source.

Medicaid reimbursed births by selected demographics – resident births – calendar year 2020

Figure 2. Medicaid reimbursed a higher proportion of births among birthing people who identify themselves as Hispanic, American Indian/Native American, Black, multiple races, and Native Hawaiian compared to White and Asian birthing people for calendar year 2020.



See Appendix A for an explanation of how race and ethnicity are categorized for this report.

Figure 3. The percent of Medicaid reimbursed births was inversely related to maternal age among births to Iowa residents during calendar year 2020.

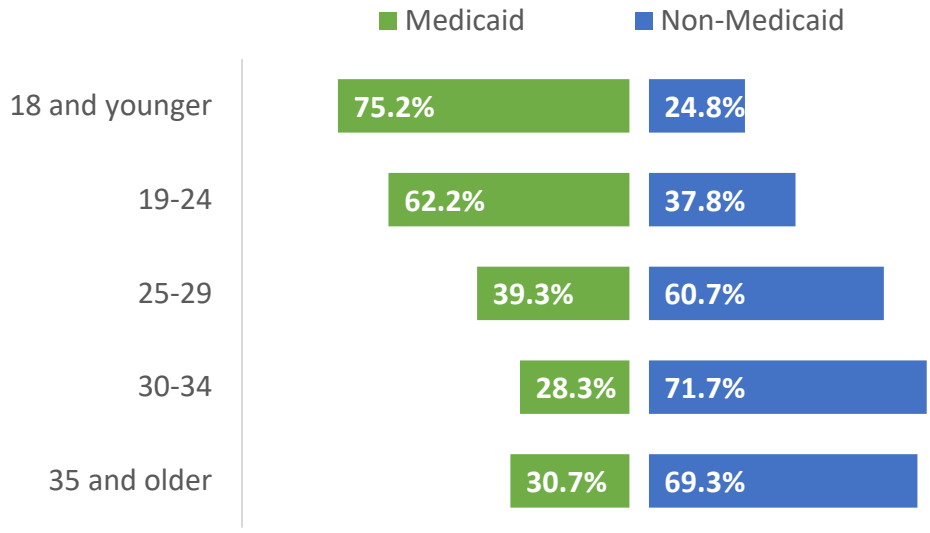
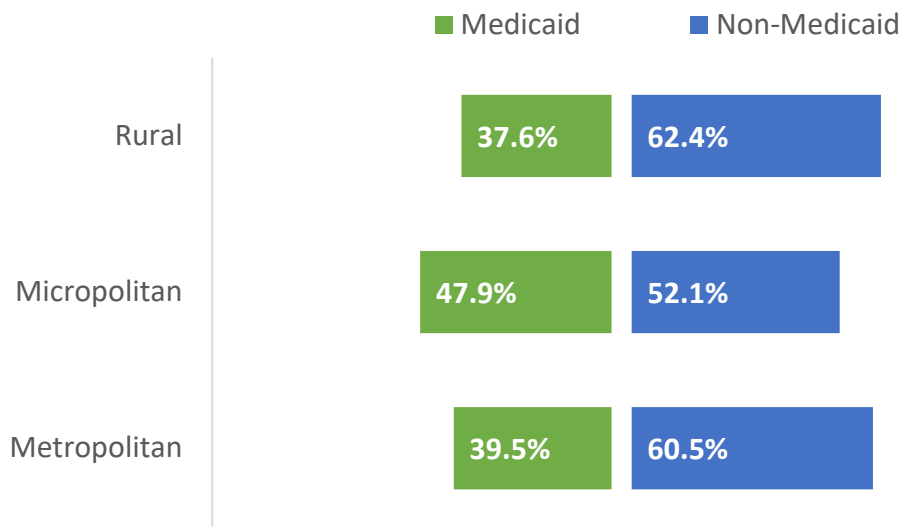


Figure 4. A significantly higher percentage of births to residents of micropolitan counties were reimbursed by Medicaid compared to those residing in metropolitan and rural counties during calendar year 2020.



Rurality is based on the National Center for Health Statistics designations. These designations focus on access to service for the county population, as opposed to only the number of people residing in the county. For more information see the 2013 NCHS Urban-Rural Classification Scheme for Counties. Readers can find more information at the State Library of Iowa's State Data Center, Metropolitan, Micropolitan, and Combined Statistical Areas. See Appendix B for a map that reports county rurality categorizations.

Adequate prenatal care[4] overall and by selected characteristics among birthing people with Medicaid reimbursed births in 2020

Table 2. Number and percent of women who obtained adequate or adequate plus prenatal care by Medicaid status and State Total, 2016 - 2020, Iowa resident births[5]

	Medicaid		Non-Medicaid		State Total	
Year	Number	%	Number	%	Number	%
2020	10,945	78.5	17,499	87.1	28,444	83.6
2019	11,740	80.4	18,600	89.1	30,340	85.5
2018	12,433	79.4	17,782	89.3	30,215	84.9
2017	11,934	79.1	18,869	88.8	30,803	84.8
2016	11,463	79.1	19,986	88.4	31,449	84.8

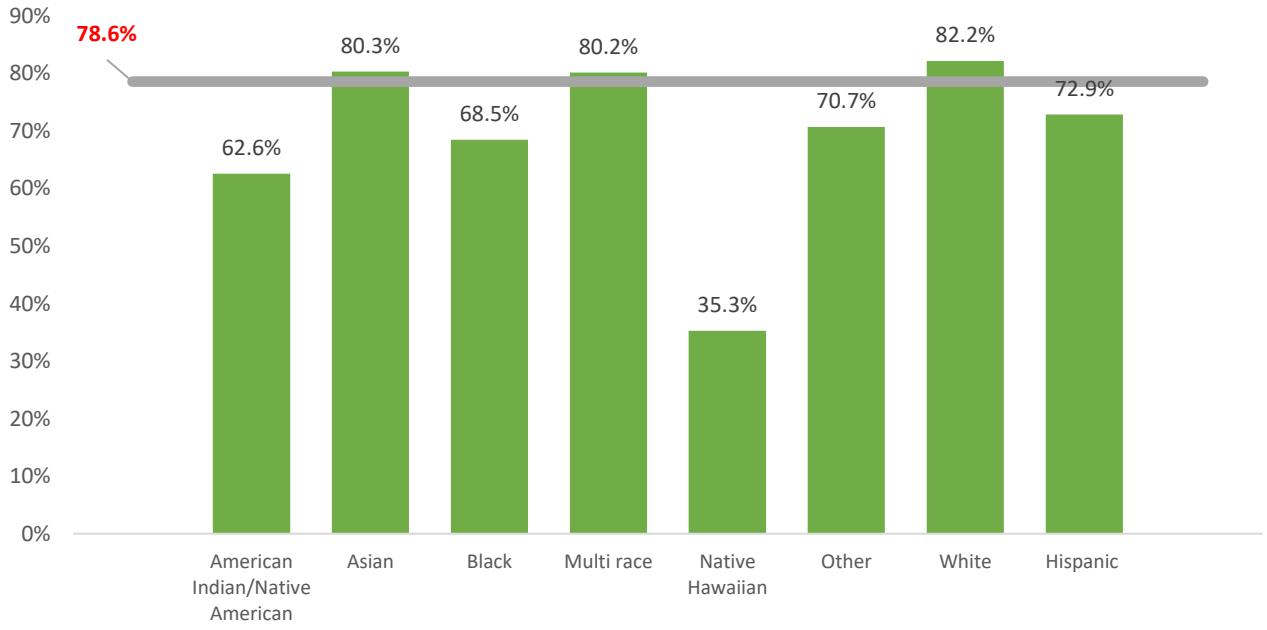
[4] Shin, D., & Song, W. O. (2019). Influence of the Adequacy of the Prenatal Care Utilization Index on Small-For-Gestational-Age Infants and Preterm Births in the United States. Journal of clinical medicine, 8(6), 838. https://doi.org/10.3390/jcm8060838

[5] Prenatal care is not consistently reported for Iowa residents who deliver outside of Iowa. For that reason, this calculation excludes births to residents that occurred outside of Iowa.

Access to prenatal care, selected behaviors/conditions, and selected birth outcomes by Medicaid status, Iowa resident births, 2016 – 2020

The Healthy People 2030 outcome measure for prenatal care is to increase the proportion of pregnant women who receive early and adequate prenatal care. The baseline measure is 76.7% (2019). The target measure is 80.5%. Among all birthing people in 2020, Iowa has surpassed the Healthy People 2030 target for early and adequate prenatal care, at 83.6% (Table 2). However disparities in early and adequate prenatal care are evident among birthing people with Medicaid reimbursed births (78.6%) overall, and by race, ethnicity, and age.

Figure 5. Overall 78.6%[6] of birthing people with a Medicaid reimbursed birth obtained early and adequate prenatal care. The lowest percentages of those who obtained early and adequate prenatal care were among Native Hawaiian birthing people followed by Native American/American Indian and Black birthing people.



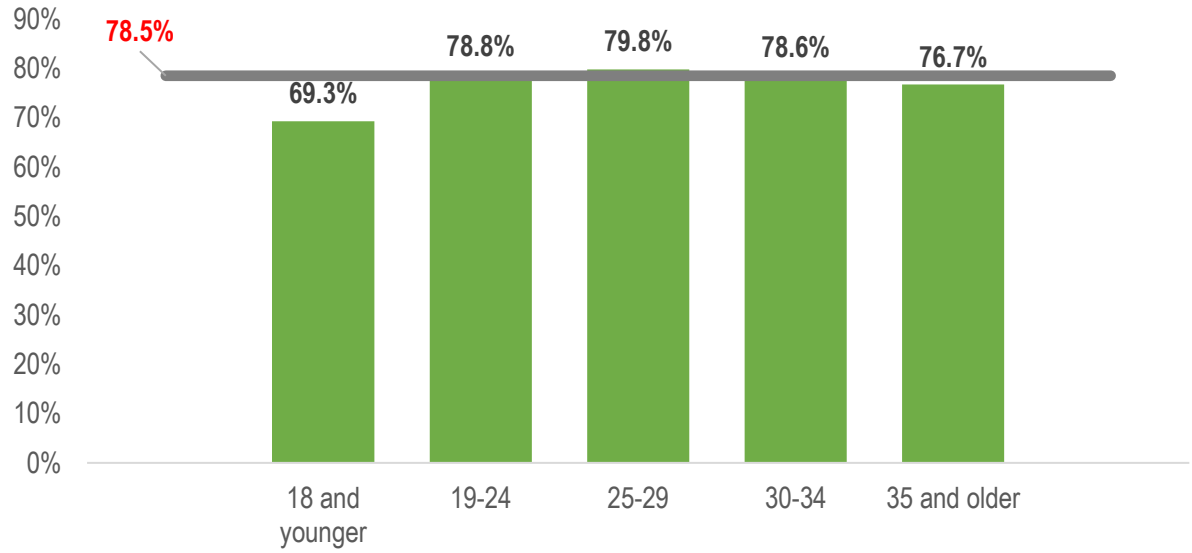
Adequate prenatal care is based on the Adequacy of Prenatal Care Utilization Index (APNCU). The APNCU is calculated using two parts: the month in which prenatal care is initiated and the number of prenatal visits from prenatal care initiation until delivery and then categorized into four outcome measures. "Inadequate" care is defined as either starting prenatal care after the 4th month of pregnancy or receiving less than 50% of expected visits based on the schedule of prenatal care visits recommended by American College of Obstetricians and Gynecologists (ACOG). "Intermediate" care is care begun by month 4 and with 50–79% of expected visits received; "adequate" care is that begun by month 4 and with 80–109% of expected visits received; "adequate plus" care is begun by month 4 and with 110% or more of expected visits received. In this report, adequate and adequate plus were combined for one measure (Shin & Song, 2019).

For this report, adequate and adequate plus were combined to report the percent of those who obtained early and adequate prenatal care.

[6] Due to missing data for race and ethnicity, the overall percentage by race and ethnicity differs by .1 % from that reported by age.

Access to prenatal care, selected behaviors/conditions, and selected birth outcomes by Medicaid status, Iowa resident births, 2016 – 2020

Figure 6. The percent of birthing people with Medicaid reimbursed births ages 18 and younger obtained early and adequate prenatal care at the lowest percentage compared to birthing people of older age groups.



Third trimester cigarette smoking overall and by selected characteristics among women with Medicaid reimbursed births

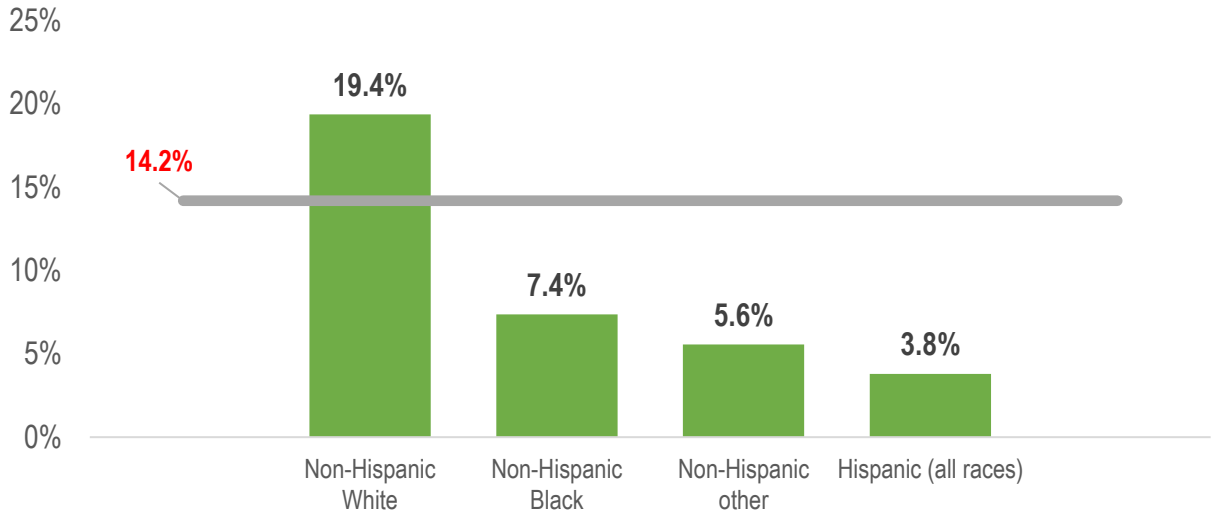
Table 3. Number and percent of women who reported 3rd trimester smoking cigarettes by Medicaid status and State Total, 2016-2020, Iowa resident births

	Medicaid		Non-Medicaid		State Total	
Year	**Number**	**%**	**Number**	**%**	**Number**	**%**
2020	2,072	**14.2**	798	3.7	2,870	8.0
2019	2,300	15.1	775	3.5	3,075	8.2
2018	2,637	16.1	764	3.6	3,401	9.0
2017	2,681	17.1	1,030	4.5	3,711	9.7
2016	2,734	18.1	1,140	4.7	3,874	9.9

Between 2016 and 2020, the percent of women who reported that they smoked cigarettes during their third trimester has decreased by 21% among both women with Medicaid reimbursed births and among women with other reimbursement types (See Table 3). Despite the decreased percentage of third trimester smoking among all birthing people, the percent remains significantly higher among those with Medicaid reimbursed births. The percentages of third trimester smoking among those with Medicaid reimbursed births vary by race, ethnicity, and maternal age.

Access to prenatal care, selected behaviors/conditions, and selected birth outcomes by Medicaid status, Iowa resident births, 2016 – 2020

Figure 7. Non-Hispanic white birthing people with Medicaid reimbursed births reported highest percent of third trimester smoking, calendar year 2020. The percentage was at least 12 percentage points greater than those of other races and ethnicity.



The efforts to educate professionals working with pregnant women, and in other health settings, on the Ask, Advise, Refer (AAR) Quitline referral program, and efforts to educate pregnant women and women of reproductive age on the negative health effects of tobacco use takes place in silos. To address this issue, the Tobacco Use Prevention and Control Division along with Maternal Child and Adolescent Health (MCAH), WIC, Early Childhood Iowa (ECI), Healthy Opportunities for Parents to Experience Success (HOPES) and Home Visitation programs formed a Task Force to promote and support collaboration across programs. The Task Force has identified key stakeholders and partners on the AAR initiative to reduce the maternal smoking rate in Iowa.

The goal of the Task Force is to reduce maternal smoking and tobacco use rates in Iowa by way of the implementation of best practices through sustainable internal and external collaborations through 4 objectives:

Objective 1: Identify key stakeholders and partners within IDPH to reduce the maternal smoking rate in Iowa and work to identify silos and barriers to collaborations.

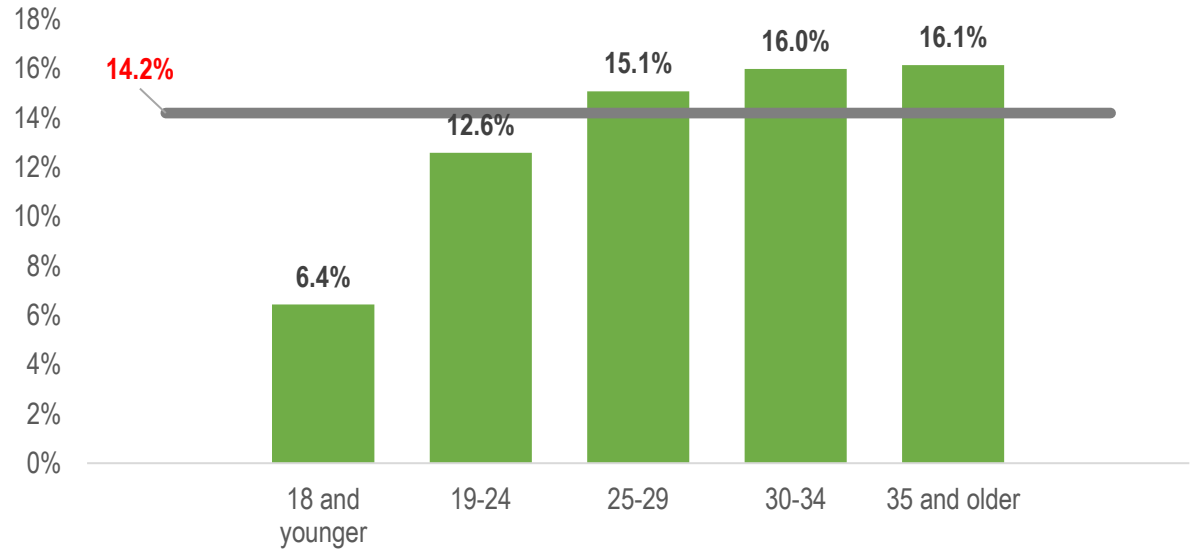
Objective 2: Continue to develop and promote the pregnancy incentive program with Quitline Iowa.

Objective 3: Provide comprehensive education on the AAR method and Quitline Iowa to internal IDPH programs.

Objective 4: Use the outcomes and lessons learned from OBJECTIVE 3 training to educate and train health care providers on the Ask, Advise, and Refer program.

Access to prenatal care, selected behaviors/conditions, and selected birth outcomes by Medicaid status, Iowa resident births, 2016 – 2020

Figure 8. The percent of birthing people with Medicaid reimbursed births who reported third trimester smoking increased with age, calendar year 2020. Those over the age of 25 reported third trimester smoking at the highest percentages compared to those between the ages of 18 and 24.



Breastfeeding at hospital discharge overall and by selected characteristics among birthing people women with Medicaid reimbursed births

Table 4. Number and percent of women breastfeeding their infants at hospital discharge by Medicaid status and State Total, 2016-2019, Iowa resident births

	Medicaid		Non-Medicaid		State Total	
Year	Number	%	Number	%	Number	%
2020	10,793	74.3	19,061	88.5	29,854	82.8
2019	11,166	73.5	19,809	88.9	30,975	82.6
2018	11,981	73.4	19,048	89.4	31,029	82.4
2017	11,349	72.6	19,946	88.0	31,295	81.7
2016	10,930	72.4	21,145	87.9	32,075	81.8

The overall percent of women who reported that they were breastfeeding their infants at hospital discharge exceeds the Healthy People 2020 goal of 81.9%. However, women with Medicaid reimbursed births have not yet reached that goal. The Healthy People 2030 breastfeeding goal is based on breastfeeding exclusivity at 6 and 12 months of the infant's age.

IDPH contracted with Coffective to develop a strategic plan that will address breastfeeding disparities and support breastfeeding among all Iowa families. Specifically, in calendar year 2021, the Iowa Department of Public Health WIC program contracted with Coffective to complete a discovery phase process to inform a framework for a statewide breastfeeding strategic plan. The discovery phase included a state landscape scan, local landscape scan and a Landscape Opportunity Analysis report. In 2022, IDPH will review the analysis, gather input from state partners on the recommendations and develop goals, objectives and priorities to create the Iowa Breastfeeding Strategic Plan. The final strategic plan is on track to be written by September 2022.

Figure 9. The percent of birthing people with Medicaid reimbursed births who reported that they were breastfeeding their newborns at hospital discharge was highest among those who reported their race as "Other" and among Hispanic birthing people. The lowest percentages of birthing people with Medicaid reimbursed births who reported that they were breastfeeding their newborns at hospital discharge was among American Indian/Native American and Black birthing people, calendar year 2020.

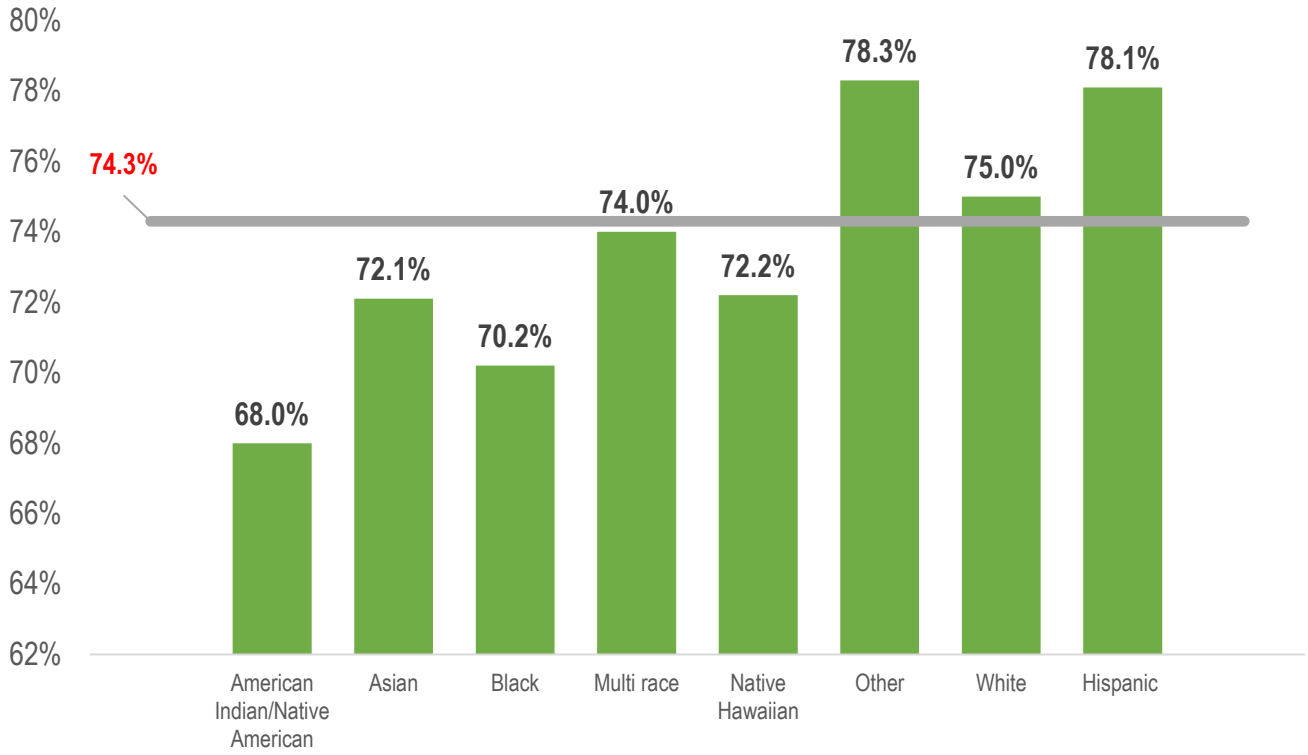
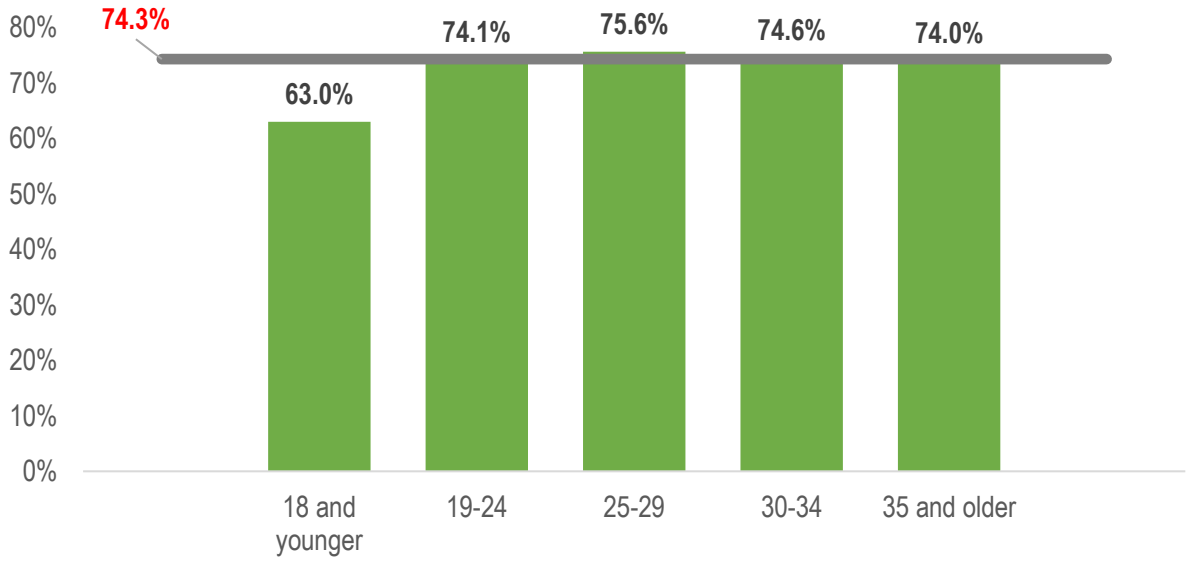


Figure 10. With the exception of birthing people 18 and younger, the percent of birthing people with Medicaid reimbursed births who reported that they were breastfeeding their newborns at hospital discharge was at or above the state rate.



Birth outcomes overall and by selected characteristics among women with Medicaid reimbursed births

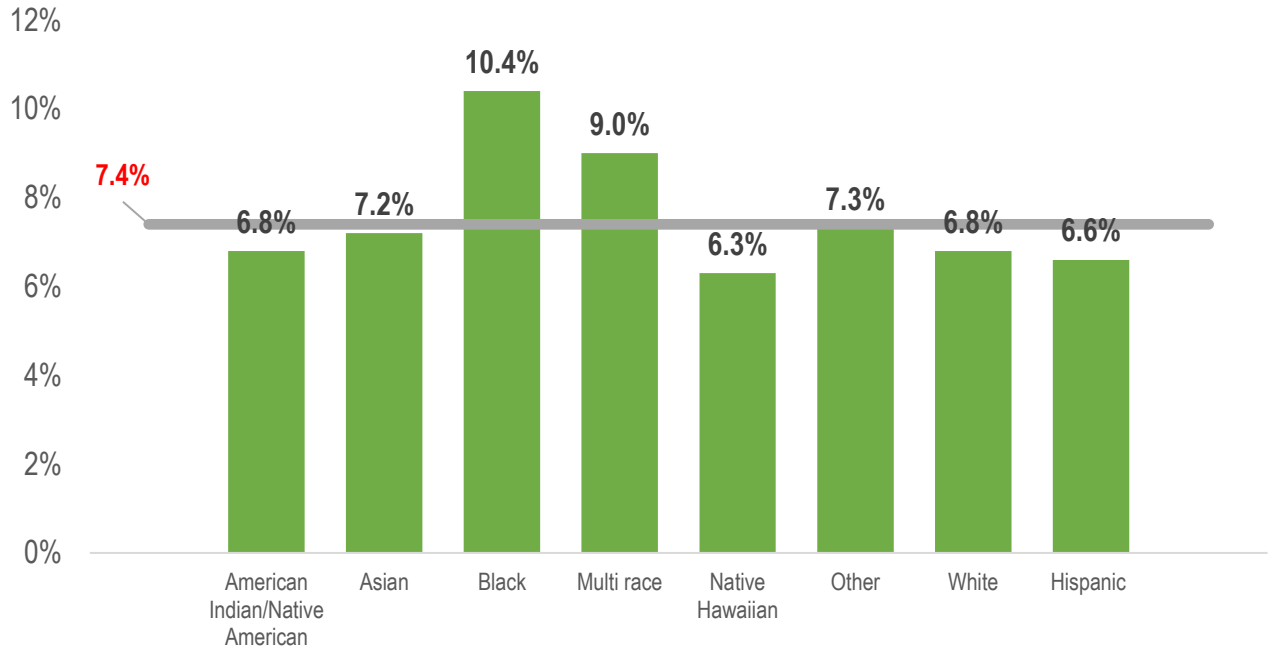
Table 5. Number and percent of LBW[7] infants by Medicaid status and State Total, 2016-2020, Iowa resident births

	Medicaid		Non-Medicaid		State Total	
Year	Number	%	Number	%	Number	%
2020	1,080	7.4	1,402	6.5	2,482	6.9
2019	1,153	7.6	1,367	6.1	2,520	6.7
2018	1,217	7.4	1,357	6.4	2,574	6.8
2017	1,129	7.2	1,374	6.1	2,503	6.5
2016	1,213	8.0	1,407	5.9	2,620	6.7

The overall percent of infants born at a low birth weight to Iowa residents did not increase significantly in 2020 (6.9%) compared to 2019 (6.7%) (Table 5). Healthy People 2020 has proposed a goal low birth weight rate of 7.8% by 2020. Iowa has achieved this goal overall and among birthing people with Medicaid reimbursed births. Healthy People 2030 does not include a low birth weight goal.

Birthing people with Medicaid reimbursed births gave birth to low birth weight infants at a significantly higher percentage than birthing people with other payment sources for births in calendar years 2019 and 2020.

Figure 11. The percent of infants born at a low birth weight among Iowa resident birthing people with Medicaid reimbursed births was significantly greater among Black birthing people compared to all other racial and ethnic groups. The percent difference in infants born at a low birth weight to those who categorized themselves as "other" compared to all other racial and ethnic groups was not statistically significant.



[7] Infant LBW = infant birth weight of <=2500 grams. LBW calculation includes VLBW infants.

Figure 12. The percent of infants born at a low birth weight among women with Medicaid reimbursed births was significantly higher among women 35 and older and women 18 and younger compared to women in other age groups.

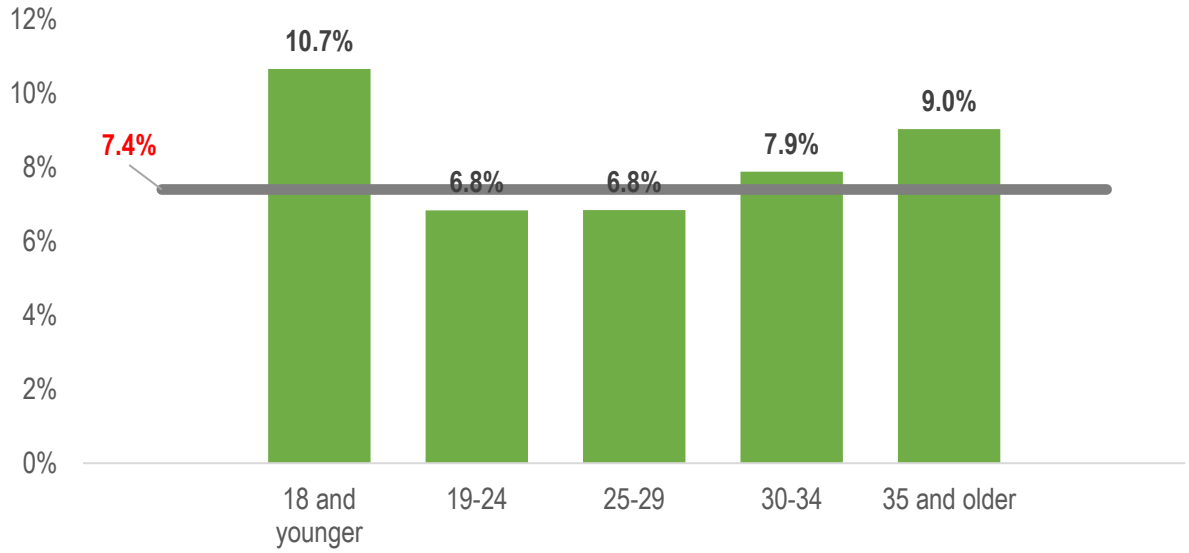


Table 6. Number and percent of infants born prematurely[8] by Medicaid status and State Total, 2016-2020, Iowa resident births

	Medicaid		Non-Medicaid		State Total	
Year	**Number**	**%**	**Number**	**%**	**Number**	**%**
2020	1,477	**10.2**	2,088	9.7	3,565	9.9
2019	1,540	10.1	2,023	9.2	3,563	9.5
2018	1,676	10.2	2,052	9.6	3,728	9.9
2017	1,493	9.5	2,027	8.9	3,520	9.2
2016	1,535	10.2	2,089	8.7	3,624	9.2

The overall percent of infants born prematurely to Iowa residents did not decrease significantly from 2019 (9.5%) to 2020 (9.9%) (Table 6). Healthy People 2030 has proposed a goal prematurity rate of 9.4% by 2030.

The percent of infants born prematurely did not differ significantly among birthing people with Medicaid reimbursed births compared to birthing people with other payment sources for births, calendar year 2020.

[8] Pre-term birth = infants born at < 37 weeks gestation based on OB estimate of gestational age reported on the birth certificate.

Figure 13. With the exception of birthing people with Medicaid reimbursed births and who reported their race to be Asian, there are not significant differences in the percent of infants born at a low birth weight among birthing persons with a Medicaid reimbursed birth by race and ethnicity in calendar year 2020.

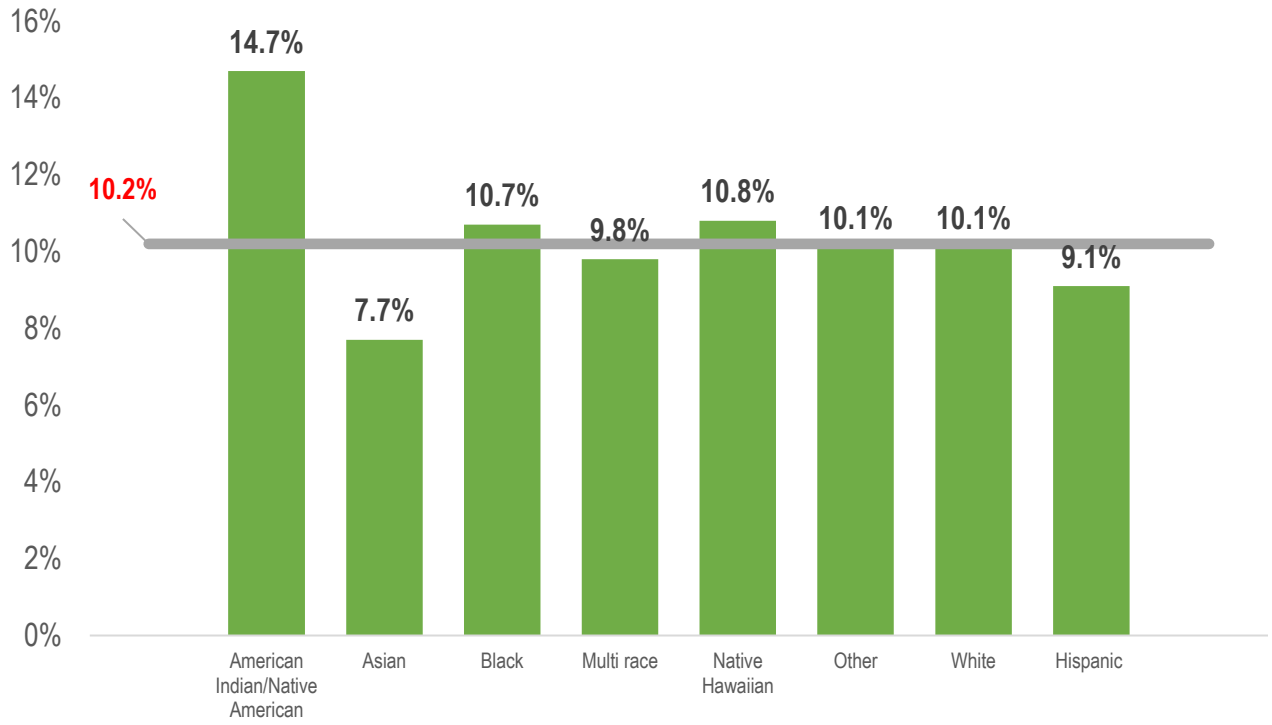
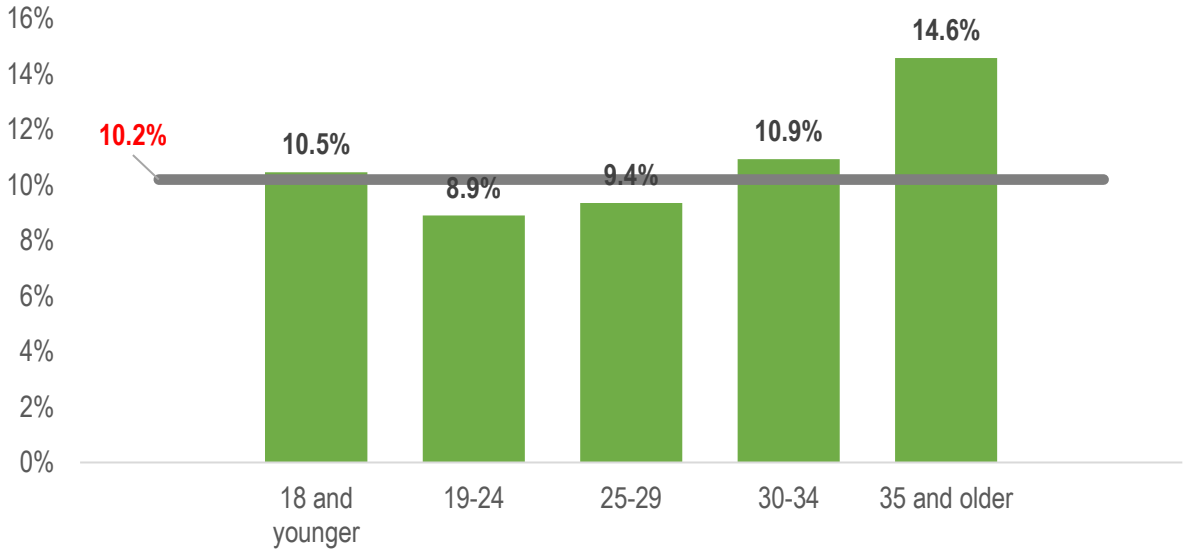


Figure 14. The percent of infants born prematurely among women with Medicaid reimbursed deliveries was significantly higher among women ages 35 and older and among women ages 30 to 34 compared to women in other age groups.



Appendix A

Race and ethnicity categorizations for this report

This report uses the certificate of live birth to determine the mother's race and ethnicity. Race and ethnicity information are collected on the "Official Worksheet to Establish Legal Certification of Live Birth – Birth Mother's Worksheet". On this worksheet mothers self-report their race and ethnicity.

Ethnicity: For ethnicity the mother is asked the following: Is the birth mother of Spanish/Hispanic/Latina origin? (Check Yes or No. If yes, *specify*). The response options are as follows: No, not Spanish/Hispanic/Latina or Yes with the option to select Mexican, Mexican American, Chicana, or Puerto Rican or Cuban, or other (*specify*).
Ethnicity is then re-coded into two categories – Hispanic or non-Hispanic.

Race: For race, the mother is asked the following (she may select more than one race): Race that birth mother considers herself to be. The response options are as follows: White, Black or African American, American Indian or Alaska Native (*Specify*), Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, Other Asian (*Specify*), Native Hawaiian, Guamanian or Chamorro, Samoan, Other Pacific Islander (*Specify*) or Other (*Specify*).
Race is grouped as follows when reported in six categories:

1. American Indian/Native American
2. Asian (Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, Other Asian)
3. Black or African American
4. Multi race (American Indian/Native American, Asian or Pacific Islander, Black, or White)
5. Native Hawaiian (Native Hawaiian, Guamanian or Chamorro, Samoan, Other Pacific Islander)
6. White
7. Other

The category of "Other" contributed 3.6% (n=1,257) to the 2020 birth cohort. Women can refuse to complete this section of the worksheet. In 2020, approximately 2.6% (n=~954) of birth certificates were missing race information.

Combined race and ethnicity: To facilitate statistical testing it was necessary to combine race and ethnicity into the following categories:

1. Non-Hispanic White
2. Non-Hispanic Black
3. Non-Hispanic other (includes all other races [1, 2, 4, & 5 from the list of races]
4. Hispanic (Of any race)

Appendix B

Map with rurality