STATE OF IOWA DEPARTMENT OF Health AND Human SERVICES

SHATTERPROOF™

Stigma of Addiction: Iowa Baseline Survey

Narrative Findings

November 2, 2022

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This project is supported by funds awarded to the Iowa Department of Health and Human Services, Bureau of Substance Use Prevention, Treatment and Recovery from the Centers for Disease Control and Prevention (CDC) Overdose Data to Action (OD2A) grant.

Suggested Citation:

Shatterproof. (2022). *Stigma of Addiction: Iowa Baseline Survey. Narrative Findings.* Iowa Department of Health and Human Services, Bureau of Substance Use Prevention, Treatment and Recovery.

EXECUTIVE SUMMARY

- This report details the results of the baseline public survey fielded in Iowa from September 14, 2022 to September 28, 2022. Iowa residents aged 18 and older were surveyed to determine public attitudes about individuals with opioid use disorder (OUD) using a probability-based web panel. The survey gauged public attitudes across four primary domains: (1) public stigma, (2) structural stigma, (3) stigma associated with medication for opioid use disorder (MOUD), and (4) self-stigma. Participants were asked a series of questions after being exposed to one vignette, featuring an individual named John who is experiencing issues with opioid use. In the vignette, John is using prescription opioids he began using when his doctor prescribed them for back pain after a car accident. In addition to stigma-related questions, participants were asked about their awareness of the "See the Person, Not the Addiction" campaign and perceptions of one of the campaign ads.

  High-level findings are summarized below:

  - In some ways, Iowa residents are more stigmatizing of OUD than the US population. Specifically, surveyed Iowans report less willingness to interact with people with OUD in neighborhoods, as friends, and at work, compared to national averages.
  - Over half of survey respondents reported knowing someone with an OUD, with most considering these to be relatively close relationships. On average, respondents ranked their closeness to the person with an OUD as a 6.3 on a scale of 1-10, with 1 being an acquaintance, and 10 being as close as you could be.
  - The data suggested strong support for institutional and structural resources created to help individuals with OUD. Most respondents believed in the efficacy of MOUD and supported expanding access, with certain limitations.
  - Among respondents who indicated that they have a history of substance use disorder (SUD), few reported high levels of self-stigma.
  - In terms of "See the Person, Not the Addiction" campaign awareness, 20.2% of respondents were familiar with the campaign prior to the survey. After being presented campaign advertisements as part of the survey, positive perceptions of campaign efforts were reported. The campaign was perceived more positively by older demographics.

On a scale from 1 (lowest stigma) to 4 (highest stigma), Iowa's scale scores for public stigma and structural stigma were higher than the national average scale scores. However, Iowa's average scale scores for self-stigma and MOUD stigma were lower than the national average. These results are summarized in Figure 1 below.

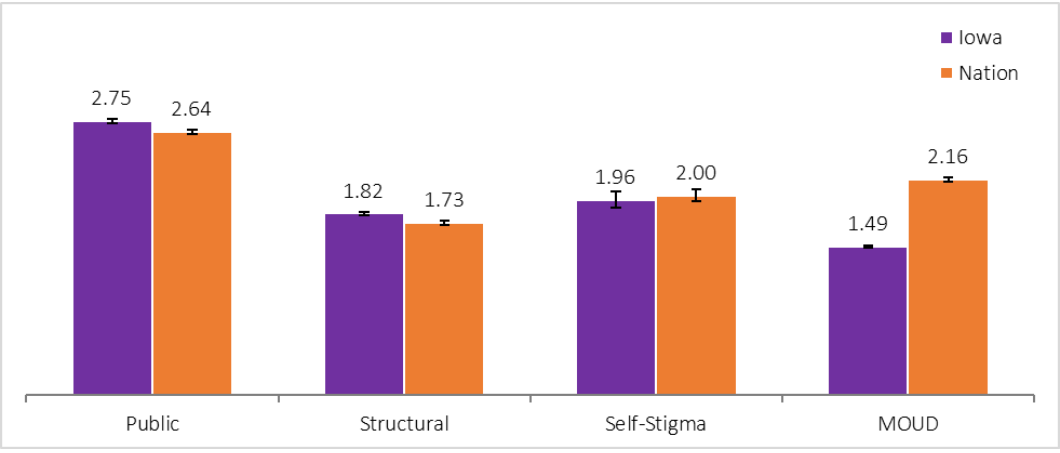


Figure 1. Average stigma scale scores for Iowa and the Nation.

METHODOLOGY

Survey Methodology

This survey was based on the Shatterproof Addiction Stigma Index (SASI). Supported by Ipsos alongside Dr. Brea Perry and Dr. Anne Krendl from Indiana University, Shatterproof developed the SASI – a first-of-its-kind measurement tool designed to set a baseline measure of addiction stigma and attitudes from the public about substance use. It also measures the perceptions of those with a SUD, including the degree to which they have internalized societal exclusion. The Iowa baseline evaluation survey was fielded by Ipsos Public Affairs[a] on behalf of Shatterproof. The target population for the survey was non-institutionalized residents of Iowa who were 18 years of age and older. Iowa adults were surveyed using KnowledgePanel® – the first and largest online research panel designed to be representative of the United States.

KnowledgePanel® relies on probability-based sampling techniques for recruitment, allowing for fully representative samples to be generated to produce statistically valid inferences for study populations. Panel members are randomly selected using address-based sampling from the United States Postal Service (USPS) Delivery Sequence File (DSF), a sampling frame that provides access to nearly all households in the US. Using this sampling approach, survey results can properly represent the US population with a measurable level of precision, features not obtainable from nonprobability or opt-in online panels. Adults from sampled households are invited to join KnowledgePanel® through a series of mailings and by phone, when a phone number is available. Once panelists complete recruitment, they are eligible to participate in new client surveys.

In the vignette, John is prescribed pain medication for back pain he developed following a car accident. He took the pain medication regularly, and after a few weeks found that he increasingly felt the desire for more, despite his back pain having improved. Eventually, John begins getting prescription pain medication from a friend. His family and friends say he has become unreliable and cannot be counted on. When John tries to stop using pain medication, he experiences withdrawal symptoms. John has been living this way for six months.

The goal of the Iowa Baseline Survey was to characterize the nature and magnitude of stigma towards opioid use in Iowa. The survey used a vignette strategy to assess this stigma. After reading the vignette, participants were prompted to answer a series of questions based off the narrative they were exposed to. The Iowa Baseline Survey is constructed from the National Baseline Shatterproof Stigma of Addiction Index, enabling comparison across samples, which will be compared throughout this report.

The survey consisted of over 50 questions regarding general attitudes on opioid use disorder (OUD), including items that measure public stigma, structural stigma, and self-stigma. Only individuals self-identifying with a SUD were provided questions to determine their level of self-stigma. These questions and resulting stigma index mirror the National Baseline. Additionally, questions were included to assess general awareness of and attitudes towards the "See the Person, Not the Addiction" campaign. Participants also viewed the campaign awareness advertisement shown below and provided feedback in a short series of questions at the end of the survey.

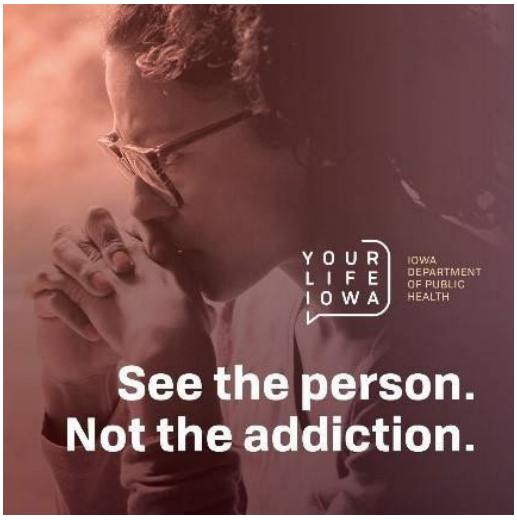
The survey was fielded in English from September 14 – September 28, 2022. Email reminders were sent to nonrespondents every three days during the data collection period to maximize participation. Out of the 491 panel members who were invited to participate, 306 completed the survey, achieving a 66% completion rate. The median completion time for the survey was 9 minutes.

Prior to analysis, 6 respondents were removed due to poor quality data (e.g., completed the survey too quickly, high rates of missing data, or straight-lining responses). This left a total of 300 respondents for analysis. Ipsos prepared weights for participants that (a) accounted for any unequal probabilities in sample selection and (b) adjusted participant distributions on age, gender, race, education, and household income to 2019 American Community Survey Iowa population estimates. Weighted participant demographics overall generally were within a few

percentage points of American Community Survey estimates for Iowa's adult population. The youngest age group (18–29-year-olds) is slightly underrepresented, as are Hispanic Iowans, those with a household income under $50,000, and those with no high school diploma or GED. The probability-based sample design and weighting to Iowa demographics allow us to generalize findings to adult Iowans.

Analysis Methodology

Analyses were conducted by Shatterproof and the Indiana University Irsay Institute. For the analyses that follow, responses on the four-point scales were dichotomized. For example, "definitely willing" and "probably willing" were combined into a "willing" category, and "probably unwilling" and "definitely unwilling" were combined into an "unwilling" category. Demographic variables were also dichotomized as follows: gender identification (persons identifying as male, persons identifying as female); age (younger than 45, 45+), race (persons identifying as white, persons identifying as Hispanic/Black/another race that is not white), household income (less than $50K, $50K+), and education (some college/Associate's degree or less, Bachelor's degree or higher). To preserve confidentiality and due to instability in the survey estimates, data is not presented if there were fewer than 25 respondents answering a question or fewer than five respondents in a specific response category. Missing data rates were low throughout the survey – only 1 case (or 0.3%) was dropped from the overall sample (n=300) due to complete missingness on stigma scale questions.



Analysis results are presented using percentages, means, and standard errors that account for weighting. Differences between Iowa sample and US sample were assessed using a difference of proportions z-test, using US means reported in the Shatterproof Addiction Stigma Index. Pooled sample proportions and standard errors were calculated to derive a z-score test statistic. Normal distribution was used to find P(z).

After examining potential differences between Iowa and the United States, potential demographic subgroup differences within the Iowa sample are examined using the five dichotomized demographic variables described above (gender, age, race, income, and education). Since the demographic subgroup sample sizes are small, statistical significance is not assessed as it would likely be difficult to detect with samples of this size. Instead, exploratory analysis is conducted, identifying differences of interest, regardless of statistical significance. These differences could merit additional exploration in a future study to determine whether they would hold in a larger sample or not.

The number of respondents especially for subgroups of the population is very limited in this survey and results could look different if a larger sample had been obtained. Additionally, there are unmeasured sources of survey error including nonresponse, measurement, and processing errors that should be kept in mind when analyzing data from a survey. For example, respondents may give socially desirable responses to questions on sensitive topics such as substance use, leading to measurement error, or those who choose not to respond to surveys may have different attitudes about substance use than those who choose to respond. However, the survey data used here is invaluable for assessing the nature and status of substance use stigma in Iowa as well as comparing results to national estimates.

PUBLIC STIGMA

Public stigma refers to society's negative attitudes and behaviors towards a group of people because of some socially devalued attribute. For example, prejudice and discrimination towards SUD creates an environment where people with SUD are discredited, feared, and isolated. Stereotypes about substance use feed into prejudices and discrimination towards people with SUD, which contributes to public stigma overall.[1] Higher levels of public stigma toward people with opioid use disorder (OUD) are associated with greater support for punitive policies and lower support for public health-oriented ones.[2,3] It also discourages treatment-seeking and reduces opportunities for employment, as demonstrated in Shatterproof's National Addiction Stigma Index – when a respondent expressed

prejudicial views against someone with a SUD in earlier measures, they were three times less likely to want that person as a coworker, 5.5 times less likely to have that person as a supervisor, and six times less likely to hire that person to do work for them in comparison to those respondents who did not hold prejudicial views. Even if a person is in recovery, fewer than half of respondents indicated that they would be willing to have that person as a supervisor in the workplace, suggesting only moderate levels of support toward those in recovery and showing that any association with substance use can impact long-term perceptions of competency.

Public Stigma was the only stigma category in which significantly different attitudes were observed between Iowa and national respondents, with Iowans holding higher levels of stigma. Of the 21 questions that were asked to assess public stigma, six of those showed significantly different ($p<.05$) responses as summarized in Figure 1. See Appendix II for the full results regarding public and structural stigma in the US and Iowa. Please note that, in tables and figures, Iowa estimates are weighted so that participant demographics reflect Iowa's adult population and US estimates are weighted to reflect the US adult population.

The most supported belief is that John is likely experiencing the normal ups and downs of life, with almost 7 out of 10 Iowans (68.6%) labeling the OUD vignette this way. Iowans are less likely than the average US adult to believe that John is experiencing a physical illness, yet this belief is still endorsed more than chronic illness. Among Iowa respondents, **81% do not believe that John is experiencing a chronic illness like diabetes, arthritis, or heart disease.** This aligns with the national average (79%), as reported by the Shatterproof Addiction Stigma Index (SASI) and underscores the need for continued evidence-based stigma reduction interventions.

Iowa respondents were less willing to interact with John in various work capacities, including hiring John to do work for them or work closely with him on a job. They also were less willing to be socially close to John, including moving next door to him or having him as a close, personal friend. **This suggests greater discrimination and mistrust among Iowans, compared to US residents, towards active opioid use, even though the substance was originally prescribed for medical purposes.**

These trends, alongside the differences in public stigma between Iowa and the national survey data, emphasize that public stigma is not monolithic. People can hold varying attitudes, specifically regarding social distancing, towards individuals with different experiences of OUD. **Figure 2** shows that these results are not in line with the national average, with a particularly noticeable difference in that respondents in Iowa were less willing to have John as a co-worker than what was observed in the national average.

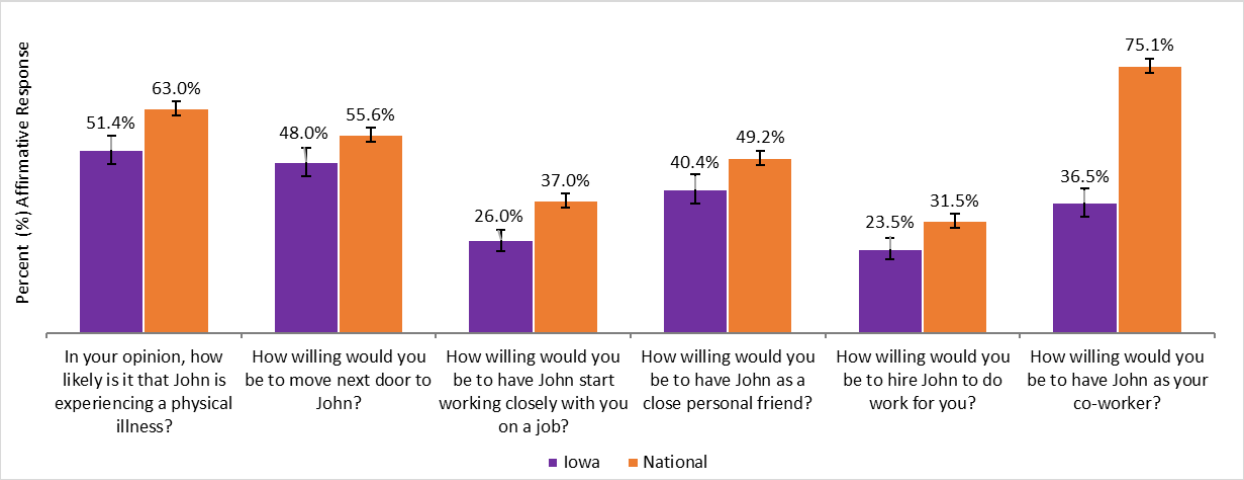


Figure 2. Responses to select public stigma questions (i.e., those with statistically significant differences between IA and USA estimates). *NOTE: Percent estimates are weighted (both IA and USA). National Average estimates from Shatterproof Addiction Stigma Index.*

Although not statistically significant, Iowa respondents were also less willing to spend an evening socializing with John or have him marry into their family, lending further support to the conclusion that Iowans are more likely to distance themselves from people with OUD than the average US resident. However, there was a larger percentage of respondents who viewed John as trustworthy or competent compared to the national average. Further research is needed to assess whether this pattern is generalizable.

Social Distancing

Among surveyed Iowans, 56% of respondents indicated that they have known someone who had a situation like John's. Of that subset, the majority described that the individual in question was close to them, with an average ranking of 6.3 on a scale of 1-10, with 1 being an acquaintance, and 10 being as close as you could be. Attitudes indicating social distancing (an unwillingness to interact with people with SUD) generally increased with increased social proximity (relationship intimacy/closeness from acquaintance, friend, family), as shown in **Figure 3**.[4] While Iowa and national results show less willingness to associate with John as social proximity increases, overall Iowa respondents are less willing to have a relationship with John than the national average.

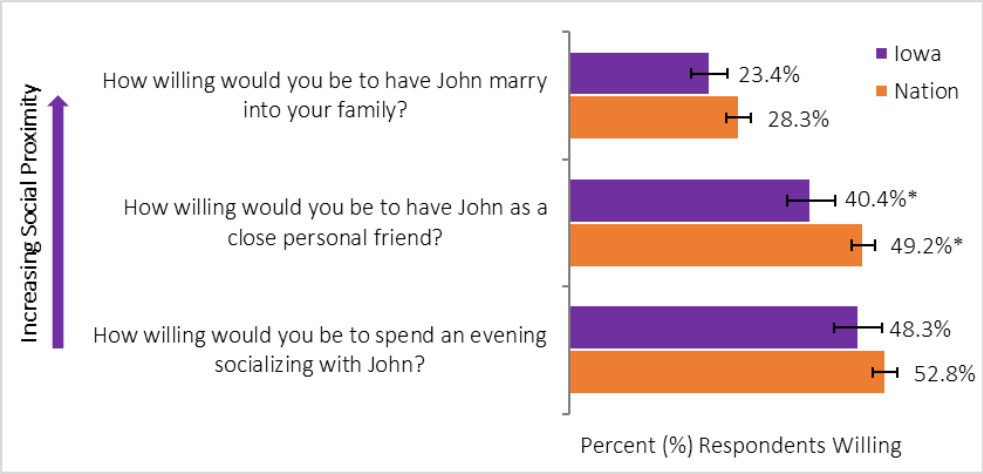


Figure 3. Percent of respondents who would be willing to associate with John in various capacities. Generally, as social proximity increases so do stigmatizing attitudes. An asterisk (*) denotes a statistically significant ($p < 0.05$) difference. *NOTE: Percent estimates are weighted.*

STRUCTURAL STIGMA

Structural stigma refers to systems-level discrimination, such as cultural norms, institutional practices, and healthcare policies that constrain resources, opportunities, and well-being.[1] It generates and sustains structures, either explicitly or implicitly, which exclude a stigmatized population from being able to fully participate in society. This impacts the treatment system: a study conducted in Massachusetts found that 24% of emergency, family, and internal medicine providers believe their practice would attract undesirable patients if they treated OUD.[5] Other examples of structural stigma in healthcare include separating methadone clinics from the rest of healthcare providers, requiring additional waivers to prescribe MOUD, and inadequate insurance coverage.[1]

Seven questions in the survey addressed structural stigma. Full data regarding structural stigma can be found in Appendix II. Encouragingly, **across all respondents, the survey found widespread support for broadening access to treatment through increased insurer and employer coverage of treatment,** with over 90% of Iowans supporting healthcare coverage for addiction treatment, for employer support of employees with a substance use disorder and supporting healthcare providers caring for people with SUD like anyone else with a chronic illness. Additionally, nearly 90% of respondents believe that people with SUD should be directed to treatment instead of incarceration for drug-related, non-violent crimes**.** These results are summarized in **Figure 4**.

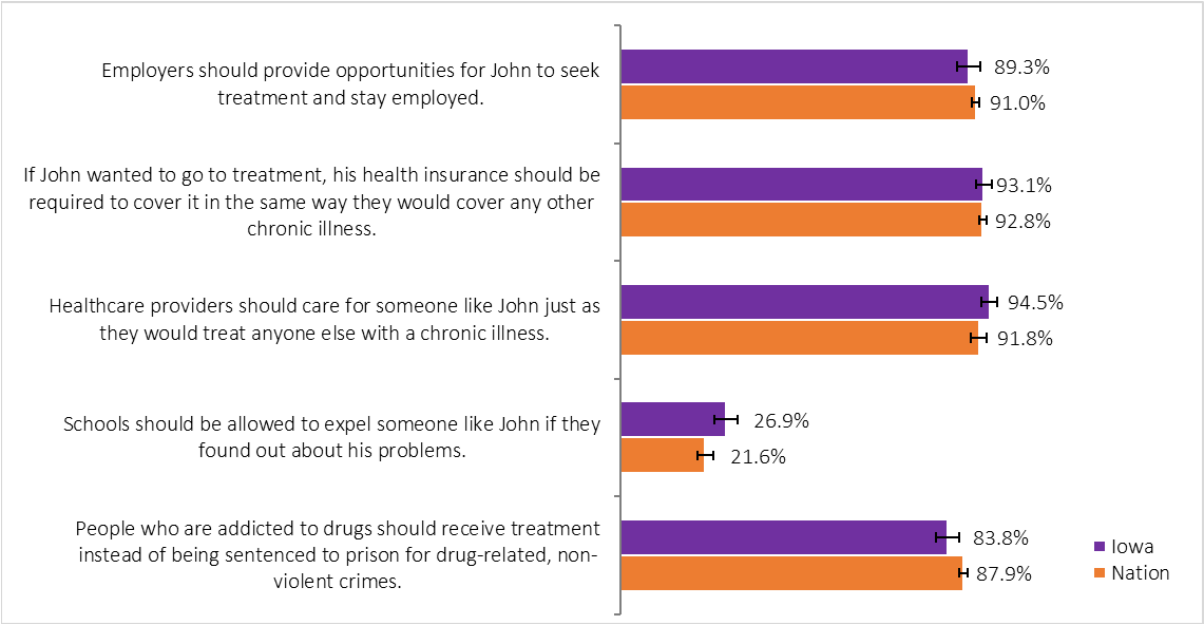


Figure 4. Structural stigma measures by Iowa and national respondents. *NOTE: Percent estimates are weighted*

Even though structural policy reform is generally supported by the public, this support has not translated into lower levels of either public or self-stigma. This finding highlights the need to continue implementing evidence-based stigma reduction efforts and interventions, to evaluate their impact, and to recognize that structural shifts made to reduce stigma may take time to change attitudes among the larger population. Most importantly, decision-makers must recognize that the public supports efforts that reduce structural discrimination and stigma and ensure that support is translated and codified.

STIGMA ASSOCIATED WITH HARM REDUCTION AND MEDICATION FOR OPIOID USE DISORDER (MOUD)

The stigma associated with medications for opioid use disorder (MOUD) refers to the misconception that FDA-approved medications designed to treat OUD are simply "trading one addiction for another." For example, many participants in a Pew Charitable Trust focus group saw patients in MOUD programs as "still 'addicted' or 'not clean.'"[6] This misconception often exists in peer support groups, where medication stigma can hinder recovery.[7] Another study found local news coverage in states with high opioid overdose rates highlighted more negative than positive consequences of MOUD, and fewer than 40% of news stories about the medications mentioned they were underused.[8]

Nine questions in the survey analyzed attitudes towards MOUD. These questions were not referencing John or the vignette itself. There was strong support for MOUD among Iowans surveyed, with exceptions specifically around MOUD clinics and safe consumption sites. Generally, **around 70% of respondents agreed with the use of the proposed treatments, though there was lower willingness among respondents to have a clinic in their neighborhood that provides MOUD to people with opioid use disorder (54.2%).** A large majority of respondents agreed that MOUD is an effective treatment option (69%) and that it should be readily available to individuals, especially in healthcare settings (71%). Additionally, though there were limited questions related to harm reduction on the survey, more than one in three (34.4%) respondents showed support for the availability of safe consumption sites, and only 16% of respondents know how to administer naloxone to help a person experiencing a life-threatening drug overdose (**Figure 5**).

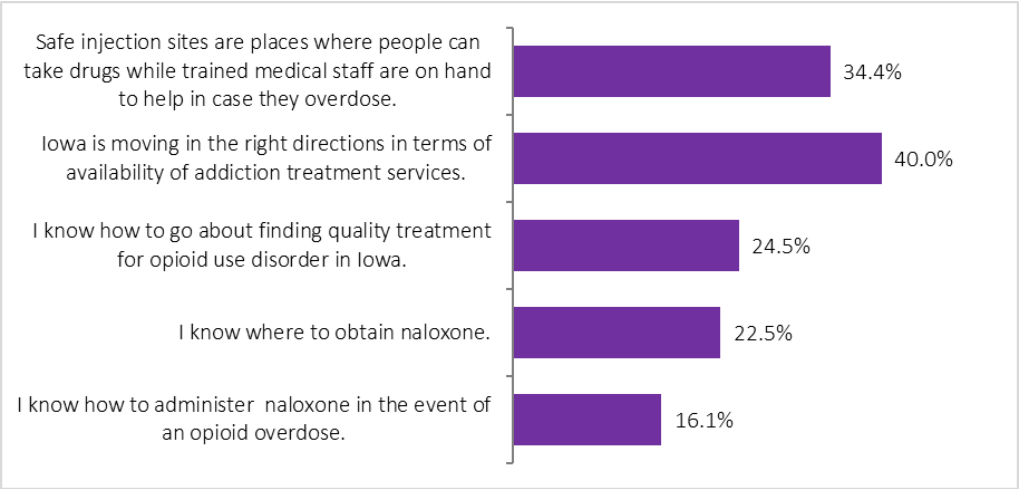


Figure 5. Harm reduction and MOUD treatment stigma measures among Iowa respondents. *NOTE: Percent estimates are weighted*

SELF-STIGMA

Self-stigma occurs when individuals internalize and accept negative stereotypes.[1] It turns a "whole" person into someone who feels "broken" with little or no self-esteem. Self-stigma – which can also manifest as anticipated stigma, or fear of confronting public stigma – can discourage people from seeking treatment: among people who know they need substance use treatment but do not receive it, 15% cite not wanting their neighbors or community to have a negative opinion of them as a reason to not seek treatment, and 1 of 6 cite that it may have a negative effect on their job.[9] Self-stigma can also exacerbate the social isolation generated by public stigma.[1]

Iowans surveyed were asked to report on their own substance use history. Participants who disclosed experiencing an issue with substance use were asked a series of self-stigma questions. In total, 2.5% of Iowans surveyed have ever thought that they might have a problem with opioid use, 2.1% thought that they might have a problem with stimulant (methamphetamine) use, 1.4% thought they might have a problem with cocaine use, and 15.6% thought that they might have ever had a problem with alcohol use. For those who reported that they might have ever had a problem with substance use (21.3%), with 73% identifying alcohol use as their primary substance of concern, there were lower levels of self-stigma reported compared to levels of perceived/anticipated stigma. About one in three respondents who indicated that they might have a problem with substance use felt ashamed of themselves (34.9%) or believed they deserved the bad things that have happened to them (32.8%). Only 5.4% of respondents felt they can't be trusted, yet almost 60% of respondents agreed that a job interviewer would not hire them if they mentioned their substance use history in a job interview. This suggests that **while there might be relatively low levels of self-stigma, this does not necessarily translate to a reduction in perceived or anticipated stigma – how the people with SUD believe the world feels about them**. For a full summary of results, see Appendix IV.

DEMOGRAPHIC ANALYSIS

The vignette was analyzed for possible differences in the percentage reporting a positive/agree response (likely/willing/able/agree) for five demographic subgroups:

- Gender Identification (persons identifying as female, persons identifying as male
- Age (<45yrs, 45+)
- Race/ethnicity (persons identifying as White, persons identifying as Hispanic/Black/another race that is not White)
- Household income (<$50K, $50K+)
- Education (some college/Associate's degree or less, Bachelor's degree or higher)

Attitudes indicating social distancing (an unwillingness to interact with people with SUD) generally increased with

increased social proximity (relationship intimacy/closeness from acquaintance, friend, family) among all demographic sub-groups with the exception of non-White individuals. However, younger individuals (18-44yrs) were more willing to associate with John as social proximity increases compared to all other sub-groups. The sample was not large enough to determine statistical differences in how stigma varied by demographic. For some questions, there were sizable percentage point differences between how demographic subgroups responded, and these results are summarized in Appendix V. However, it should be stressed that these results are *not conclusive*, nor can any definitive statements be made based on these differences between subgroups.

CAMPAIGN AWARENESS AND ATTITUDES

Across all respondents, 40% of Iowans surveyed agreed that Iowa is moving in the right direction in terms of the availability of addiction treatment services. There were sizable percentage point differences between demographic subgroups. However, again, a larger sample is needed to assess potential demographic differences more accurately.

Across all survey respondents, **20.2% reported that they were at least slightly familiar with the "See the Person, Not the Addiction" educational campaign.** As part of the survey, all respondents, regardless of prior familiarity with the campaign, were shown a "See the Person, Not the Addiction" advertisement (see Appendix VI) and asked for their reactions on a four-point scale (*very positive, somewhat positive, somewhat negative, very negative*). A **majority (84.5%) of respondents reported a very positive or somewhat positive reaction to these advertisements –** this indicates that the advertisement resonates strongly with Iowans, providing insight that the campaign is not eliciting negative reactions, supported by the next question. Survey participants were then shown a "See the Person, Not the Addiction" advertisement. 75.5% of Iowans surveyed did not think that the advertisement promoted negative stereotypes about people with a substance use disorder. Further research can be done to assess reactions to the advertisement, including where there were elevated responses indicating that the advertisement did promote negative stereotypes. See Appendix VI for full results on campaign attitudes.

CONCLUSIONS AND RECOMMENDATIONS

Stigma Attitudes

The results of this survey underscore the need for the expansion of evidence-based stigma reduction messaging that focuses on sharing a wide variety of stories. This should be done via contact-based strategies and tailored messaging to resonate with as many audiences as possible. Broadly, Iowans shared with the national respondent audience the misconception that John was not experiencing a chronic medical illness and reported less willingness than the national average to interact with people with OUD in neighborhoods and as friends.

In particular, the statistically significant differences between Iowa's respondents and the national respondents pertaining to employment are important to note, with Iowans holding more stigmatizing views as it relates to hiring or having someone who is actively using an opioid as a supervisor or co-worker. This suggests that **prioritizing employers and employment systems is critical.** Targeted messaging and contact-based strategies featuring narratives related to the workplace could be particularly effective here to combat any stigmatizing views towards people with a substance use disorder and prevent any discrimination they might encounter in the workplace or employment systems. Lastly, data from the national SASI indicates that, even if a person is in recovery, less than half of the population would want them as a supervisor, highlighting how addiction stigma follows a person into their recovery. Respondents indicated increased public stigma with increased proximity to an individual with OUD. This attitude was observed even though a majority of respondents (55.7%) reported knowing someone with an OUD, with an average closeness rating of 6.3. However, 84% of all respondents reported believing that with treatment, people in John's situation can get well and return to a healthy life.

Iowans surveyed indicated broad support for medications for opioid use disorder and structural reform meant to aid those with OUD. While this is a positive trend, the criminal/legal system, employers, and even healthcare providers do not always create pathways to recovery for individuals with OUD.[10] An additional component to this finding is that levels of perceived and anticipated stigmas were higher than self-stigma, indicating that even though structural policy reform is generally supported by the public, this support has not translated into lower levels of

either perceived or anticipated stigmas. This finding highlights the need to continue implementing evidence-based stigma reduction efforts and interventions, to evaluate their impact, and to recognize that structural shifts made to reduce stigma may take time to change attitudes among the larger population. Most importantly, decision-makers must recognize that the public supports efforts that reduce structural discrimination and stigma and ensure that support is translated and codified.

Additionally, while around 70% of respondents agreed with the use of the proposed treatments, there was slightly lower willingness among respondents to have a clinic in their neighborhood that provides MOUD to people with OUD (54.2%). **Therefore, to help humanize the disease, campaign messaging should provide positive examples of proximate relationships with people who have OUD, and reinforce that recovery is not just possible, but probable with the proper support.** There is also an opportunity here to prioritize messaging around MOUD, its efficacy, and Iowa's treatment systems.

Due to sample size, assessing statistically significant differences in stigma by demographic subgroup was not feasible. While trends can be observed, conclusions are not able to be drawn for subgroups based on these data. To assert how different demographics view of OUD might vary, a larger study with potential oversampling of subgroups of interest would be valuable, perhaps targeting how messaging can be better tailored to age and gender demographics to address specific stigmas within those groups. A convenience sample, which would specifically target a demographic of interest as opposed to a sample that was representative of Iowa's population, could give a better indication of demographic differences pertaining to different types of stigmas.

Campaign Awareness and Messaging

Data regarding the "See the Person, Not the Addiction" campaign suggest that there is **room to increase campaign awareness (20.2% of survey respondents reported being at least slightly familiar with the campaign prior to the survey), and that there are generally favorable attitudes towards the campaign itself (84.5% at least somewhat positive when shown advertisements in the survey).** Demographic analyses of campaign perceptions noted **some racial/ethnic differences in responses to the "See the Person, Not the Addiction" advertisement,** though there is an insufficient sample size for statistical analysis. Further research could be done to assess differences across racial/ethnic splits, as well as conducting focus groups and interviews to inform messaging that would resonate among certain demographics. Lastly, over 75% of respondents disagreeing that the "See the Person, Not the Addiction" advertisement promoted negative stereotypes towards people with a SUD, an encouraging response, though further research can be done to assess the nearly one in four respondents who did find that it promoted negative stereotypes towards people with a substance use disorder.

Iowa's anti-stigma campaigns can capitalize on this data by collecting stories that showcase the structural barriers faced by individuals in relation to seeking employment or gaining access to quality care to highlight the need for change. Further, the campaigns could geo-target areas where MOUD clinics are proposed to preemptively reduce stigma and address barriers. As such, there is abundant opportunity for Iowa to **expand institutional support for people with OUD and to highlight existing resources in "See the Person, Not the Addiction" campaign messaging**. A webinar highlighting MOUD and other campaign resources could be beneficial to ensure the public is aware of the existing treatment modalities for Iowans.

This report highlights data that can be used to inform campaign strategy and messaging. Convenience sampling of how particular subgroups perceive OUD and the "See the Person, Not the Addiction" campaign could be performed to better understand demographic differences. **By learning from these results, the "See the Person, Not the Addiction" campaign has the opportunity to take steps towards destigmatizing OUD and create real, lasting change.**

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Appendix I – Weighted participant demographics for Iowa

Variable	Characteristic	Study Total % (weighted)	Census ACS %*
Gender	Male	47.2	49.7
	Female	52.8	50.3
Age 4 categories	18-29	14.9	16.5
	30-44	27.4	18.3
	45-59	35.2	18.6
	60+	22.4	23.5
Ethnicity	Hispanic	3.7	6.8
	Non-Hispanic	96.3	93.2
Race/ethnicity	White, not Hispanic	87.7	82.7
	Hispanic	3.7	6.8
	Black and other races including 2 or more races, not Hispanic	8.6	10.5
Education	No high school diploma or GED	2.3	7.9
	High school graduate (high school diploma or the equivalent GED)	32.0	30.4
	Some college or Associate's degree	36.2	34.7
	Bachelor's degree or higher	29.5	27.0
Household income	Less than $50,000	30.5	40.1
	$50,000 to $99,999	37.1	33.4
	$100,000 or more	32.4	26.5
	Number of respondents (n)	**300**	

* Data obtained from US Census Bureau American Community Survey (ACS) 2020 5-year estimates

Appendix II – Iowa and national responses regarding public and structural stigma

Question	*Iowa* % Positive	*National* % Positive	*Iowa* % Negative	*National* % Negative	p-value (% positive difference)
Public Stigma					
In your opinion, how likely is it that John is experiencing part of the normal ups and downs of life?	31.4	37.0	68.6	63.0	0.467
In your opinion, how likely is it that John is experiencing a mental illness?	54.1	47.2	45.9	52.8	0.051
In your opinion, how likely is it that John is experiencing a physical illness?	**51.5**	**61.7**	**48.5**	**38.3**	**0.003**
In your opinion, how likely is it that John is experiencing a chronic medical illness like diabetes, arthritis or heart disease?	18.6	20.7	81.4	79.3	0.467
How willing would you be to move next door to John?	**48.0**	**55.3**	**52.0**	**44.7**	**0.039**
How willing would you be to spend an evening socializing with John?	48.3	52.8	51.7	47.2	0.218
How willing would you be to have John start working closely with you on a job?	**26.0**	**37.0**	**74.0**	**63.0**	**<0.001**
How willing would you be to have a group home for people like John opened in your neighborhood?	49.4	53.3	50.6	46.7	0.269
How willing would you be to have John marry into your family?	23.4	28.3	76.6	71.7	0.112
How willing would you be to have John as a close personal friend?	**40.4**	**49.2**	**59.6**	**50.8**	**0.011**
How willing would you be to hire John to do work for you?	**23.5**	**31.5**	**76.5**	**68.5**	**0.010**
How willing would you be to have John as your supervisor at work?	19.2	19.2	80.8	80.8	0.921
How willing would you be to have John as your co-worker?	**36.5**	**74.5**	**63.5**	**25.5**	**<0.001**
In your opinion, how able is John to make his own decisions about managing his own money?	54.0	50.3	46.0	49.7	0.283
People like John are unpredictable.	77.6	77.5	22.4	22.5	0.972
In your opinion, how likely is it John would do something violent toward other people?	51.3	46.6	48.7	53.4	0.172
In your opinion, how likely is John to be trustworthy?	35.6	31.5	65.4	68.5	0.205
In your opinion, how likely is John to be competent?	55.2	49.1	44.8	50.9	0.077

Question	*Iowa* % Positive	*National* % Positive	*Iowa* % Negative	*National* % Negative	p-value (% positive difference)
Structural Stigma					
Employers should provide opportunities for John to seek treatment and stay employed.	89.3	91.0	10.7	9.0	0.400
If John wanted to go to treatment, his health insurance should be required to cover it in the same way they would cover any other chronic illness.	93.1	92.8	3.4	7.2	0.866
Healthcare providers should care for someone like John just as they would treat anyone else with a chronic illness.	94.5	91.8	5.5	8.2	0.135
Schools should be allowed to expel someone like John if they found out about his problems.	26.9	21.6	73.1	78.4	0.068
People who are addicted to drugs should receive treatment instead of being sentenced to prison for drug-related, non-violent crimes.	83.8	87.9	16.2	12.1	0.080
How much do you agree or disagree that there should be a safe injection site in your community?	34.4	**	65.6	**	**
Number of respondents (n)	**299**		**711**		

**Comparison unavailable

Note: Percentages are weighted. The number of respondents (n) varies by question; the listed n is the minimum across all items presented. Bolded rows indicate that the difference in positive response percentages between Iowa respondents and the national average is statistically significant at alpha = 0.05 significance level (i.e., p-value ≤0.05).

Appendix III – Iowa responses regarding harm reduction and MOUD

Question/s	% Agree
Safe injection sites are places where people can take drugs while trained medical staff are on hand to help in case they overdose.	**34.4**
I know where to obtain naloxone.	**22.5**
I know how to administer naloxone in the event of an opioid overdose.	**16.1**
MOUD just substitutes one drug for another.	**37.1**
More healthcare providers should offer MOUD so it is easily accessible to people who want it.	71.1
MOUD is an effective treatment for OUD.	69.0
I would be willing to have a clinic that provided MOUD to people with OUD in my neighborhood.	54.2
I know how to go about finding quality treatment for an opioid use disorder in Iowa.	**24.5**
Iowa is moving in the right direction in terms of availability of addiction treatment services.	**40.0**
Number of respondents (n)	**281**

Note: Percentages are weighted. The number of respondents (n) varies by question; the listed n is the minimum across all items presented.

Appendix IV – Responses regarding self-stigma

Question/s	Response	% Respondents
Have you ever thought you might have a problem with opioid use?	Yes	2.5 (1.1)
	No	93.5 (2.2)
	Don't Know	4.0 (2.0)
	Number of respondents (n)	**300**
Have you ever thought you might have a problem with stimulant use?	Yes	2.1 (0.9)
	No	93.0 (2.4)
	Don't Know	5.0 (2.2)
	Number of respondents (n)	**300**
Have you ever thought you might have a problem with cocaine use?	Yes	1.4 (0.8)
	No	96.6 (1.5)
	Don't Know	2.0 (1.2)
	Number of respondents (n)	**300**
Have you ever thought you might have a problem with alcohol use?	Yes	15.6 (2.7)
	No	83.6 (2.8)
	Don't Know	0.8 (0.6)
	Number of respondents (n)	**300**
Have you increased your use due to the COVID-19 pandemic?*	Yes	28.7 (8.1)
	No	71.3 (8.1)
	Number of respondents (n)	**51**

*Only asked of those reporting substance use

Note: Percentages are weighted. Standard errors that account for the effect of weighting are shown in parentheses. For several questions relating to self-stigma (Q39, Q56-Q58) there were too few respondents (n <= 25) to report results for these questions. A threshold of at least 25 respondents was used to report results for a question.

Question/s	% Agree
I feel inferior to people who have never had a problem with substances.	26.5 (9.0)
I deserve the bad things that have happened to me.	32.8 (12.1)
I feel out of place in the world because of my problems with substances.	19.0 (9.8)
I feel ashamed of myself.	34.9 (12.6)
I feel that a major reason for my problems with substances is my own poor character.	28.2 (10.6)
I feel I cannot be trusted.	5.4 (3.8)
I have the thought that I have permanently screwed up my life by using substances.	28.9 (11.4)
People think I'm worthless if they know about my substance use history.	24.9 (10.9)
People around me will always suspect I have returned to using substances.	18.1 (9.8)
If someone were to find out about my history of substance use, they would expect me to be weak-willed.	23.9 (10.3)
If someone were to find out about my history of substance use, they would doubt my character.	31.4 (10.2)
A job interviewer wouldn't hire me if I mentioned my substance use history in a job interview.	59.6 (15.4)
People would be scared of me if they knew my substance use history.	12.2 (7.5)
People will think I have little talent or skill if they know about my substance use history.	22.6 (9.4)
People think the bad things that have happened to me are my fault.	37.5 (12.8)
Number of respondents (n)	**50**

Note: Percentages are weighted. Standard errors that account for the effect of weighting are shown in parentheses. The number of respondents (n) varies by question; the listed n is the minimum across all items presented. Questions were only asked to respondents who self-reported that they thought they ever had a problem with opioid use, stimulant use, or alcohol use. Includes strongly agree and agree responses. We ask the reader to note that "n" is small for this series of questions. Also, note that most of those who were eligible to answer this set of questions were answering about a problem with alcohol; there were not enough respondents to examine opioid use or stimulant use separately.

Appendix V – Demographic analysis

Question/s	Age	Education	Race/ethnicity	Gender identification	Income
In your opinion, how likely is that John is experiencing a mental illness?	Y		H/B/O		
In your opinion, how likely is John to be competent?	Y				

The table above lists demographic variables (age, race, gender, education, household income) where we see differences of at least 15 percentage points in the percentage reporting a positive/agree (likely/willing/able/agree) response between subgroups in the population for Vignette 1. For each variable where there is a difference of this size, we list the group with the highest percentage of positive responses. The groups are: Y=18-44 year old; O=45+ year old; H/B/A=Hispanic, Black, or another race or ethnicity other than white, non-Hispanic; W=white, non-Hispanic; F=person who identifies as female; M=person who identifies as male.

Appendix VI – "See the Person, Not the Addiction" advertisement shown in the survey

Question	Response	%
Have you ever heard or seen the "See the Person, Not the Addiction" campaign?	Yes	20.2 (3.2)
	No	69.5 (3.5)
	Don't Know	10.2 (2.2)
	Number of respondents (n)	**299**
Type/s	**% Yes**	**% No**
Social Media	38.5 (9.0)	61.5 (9.0)
Billboard	7.3 (4.4)	92.7 (4.4)
Radio	12.3 (6.6)	87.7 (6.6)
TV	43.0 (8.9)	57.0 (8.9)
YourLifeIowa.org	5.4 (4.5)	94.6 (4.5)
Substance Misuse Prevention Provider	1.9 (2.0)	98.9 (2.0)
Family Member/Friend	5.9 (3.0)	94.1 (3.0)
Print Materials	3.6 (2.2)	96.4 (2.2)
Other	0.5 (0.5)	99.5 (0.5)
I Don't Remember	23.0 (7.7)	77.0 (7.7)
	Number of respondents (n)	**60**

Note: Percentages do not sum to 100 due to respondent ability to choose multiple options.
Percentages are weighted. Standard errors shown in parentheses account for the effect of weighting. The number of respondents (n) varies by question; the listed n is the
minimum across all items presented. Questions were only asked to respondents who self-reported seeing or hearing the "See the Person, Not the Addiction" campaign.

Question/s	% Positive/Agree	% Negative/Disagree
Which of the following describes your reaction to the "See the Person, Not the Addiction" ad you saw? (Positive vs Negative)	86.1	13.9
This ad promotes negative stereotypes towards people with a substance use disorder.	22.6	77.4
Number of respondents (n)	**292**	

Percentages are weighted. The number of respondents (n) varies by question; the listed n is the minimum across all items presented. Questions were only asked to respondents
who self-reported seeing or hearing the "See the Person, Not the Addiction" campaign.