

Social Determinants of Health in Ohio: 2019 Update

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Department of
Medicaid

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EXECUTIVE SUMMARY

To understand the association between the *Social Determinants of Health (SDOH)* and the health of Ohioans, we first report on the distribution of four key SDOH—poverty, educational attainment, food insecurity, and loneliness—among Ohio’s working age population (ages 19 to 64). Next, we identify the prevalence of fair/poor health, mental health impairment, current cigarette use, unmet health care needs and obesity across levels of poverty, food insecurity, educational attainment and loneliness.

Key Findings

- There were clear income and education gradients in the prevalence of fair/poor health, mental health impairment and current cigarette use among working age adults—the highest rates of each were among Ohioans with the lowest incomes and with the lowest levels of education.
- Among lower-income working age adults, food insecurity was most prevalent among those enrolled in Medicaid. Roughly 42.3% of Medicaid-enrolled adults reported running out of food in the past year before having money to purchase more.
- Lower-income adults who struggled with food insecurity, particularly those enrolled in Medicaid,

were also more likely to report fair/poor health, mental health impairment and current cigarette use, reflecting the multiple stressors associated with living in poverty.

- Loneliness was concentrated among Medicaid-enrolled adults—38.1% of working age adults reported feelings of loneliness compared with 27.5% of the potentially Medicaid-eligible who were covered by other insurance.
- Adults enrolled in Medicaid who reported that they were lonely had substantially higher rates of fair/poor health, mental health impairment, and current cigarette use than adults who reported that they were not lonely.
- Unmet health care needs were substantially higher among lower-income working age adults with a disabling condition than among those without a disabling condition, across insurance types.

Visit grc.osu.edu/OMAS for additional information about OMAS, including public use files, codebooks, and methods

CONTENTS

Background	Page 5	Current Cigarette Use	Page 32
Objectives	Page 7	Unmet Health Care Needs	Page 40
Methods	Page 8		
Results	Page 11	Summary of Results	Page 49
Prevalence of Social Determinants of Health	Page 12	References	Page 51
Fair/Poor Self-rated Health	Page 18	Acknowledgements	Page 52
Mental Health Impairment	Page 25		

BACKGROUND

Good health starts in our homes and in our communities. To understand why some groups are healthier than others, and why Ohioans overall are not as healthy as they could be, it is important to consider the *Social Determinants of Health*.

The Centers for Disease Control and Prevention (CDC) defines the Social Determinants of Health (SDOH) as the conditions under which people live, learn, work and play that affect a wide range of health risks and outcomes.¹ Prior research has shown, for example, that socioeconomic status is a key determinant of health associated with pressing health issues facing Ohioans, such as heart disease, diabetes, and depression.²

State agencies across the US are grappling with the knowledge that social determinants of health influence the health of the populations they serve, but social determinants are heavily dependent on public policy change outside of any individual agency's scope. A recent review of state Medicaid agencies found that issues such as food insecurity and housing instability, as well as programs addressing criminal justice involvement and intimate partner violence, were stated priorities as agencies consider expanding their policies and programs to address social determinants of health.³

Social determinants are complex and often cluster together. To understand the patterns of this complexity, we adopt a conceptual framework used by *Healthy People 2030* which reflects five key domains: Economic Stability, Education Access and Quality, Health Care Access and Quality, Social and Community Context, and

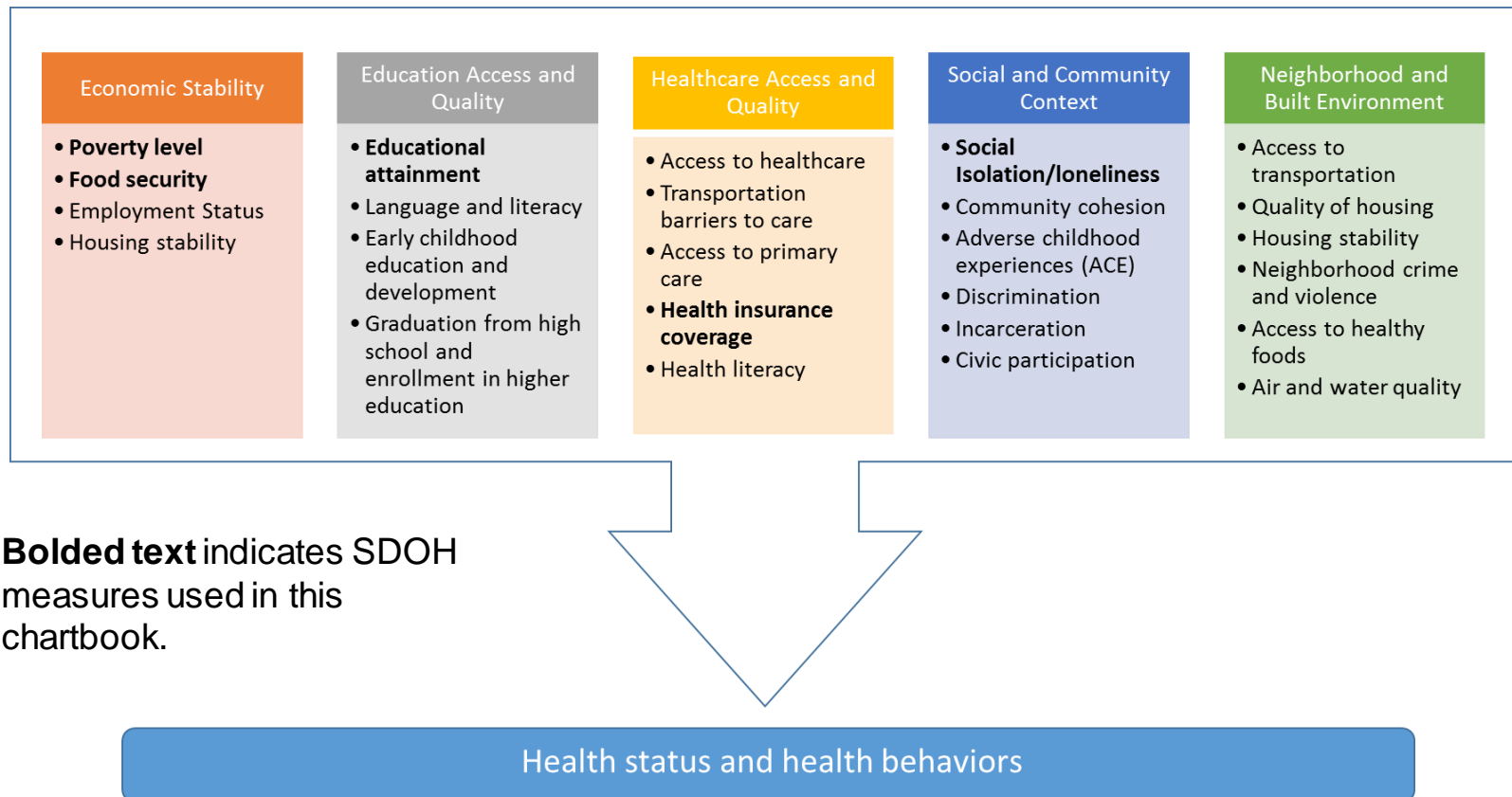
Neighborhood and Built Environment. Figure 1a (next slide) presents a conceptual diagram which outlines each of the domains and lists select measures that prior research has shown are related to a host of health indicators and health behaviors.

Using the 2019 OMAS, we examine the distribution of several of these measures—poverty, educational attainment, food insecurity, and loneliness. We present the associations between these measures of social determinants and the health behaviors and health outcomes of working age Ohioans. We pay particular attention to adults living at lower-incomes ($\leq 138\%$ FPL) as this is a key income threshold for Medicaid eligibility, as well as lower-income adults with a disabling condition.

We also direct the reader to related OMAS-based research that:

- Examines an additional dimension of SDOH in Ohio:
 - Housing Instability
- Examines the link between SDOH and health among:
 - Older Adults,
 - Women,
 - Children and Adolescents, and
 - Race/Ethnic groups

Figure 1a. Five-Category Framework for the Social Determinants of Health



Adapted from the CDC Social Determinants of Health: Know What Affects Health.

OBJECTIVES

The purpose of this chartbook is to report the distribution of social and economic factors that are known to influence health and to demonstrate that these factors are associated with the health and health behaviors of Ohioans. Using data from the 2019 Ohio Medicaid Assessment Survey, we:

1. Present the patterns of poverty, educational attainment, food insecurity and loneliness among lower-income working age Ohioans across health insurance status.
2. Estimate the prevalence of fair/poor self-rated health status, mental health impairment, current cigarette use, and unmet health care needs across levels of social determinants of health for working age Ohioans as well as the Medicaid-enrolled and Medicaid-eligible population.

METHODS

Data Source

The 2019 Ohio Medicaid Assessment Survey (OMAS) is an Ohio-specific assessment that provides health status and health system-related information about residential Ohioans at the state, regional and county levels, with a concentration on Ohio's Medicaid, Medicaid-eligible, and non-Medicaid populations. This multi-mode study collected data through a sample of landline and cellular phones in Ohio through random digit dialing, as well as by web-based or paper versions through address-based sampling. A total of 31,558 surveys of Ohioans 19 years of age and older and proxy interviews for 7,404 children 18 years of age and younger were completed by researchers in 2019: 30,068 by phone, 950 by web, and 540 by mail-in paper survey. The 2019 OMAS is the eighth iteration of the survey. For details, please see the OMAS methods report at grc.osu.edu/OMAS.

Variable Definitions

Social Determinants of Health

- *Poverty Level*: See 2019 OMAS Methodology Report for details.
- *Educational Attainment*: Educational attainment is measured as 1) Less than high school, 2) High school, and 3) Post-high school degree.
- *Food Security*: Respondents were asked whether in the last year they worried whether food in the household would run out before getting money to buy more, and whether their food ran out before they had money to buy more. We created a measure consisting of mutually exclusive categories:
 - 1) Food Secure (answering 'No' to both questions),
 - 2) Worried about food (indicating worry about food, but not running out of food), and
 - 3) Food ran out.

METHODS

Variable Definitions

- *Loneliness*: Loneliness is measured by summing the number of times a respondent answers 'sometimes or often' to questions about the frequency of lacking companionship, feeling left out, and feeling isolated from others. The total summed score ranges from a low of 3 to a high of 9 with a higher score indicating greater loneliness. Here, we consider respondents 'lonely' if they scored 6 or higher, and respondents as 'not lonely' if they scored less than 6.

Health Outcomes and Behaviors

- *Fair/Poor Self-Rated Health*
- *Mental health impairment (MHI)* is defined as having 14 or more days in the past month where one's mental health interfered with daily functioning.

- *Current cigarette use* is defined a smoking at least 100 cigarettes in a lifetime and currently smoking some days or every day.
- To measure *unmet health care needs*, OMAS asked a series of questions: "During the past 12 months, was there a time when you needed any of the following, but could not get it at that time: dental care, mental health care, alcohol or other drug treatment, or any other care such as medical exam or medical supplies? Respondents who responded 'yes' to any of these questions are considered having an unmet health care need.

METHODS

Other Variables

- *Lower-income* is defined as lower-income adults having income \leq 138% FPL. This is a key threshold for Medicaid eligibility. Among this population we define three insurance categories: 1) Medicaid-enrolled, 2) potentially Medicaid-eligible but covered by other insurance, and 3) potentially Medicaid-eligible but uninsured. We include those enrolled in both Medicaid and Medicare in the “Medicaid-enrolled” category.
- *Disabling condition* is defined as having serious difficulty hearing, seeing even when wearing glasses, walking or climbing stairs, bathing or dressing, concentrating, remembering or making decisions, difficulty doing errands alone, having a development disability, or having 14 or more days in the past month where one’s mental health interfered with daily functioning.



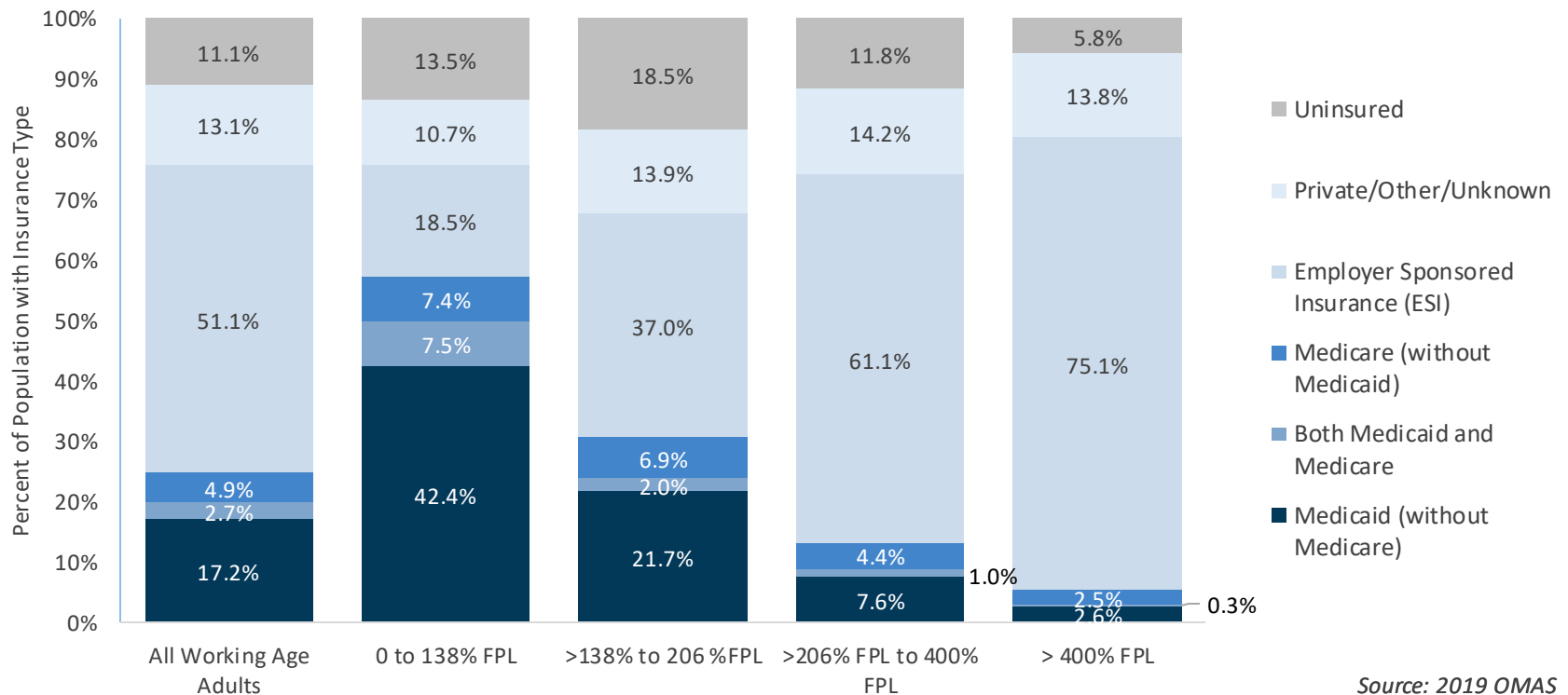
RESULTS: PREVALENCE OF SELECT SOCIAL DETERMINANTS OF HEALTH

This section describes the prevalence of poverty, food insecurity, educational attainment, and loneliness among working age Ohioans.

Key Findings: Prevalence of Select Social Determinants of Health

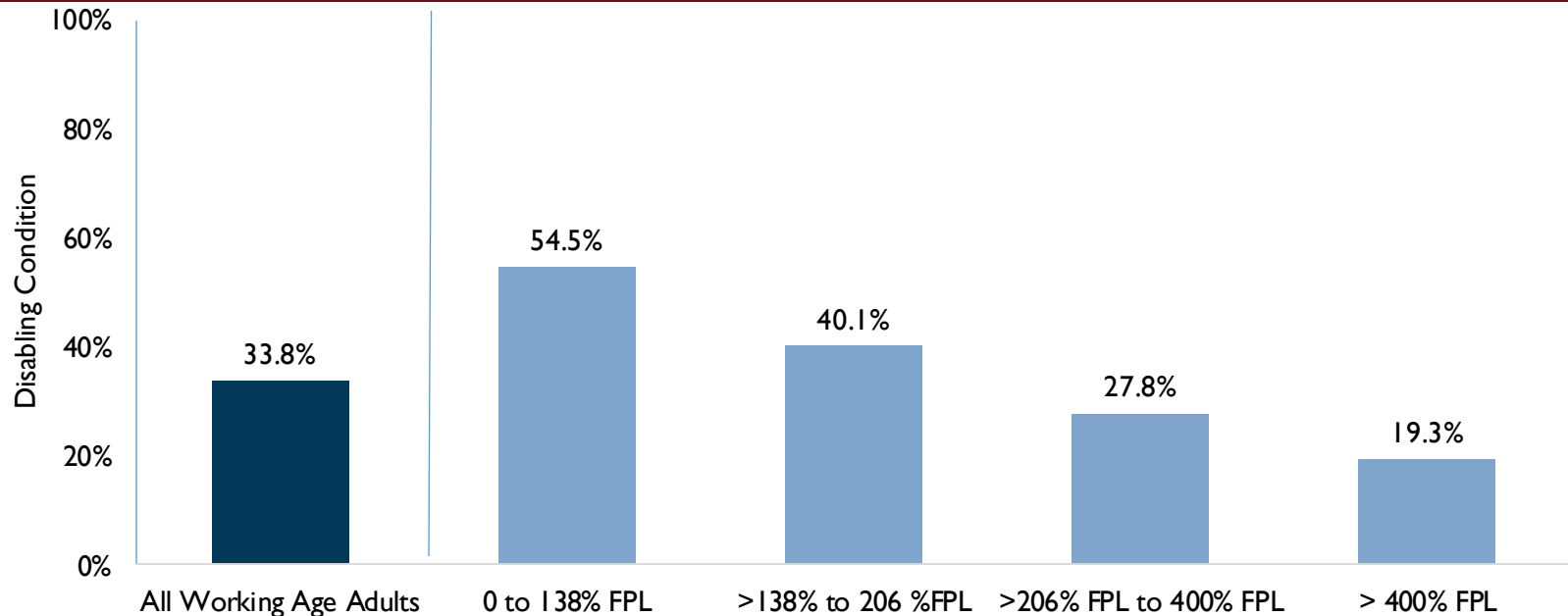
- In 2019, half of lower-income ($\leq 138\%$ FPL), working age Ohioans were covered by Medicaid.
- Roughly 42% of Medicaid-enrolled and 33.3% of uninsured working age adults reported running out of food in the last year before having money to purchase more.
- Almost 22% of working age adults enrolled in Medicaid and 27% of adults potentially Medicaid-eligible but uninsured lacked a high school degree.
- Over half (54.5%) of low-income working age (19 to 64) adults reported a disabling condition in 2019.
- Loneliness was concentrated among working age adults enrolled in Medicaid—over 38% reported being lonely compared with 27.5% of working age adults who were potentially Medicaid-eligible but were covered by other insurance and 33.3% of adults who were uninsured.

Figure 1. Insurance Status/Type by Federal Poverty Level (FPL)



- In 2019, close to half (49.9%) of working age adults living at or below 138% of the federal poverty level (FPL) were covered by Medicaid alone (42.4%) or combined with Medicare (7.5%).

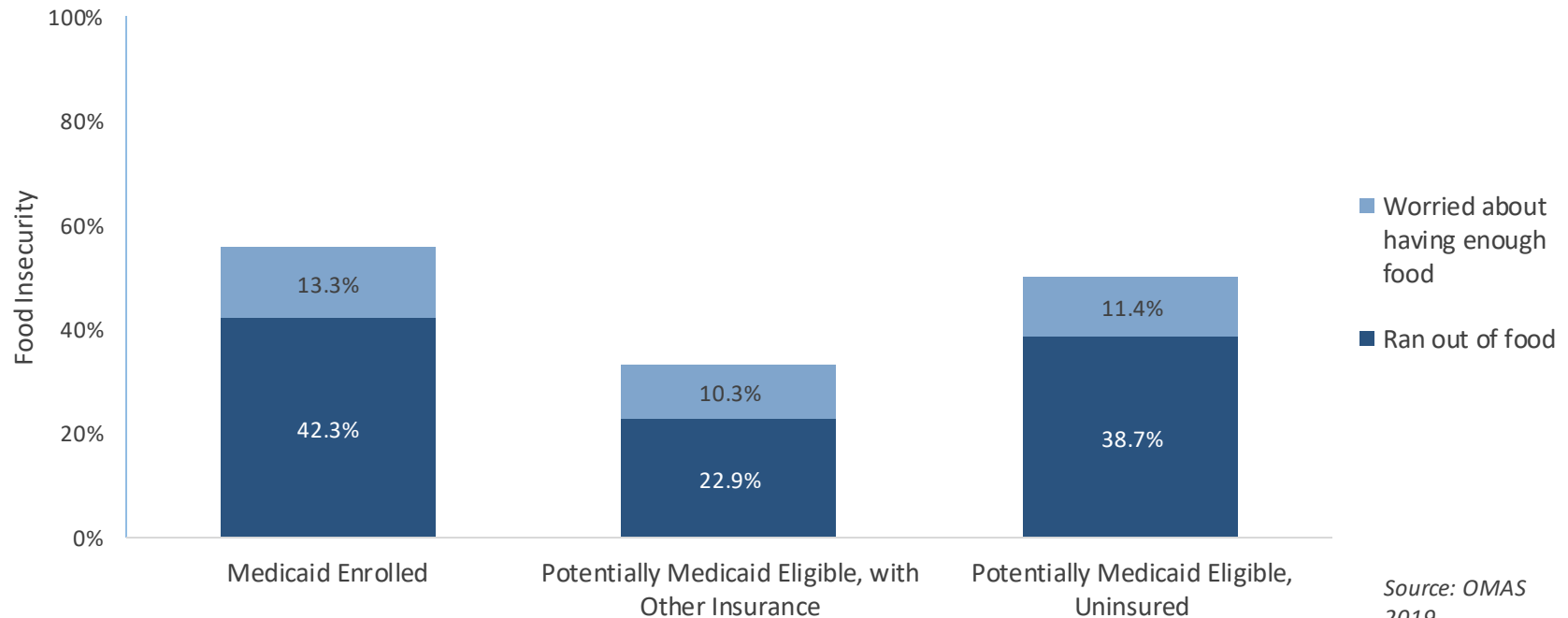
Figure 2. Percent of Working Age Ohioans (Ages 19 to 64) with a Disabling Condition by Federal Poverty Level (FPL)



Disabling Condition is defined as having serious difficulty hearing, seeing even when wearing glasses, walking or climbing stairs, bathing or dressing, concentrating, remembering or making decisions, difficulty doing errands alone, having a developmental disability, and/or having 14 or more days in the past month where one's mental health interfered with daily functioning.

- Among all working age adults in Ohio, the prevalence of a potentially disabling condition in 2019 was 33.8%.
- Over half (54.5%) of lower-income ($\leq 138\%$ FPL) working age adults reported a disabling condition in 2019. Individuals living above 400% FPL had the lowest rates at 19.3%.

Figure 3. The Prevalence of Food Insecurity among Lower-Income ($\leq 138\%$ FPL) Working Age Ohioans (ages 19 to 64) by Insurance Status

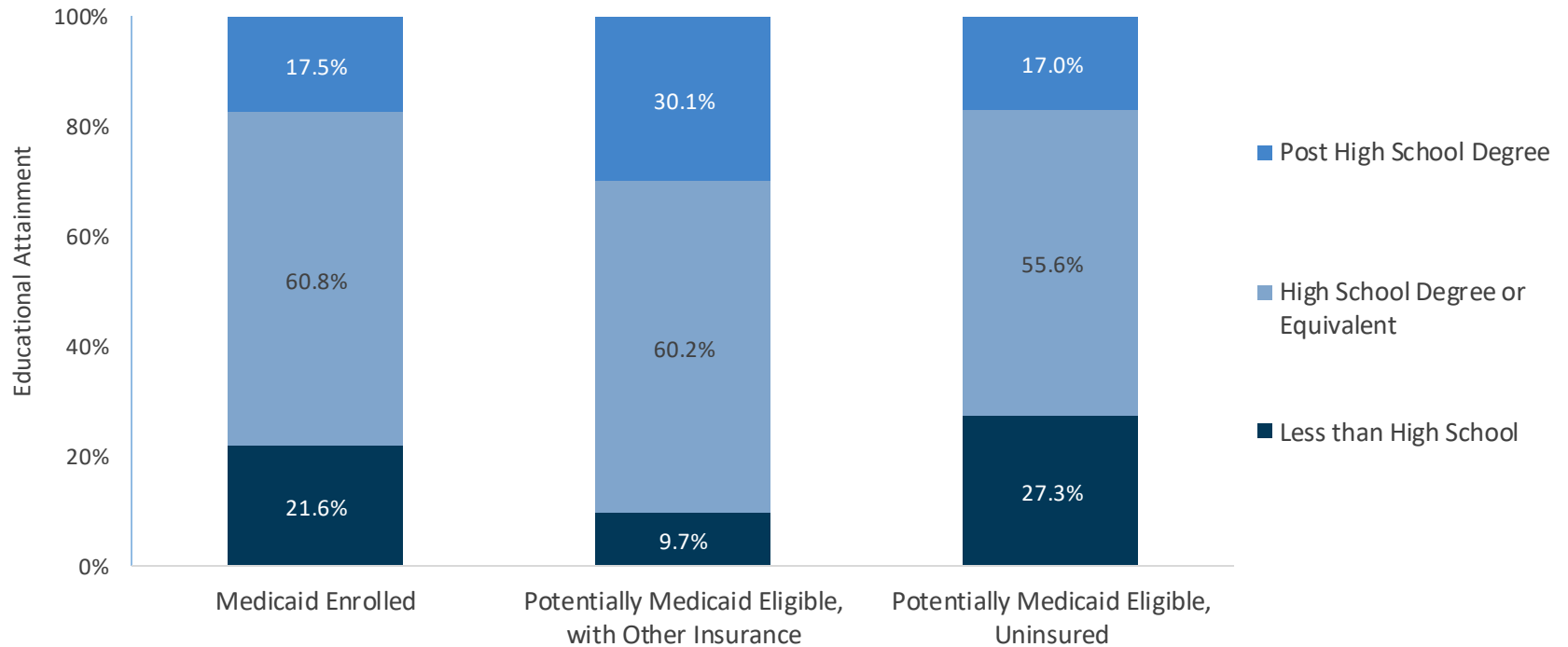


Source: OMAS 2019

Respondents were asked whether in the last year they worried whether food in the household would run out before getting money to buy more, and whether their food actually ran out before they had money to buy more. We created a measure consisting of mutually exclusive categories: 1) Food Secure (answering 'No' to both questions), 2) Worried about having enough food (indicating worry about food, but not running out of food), and 3) Ran out of food.

- The prevalence of food insecurity varied by insurance status among Ohioans living at or below 138% of the FPL. In 2019, 42.3% of working age adults enrolled in Medicaid reported they had run out of food in the past year before having money to buy more, and an additional 13.3% reported worrying about running out of food.

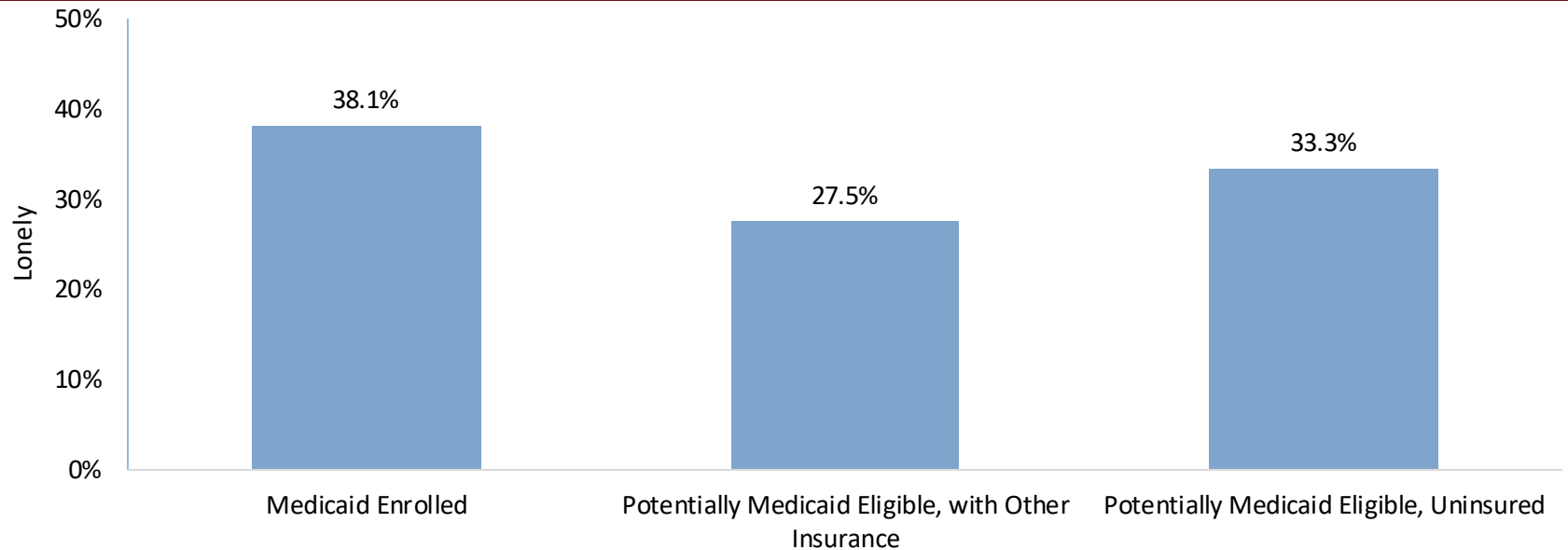
Figure 4. The Prevalence of Educational Attainment by Insurance Status among Lower-Income ($\leq 138\%$ FPL) Ohio Adults (ages 19 to 64)



Source: OMAS 2019

- Among working age adults living at or below 138% of the FPL, educational attainment varied by insurance type. In 2019, almost twenty-two percent (21.6%) of Medicaid-enrolled working age adults and 27.3% of the uninsured held less than a high school degree.

Figure 5. Percent of Lower-Income ($\leq 138\%$ FPL) Working Age Ohioans (ages 19 to 64) who reported Being Lonely by Insurance Status



Source: OMAS 2019

Loneliness is measured by summing the number of times a respondent answers 'sometimes or often' to questions about the frequency of lacking companionship, feeling left out, and feeling isolated from others. The total summed score ranges from a low of 3 to a high of 9 with a higher score indicating greater loneliness. Here, we consider respondents 'lonely' if they scored 6 or higher, and respondents as 'not lonely' if they scored less than 6.

- In 2019, the prevalence of loneliness among lower-income working age adults was highest among the Medicaid-enrolled. Thirty-eight percent (38.1%) of Medicaid-enrolled adults (ages 19 to 64) reported being lonely compared with 27.5% of adults who were potentially Medicaid-eligible but were covered by other insurance and 33.3% of adults who were uninsured.

A photograph of a healthcare professional in a white lab coat and mask examining a patient's arm in a clinical setting. The image is overlaid with a semi-transparent blue filter. The text is centered in the lower half of the image.

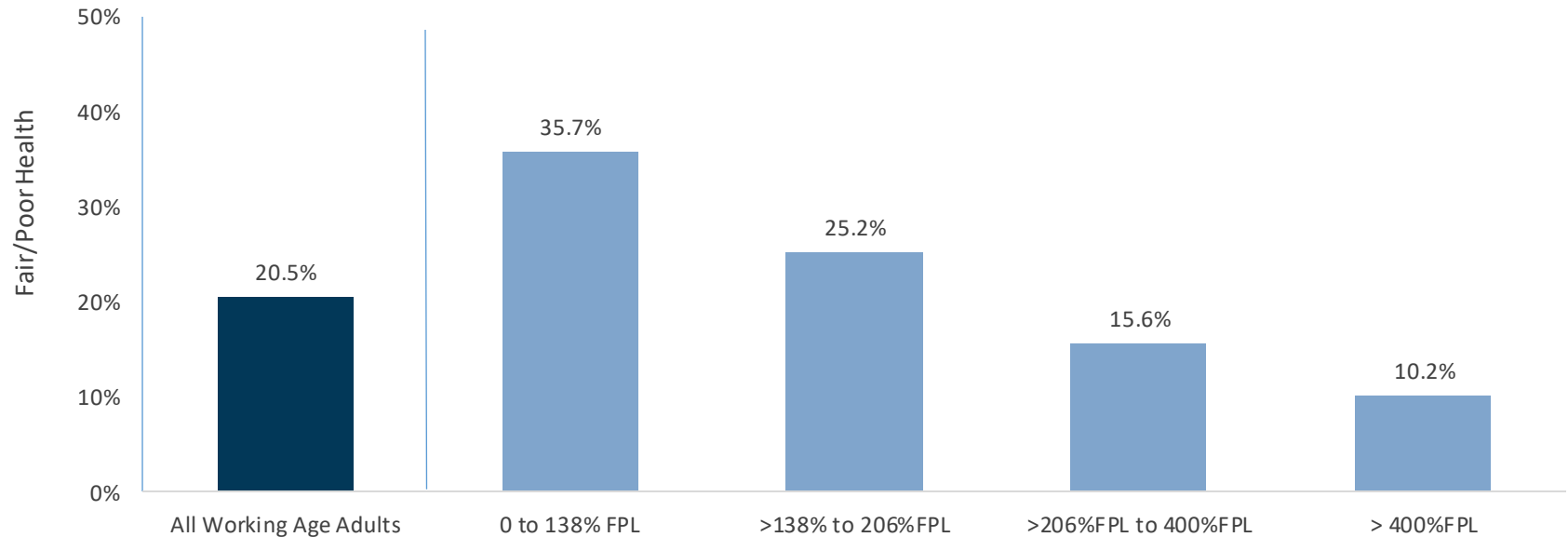
RESULTS: FAIR/POOR SELF-RATED HEALTH

This section presents the prevalence of fair/poor self-rated health by federal poverty level, educational attainment, food insecurity, and loneliness

Key Findings: Fair/Poor Self-Rated Health

- There was an income gradient in the prevalence of fair/poor health among working age adults. Lower-income Ohioans ($\leq 138\%$ FPL) reported fair/poor health three times the rate of those with incomes above 400% FPL.
- There was also an education gradient in the prevalence of fair/poor health. The prevalence of fair/poor self-rated health was highest among working age Ohioans with less than a high school degree.
- Food insecurity was associated with worse health, particularly among working age adults enrolled in Medicaid. Over half (54.1%) of Medicaid-enrolled adults who ran out of food in the last year reported having fair/poor health.
- Loneliness was associated with worse health among lower-income working age Ohioans. Well over half (57.8%) of Medicaid-enrolled adults who were lonely, also reported being in fair/poor health.

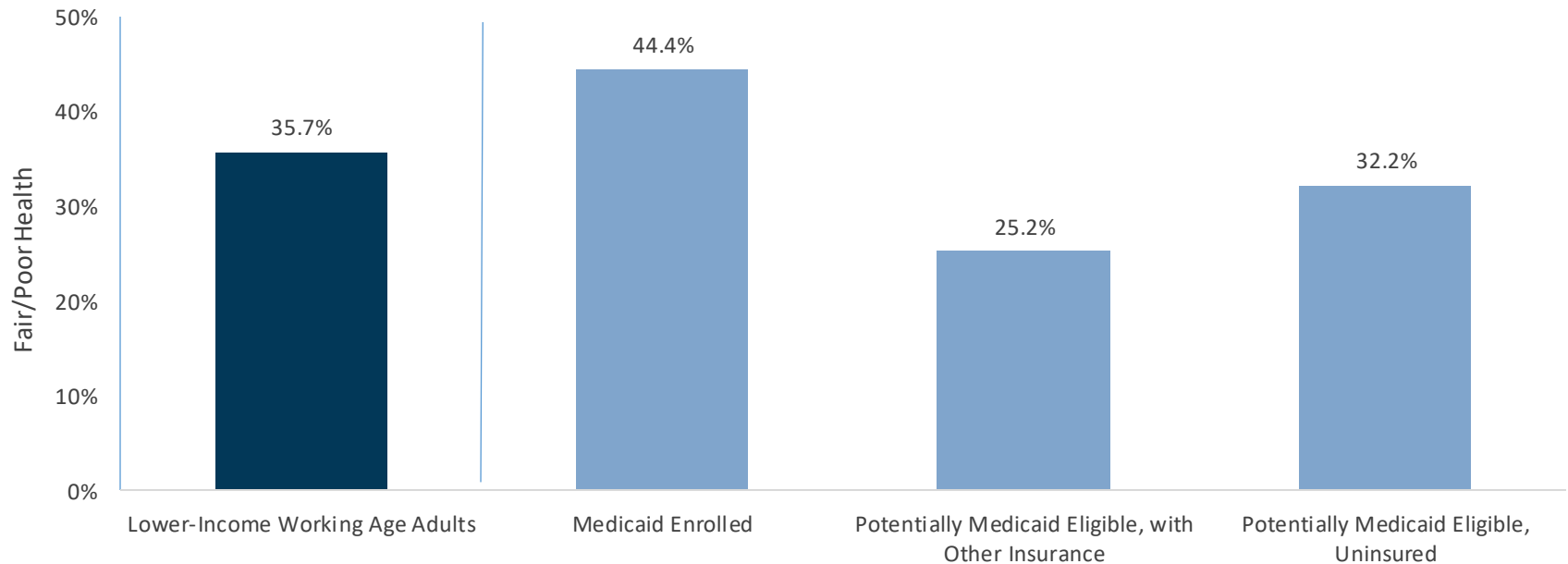
Figure 6. Percent of Ohioans (Ages 19 to 64) with Fair/Poor Self-rated Health by Federal Poverty Level(FPL)



Source: OMAS 2019

- Roughly one out of five (20.5%) working age Ohioans reported fair/poor health in 2019; however, the prevalence varied by poverty level. The prevalence of fair/poor health declined at increasing levels of income.
- Among adults living at or below 138% FPL, the prevalence of fair/poor health was 35.7%, compared to 10.2% for adults living above 400% FPL.

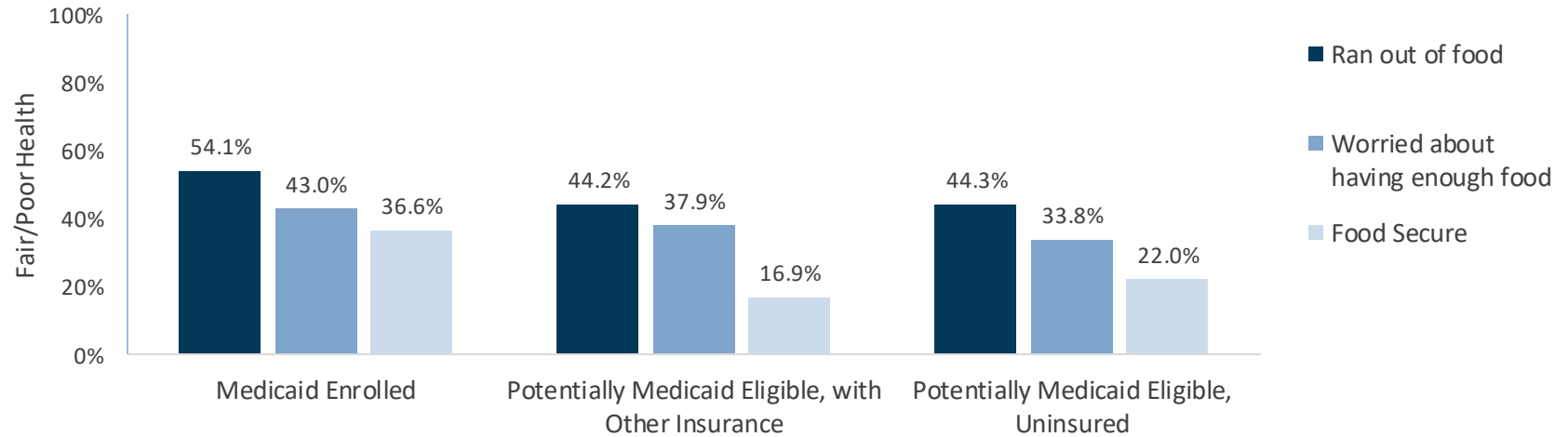
Figure 7. Percent of Lower-Income ($\leq 138\%$ FPL) Ohioans (ages 19 to 64) with Fair/Poor Self-rated Health by Insurance Status



Source: OMAS 2019

- In 2019, 35.7% of lower-income working age adults reported fair/poor health status.
- Fair/poor health status was reported by roughly 45 percent (44.4%) of Medicaid-enrolled adults, 25.2% of adults potentially Medicaid-eligible who were covered by other insurance, and almost 32.2% of the potentially Medicaid-eligible uninsured.

Figure 8. Percent of Lower-Income ($\leq 138\%$ FPL) Ohioans (ages 19 to 64) with Fair/Poor Self-rated Health by Food Insecurity & Insurance Status

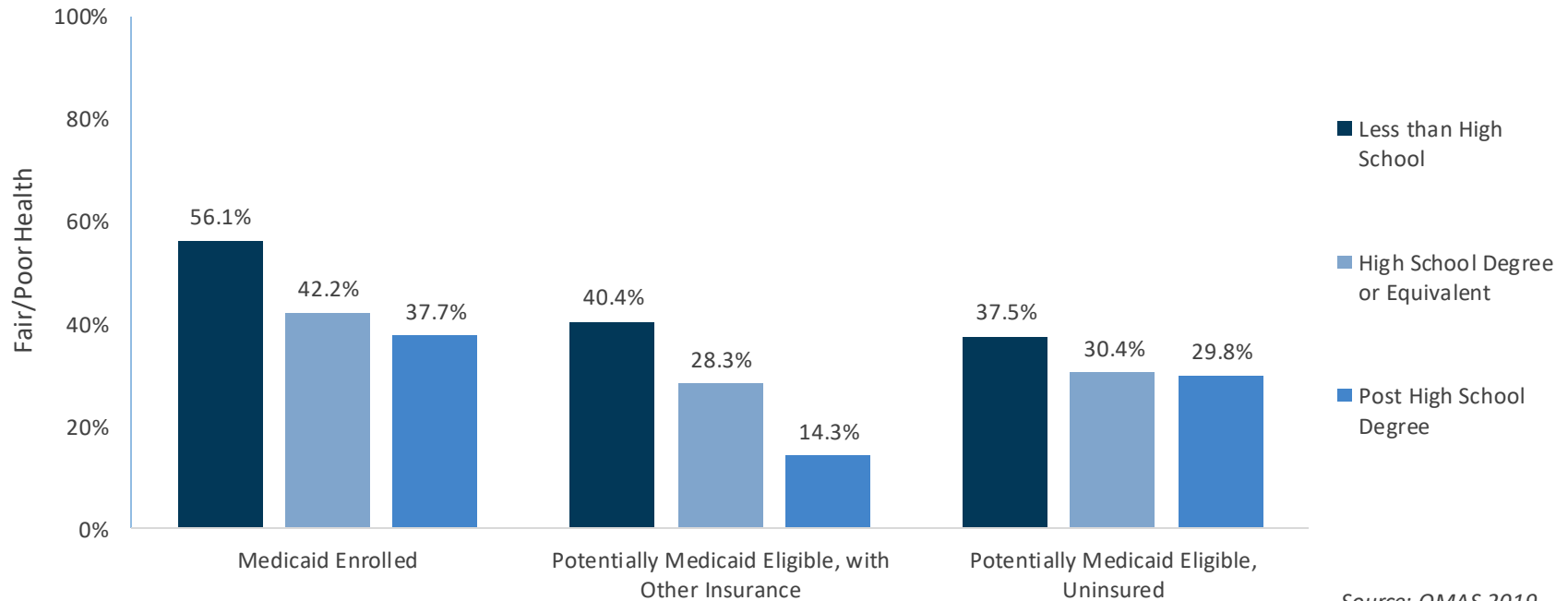


Source: 2019 OMAS

Respondents were asked whether in the last year they worried whether food in the household would run out before getting money to buy more, and whether their food actually ran out before they had money to buy more. We created a measure consisting of mutually exclusive categories: 1) Food Secure (answering 'No' to both questions), 2) Worried about having enough food (indicating worry about food, but not running out of food), and 3) Ran out of food.

- In 2019, the prevalence of fair/poor health was highest among lower-income working age adults who reported running out of food in the past year. Well over half (54.1%) of adults enrolled in Medicaid who ran out of food in the past year reported fair/poor health.
- For each insurance status, lower-income adults who worried about running out of food, or actually ran out of food in the past year reported higher rates of fair/poor health than those who were food secure.

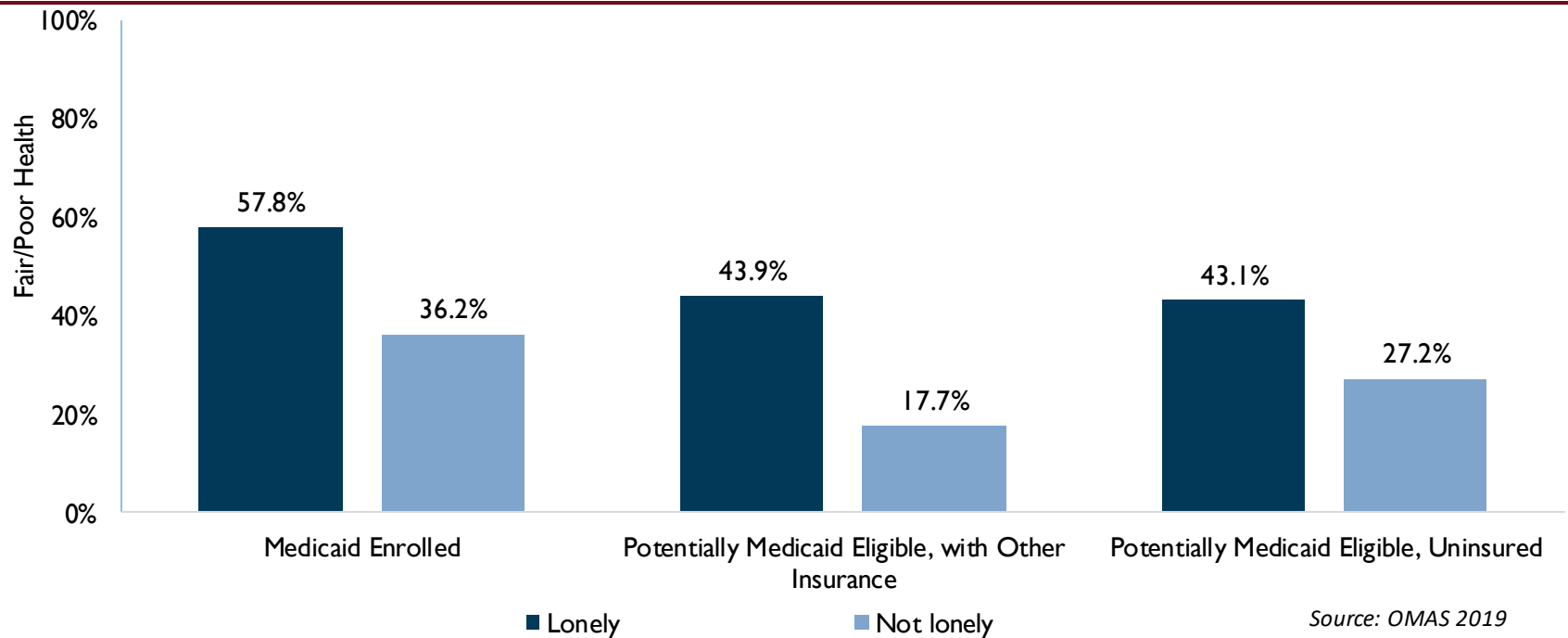
Figure 9. Percent of Lower-Income ($\leq 138\%$ FPL) Working Age Ohioans (ages 19 to 64) with Fair/Poor Health by Educational Attainment & Insurance Status



Source: OMAS 2019

- Among lower-income working age Ohioans, the prevalence of fair/poor health declined at increasing levels of educational attainment. Among adults enrolled in Medicaid, well over half without a high school degree (56.1%) reported fair/poor health compared to 37.7% with a post-high school degree.
- Medicaid-enrolled adults who lacked a high school degree reported substantially higher rates of fair/poor health compared to other groups.

Figure 10. Percent of Lower-Income ($\leq 138\%$ FPL) Working Age Ohioans (ages 19 to 64) with Fair/Poor Health by Loneliness & Insurance Status



Loneliness is measured by summing the number of times a respondent answers 'sometimes or often' to questions about the frequency of lacking companionship, feeling left out, and feeling isolated from others. The total summed score ranges from a low of 3 to a high of 9 with a higher score indicating greater loneliness. Here, we consider respondents 'lonely' if they scored 6 or higher, and respondents as 'not lonely' if they scored less than 6.

Among those living at or below 138% FPL in 2019, the prevalence of fair/poor self-rated health was higher among lonely working age adults compared with those who were not lonely. The association of loneliness with fair/poor health status is weaker for people enrolled in Medicaid, than for potentially Medicaid-eligible people who have other types of insurance. One interpretation is that Medicaid does a better job than these other types of insurance in providing mental health services, case management and other supports that may attenuate the effect of loneliness on health status.



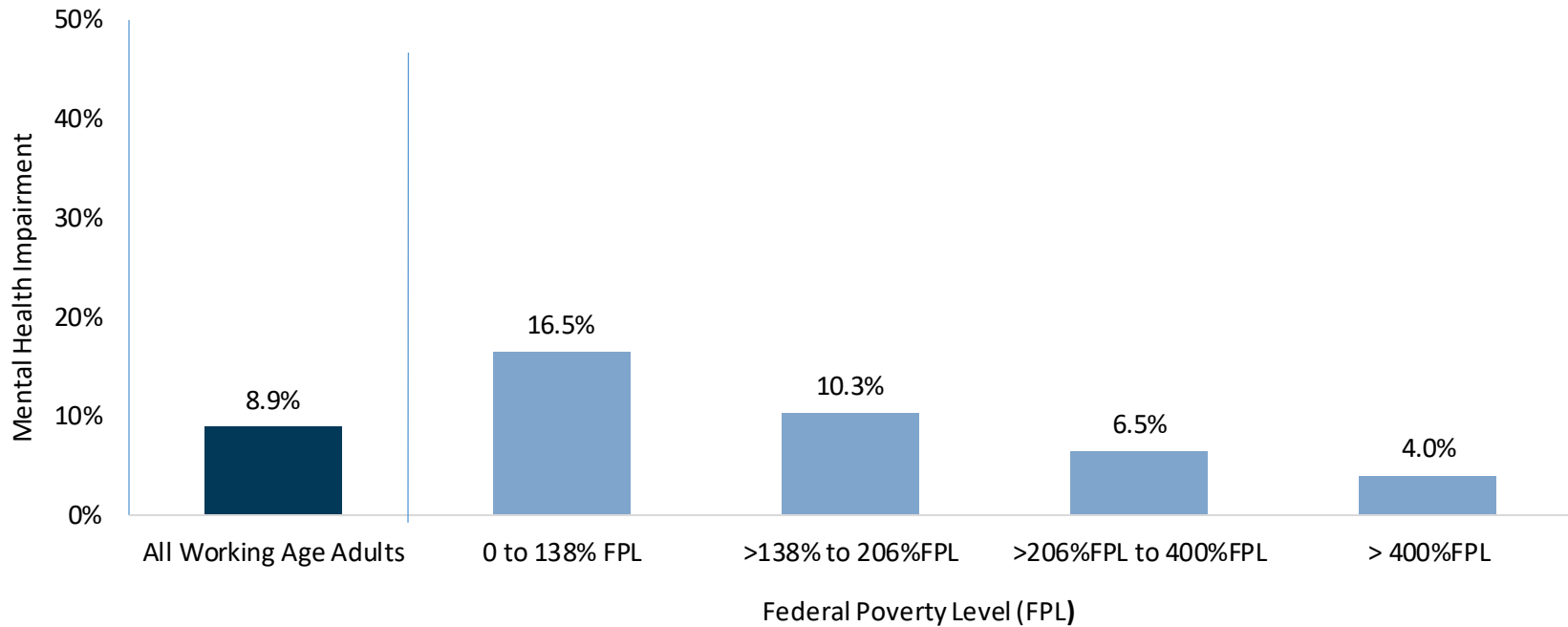
RESULTS: MENTAL HEALTH IMPAIRMENT

This section presents the prevalence of mental health impairment by federal poverty level, educational attainment, food insecurity, and loneliness

Key Findings: Mental Health Impairment

- There was an income gradient in the prevalence of mental health impairment (MHI) among working age adults. Lower-income Ohioans ($\leq 138\%$ FPL) reported MHI four times the rate of those with incomes above 400% FPL.
- There was also an education gradient in the prevalence of mental health impairment. The prevalence of MHI was highest among working age Ohioans with less than a high school degree.
- Working age adults enrolled in Medicaid had higher rates of MHI than adults who were potentially-eligible for Medicaid but were covered by other insurance across all levels of educational attainment, food hardship, and loneliness.
- MHI was associated with loneliness. Working age Ohioans who were lonely reported higher rates of MHI than those who were not lonely.

Figure 11. Percent of Working Age Ohioans (ages 19 to 64) with Mental Health Impairment (MHI) by Poverty Level

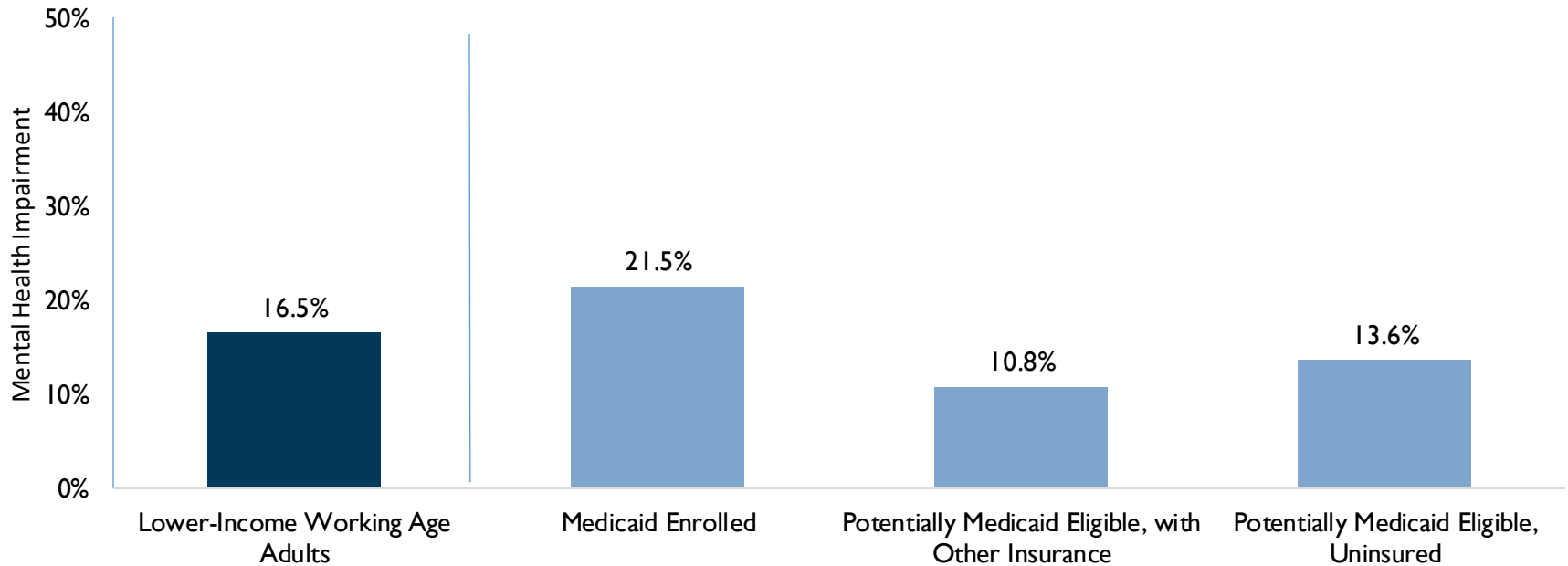


Mental health impairment (MHI) is defined as having 14 or more days in the past month where one's mental health interfered with daily functioning.

Source: OMAS 2019

- Among working age Ohioans, the prevalence of mental health impairment (MHI) was 8.9% in 2019, but there were marked differences by income level.
- The prevalence of MHI among lower-income (0 to 138% FPL) working age adults was 16.5% compared to 4% for those living above 400% FPL.

Figure 12. Percent of Lower-Income ($\leq 138\%$ FPL) Working Age Ohioans (ages 19 to 64) with Mental Health Impairment (MHI) by Insurance Status

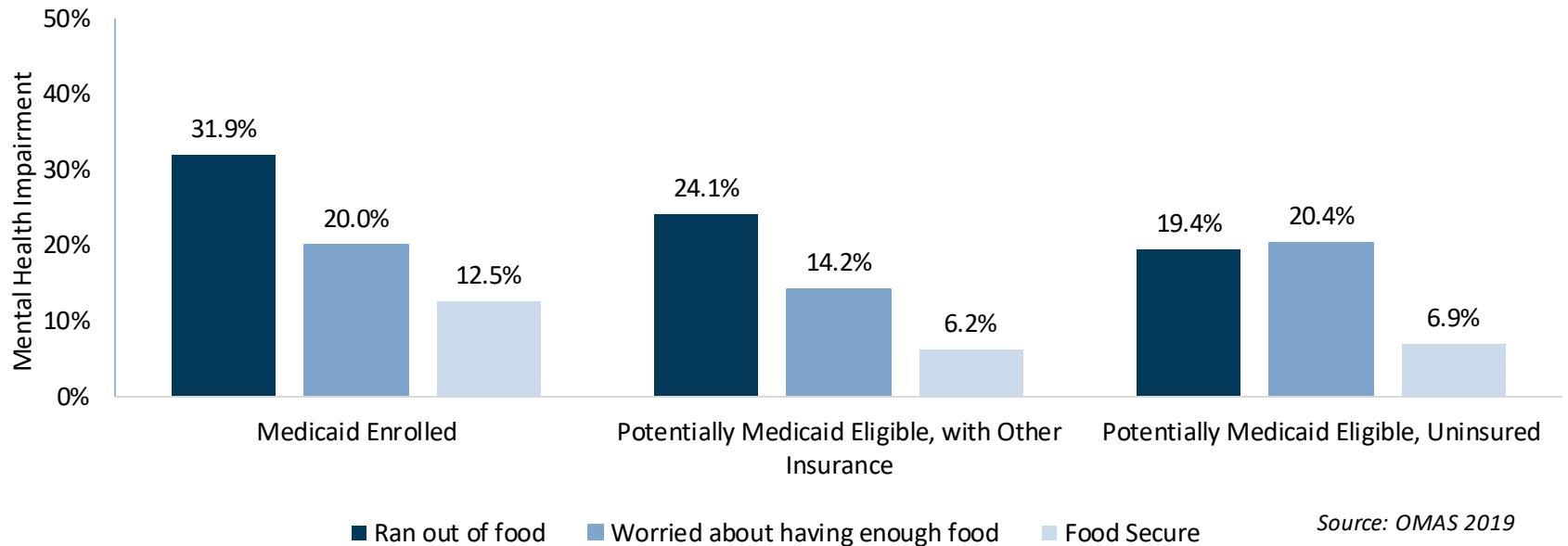


Mental health impairment (MHI) is defined as having 14 or more days in the past month where one's mental health interfered with daily functioning.

Source: OMAS 2019

- Among lower-income working age adults, the prevalence of MHI was 16.5% in 2019.
- Over one out of five (21.5%) Medicaid-enrolled adults reported MHI in 2019, compared with 10.8% of the potentially Medicaid-eligible who were covered by other insurance, and 13.6% of the uninsured.

Figure 13. Percent of Lower-Income ($\leq 138\%$ FPL) Ohioans (ages 19 to 64) with Mental Health Impairment (MHI) by Food Insecurity & Insurance Status

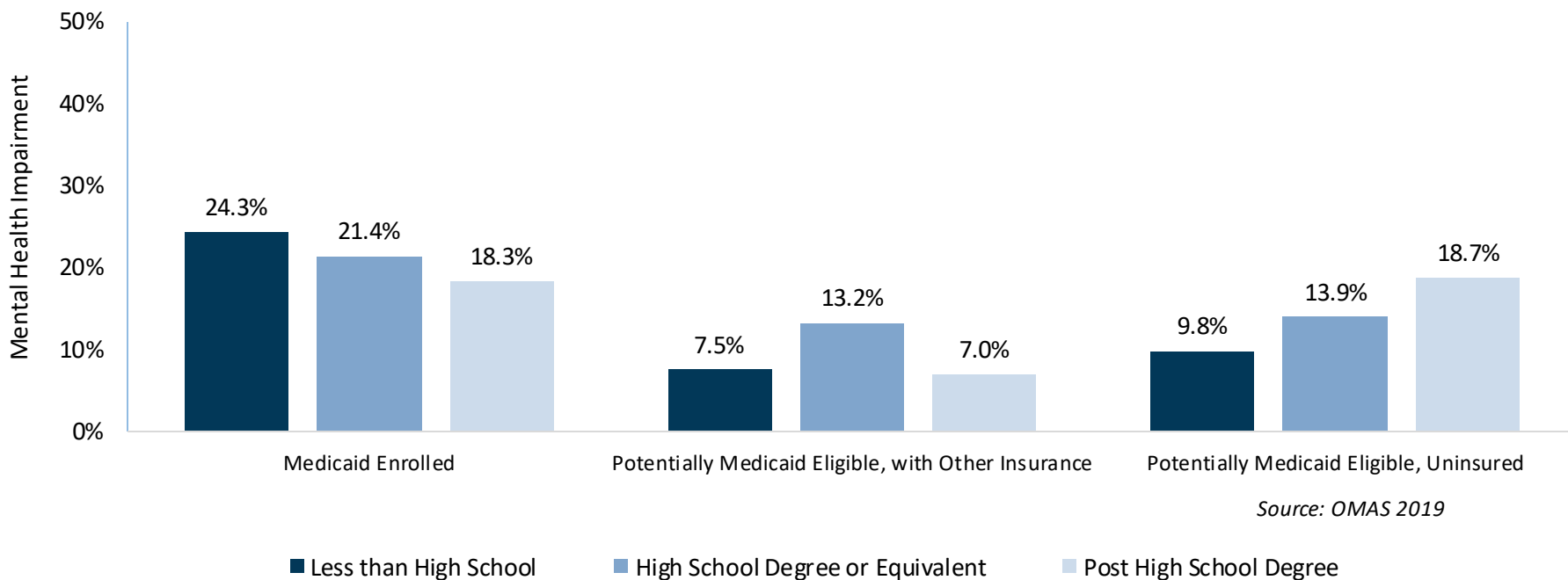


Mental health impairment (MHI) is defined as having 14 or more days in the past month where one's mental health interfered with daily functioning.

Respondents were asked whether in the last year they worried whether food in the household would run out before getting money to buy more, and whether their food actually ran out before they had money to buy more. We created a measure consisting of mutually exclusive categories: 1) Food Secure (answering 'No' to both questions), 2) Worried about having enough food (indicating worry about food, but not running out of food), and 3) Ran out of food.

- In 2019, the prevalence of MHI was highest among working age Ohioans who worried about running out of food or actually ran out of food in the past year, particularly among those enrolled in Medicaid. Almost a third (31.9%) of Medicaid enrolled adults who ran out of food in the past year also reported having a mental health impairment.

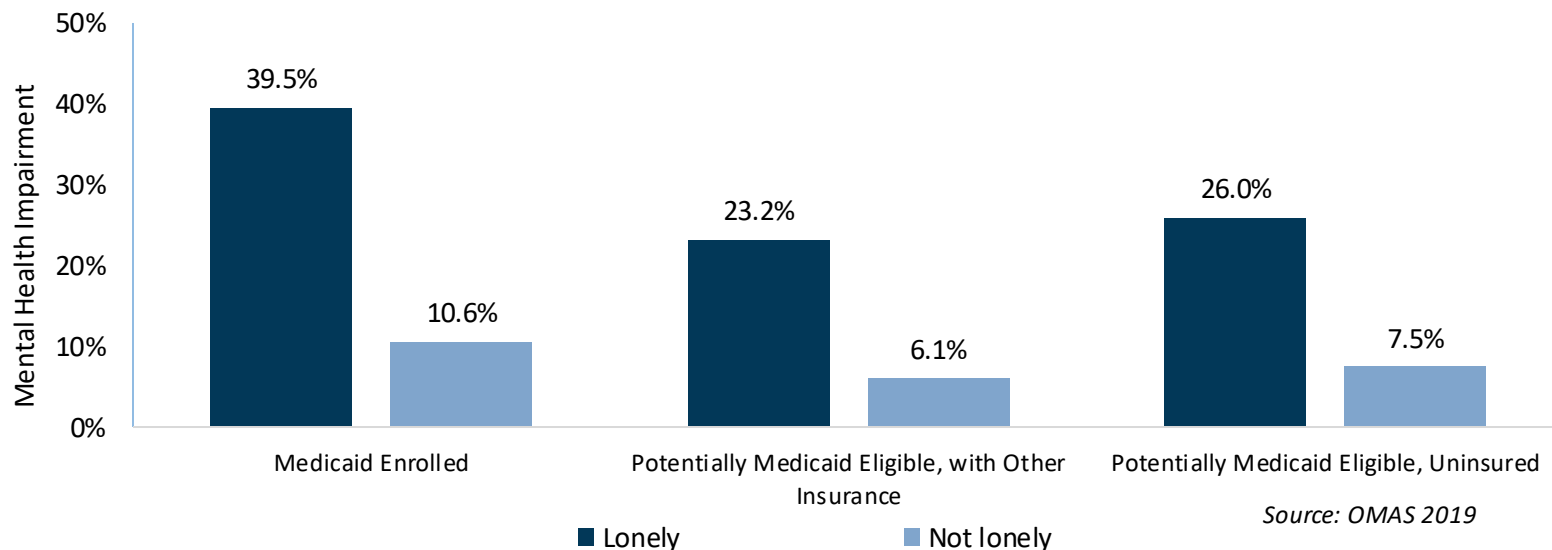
Figure 14. Percent of Lower-Income (≤ 138 FPL) Working Age Ohioans (ages 19 to 64) with Mental Health Impairment (MHI) by Educational Attainment & Insurance Status



Mental health impairment (MHI) is defined as having 14 or more days in the past month where one's mental health interfered with daily functioning.

- Among the Medicaid-enrolled population, the prevalence of MHI was highest among the least educated. The pattern was less consistent among working age adults who were potentially Medicaid-eligible but not enrolled.
- Among the uninsured, the prevalence of MHI was highest among individuals with a post-high school degree. This may reflect the younger average age of the uninsured population and the younger age profile of individuals with MHI.

Figure 15. Percent of Lower-Income ($\leq 138\%$ FPL) Working Age Ohioans (ages 19 to 64) with Mental Health Impairment (MHI) by Loneliness & Insurance Status



Mental health impairment (MHI) is defined as having 14 or more days in the past month where one's mental health interfered with daily functioning.

Loneliness is constructed as a count of the number of times a woman answers 'sometimes or often' to questions about the frequency of lacking companionship, feeling left out, and feeling isolated from others. Loneliness in this case can range from a count greater than or equal to three, but less than or equal to nine. Here, we consider the state of being lonely as having a score greater than or equal to six.

- The prevalence of mental health impairment (MHI) was substantially higher among lower-income working age Ohioans who were lonely compared to those who were not. Almost 40% of Medicaid enrolled adults who were lonely reported having a mental health impairment compared with 10.6% who were not lonely.

A person's face is shown in profile, looking downwards. In the foreground, there is a crumpled piece of white paper. The background is a dark blue gradient.

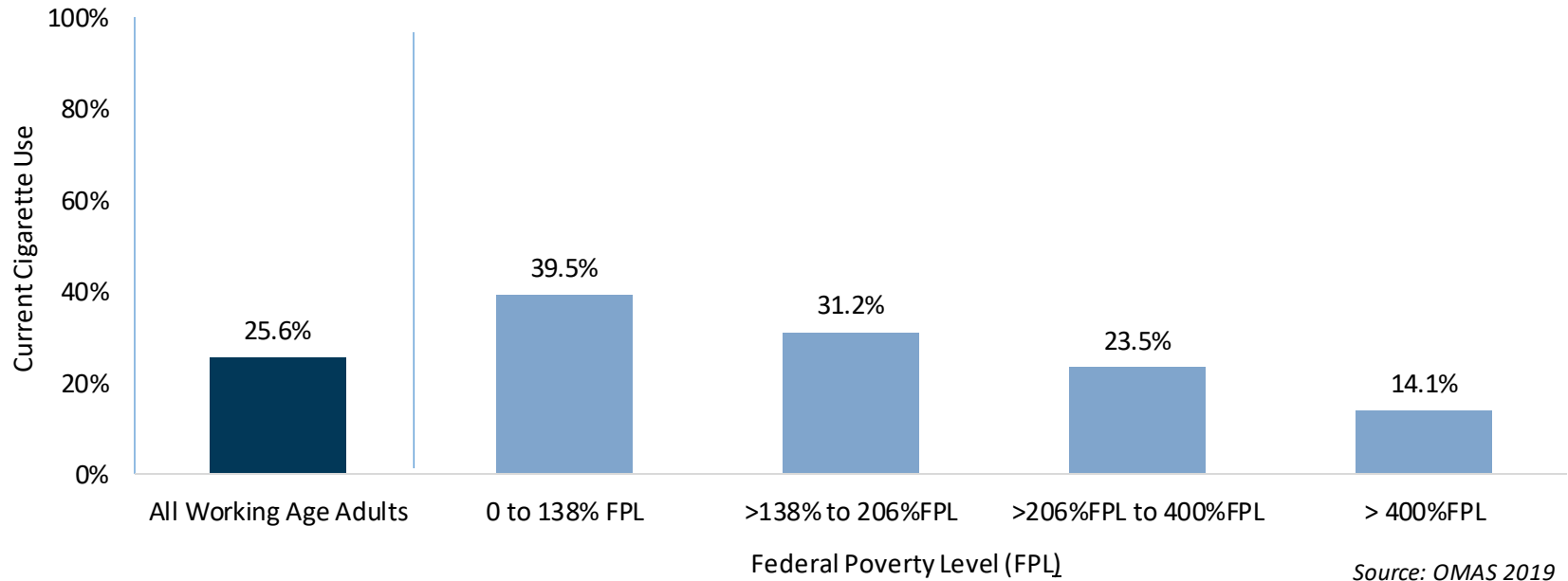
RESULTS: CURRENT CIGARETTE USE

This section presents the prevalence of current cigarette use by federal poverty level, educational attainment, food insecurity, the presence of a disabling condition and loneliness

Key Findings: Current Cigarette Use

- The highest rates of smoking for working age Ohio adults were among those with the lowest incomes and with the lowest levels of education.
- Reflecting the multiple stressors of living in poverty, current cigarette use was associated with food insecurity, particularly among working age adults enrolled in Medicaid.
- Cigarette use was associated with loneliness. Working age Ohioans who were lonely reported higher rates of current cigarette use than those who were not lonely.
- The prevalence of current cigarette use was higher among working age adults enrolled in Medicaid compared with those who were potentially Medicaid-eligible but were covered by other insurance, across all levels of education, food insecurity, and loneliness.

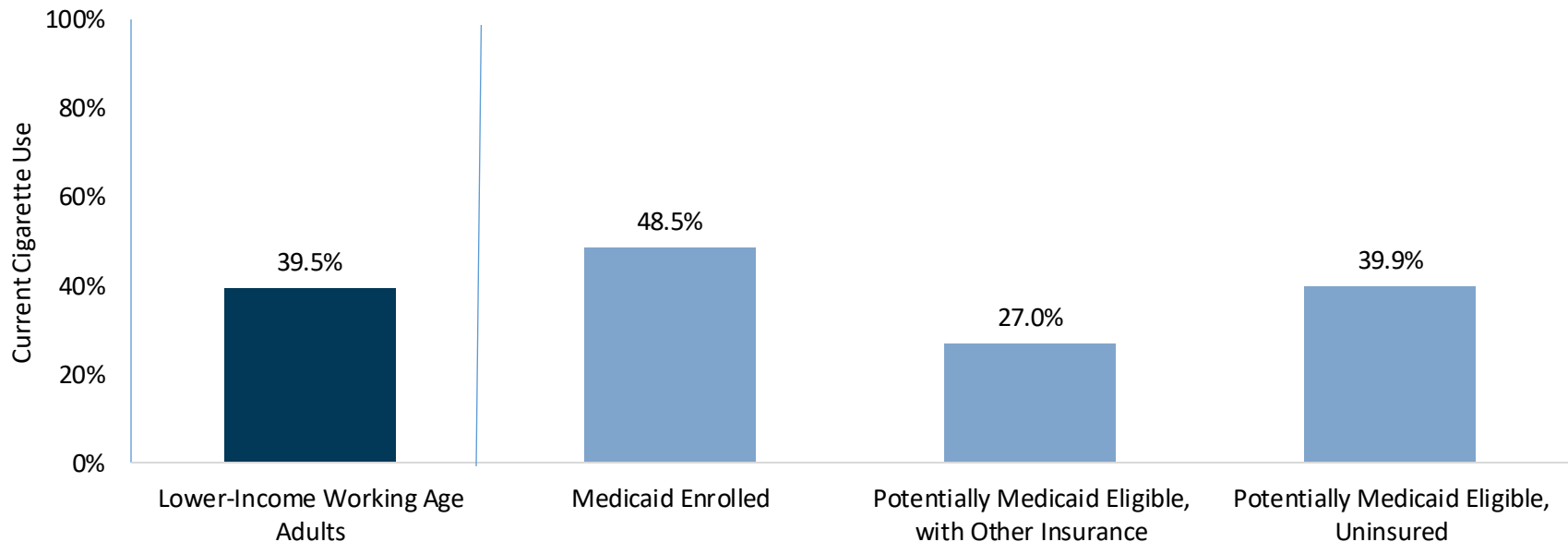
Figure 16. Percent of Working Age Ohioans (ages 19 to 64) reporting Current Cigarette Use by Poverty Level



Current cigarette use is defined as smoking at least 100 cigarettes in a lifetime and currently smoking some days or every day.

- In 2019, over a quarter (25.6%) of working age adults in Ohio reported currently using cigarettes, but there were marked differences in the prevalence by poverty level. Among lower-income Ohioans (0 to 138% FPL), 39.5% reported currently using cigarettes compared to 14.1% of those living above 400% FPL.

Figure 17. Percent of Lower-Income ($\leq 138\%$ FPL) Working Age Ohioans (ages 19 to 64) reporting Current Cigarette Use by Insurance Status

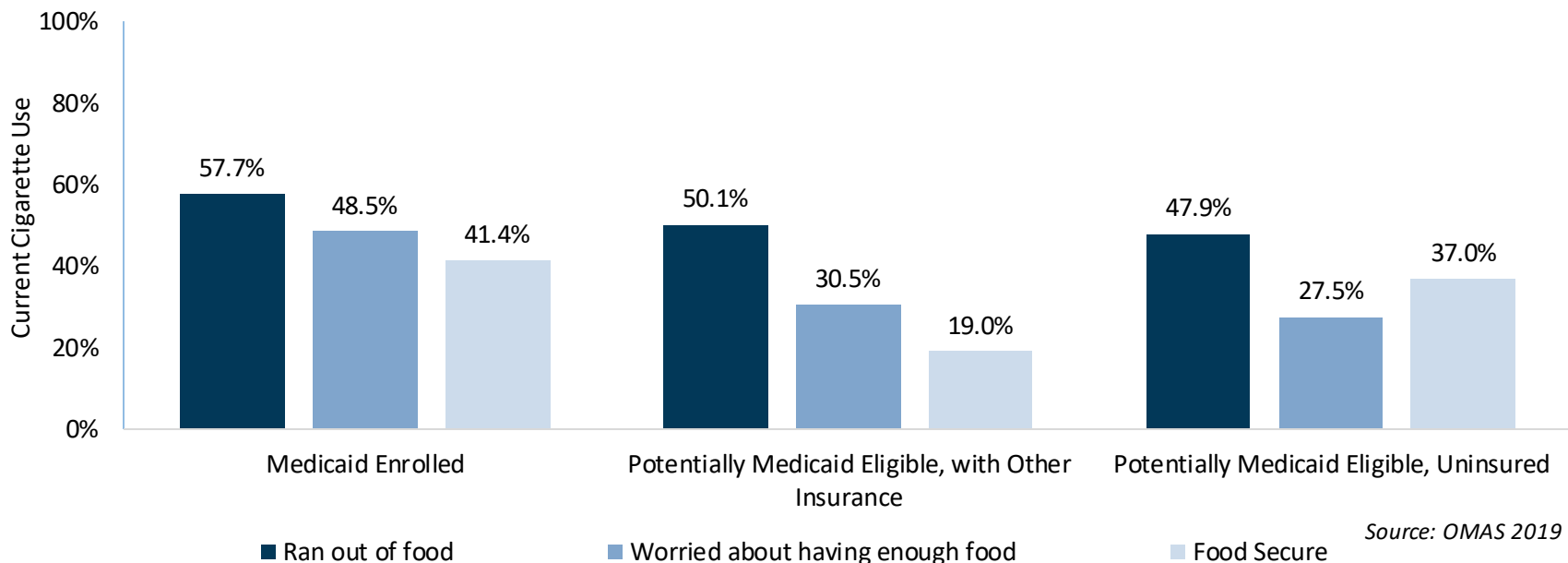


Source: OMAS 2019

Current cigarette use is defined as smoking at least 100 cigarettes in a lifetime and currently smoking some days or every day.

- In 2019, 39.5% of lower-income working age adults in Ohio reported current cigarette use.
- The prevalence of current cigarette use varied by insurance status. Close to half (48.5%) of adults who were enrolled in Medicaid reported current cigarette use, compared to 27% of adults who were potentially Medicaid-eligible but covered by other insurance, and roughly 40% of the uninsured.

Figure 18. Percent of Lower-Income ($\leq 138\%$ FPL) Working Age Ohioans (ages 19 to 64) reporting Current Cigarette Use by Food Insecurity & Insurance Status

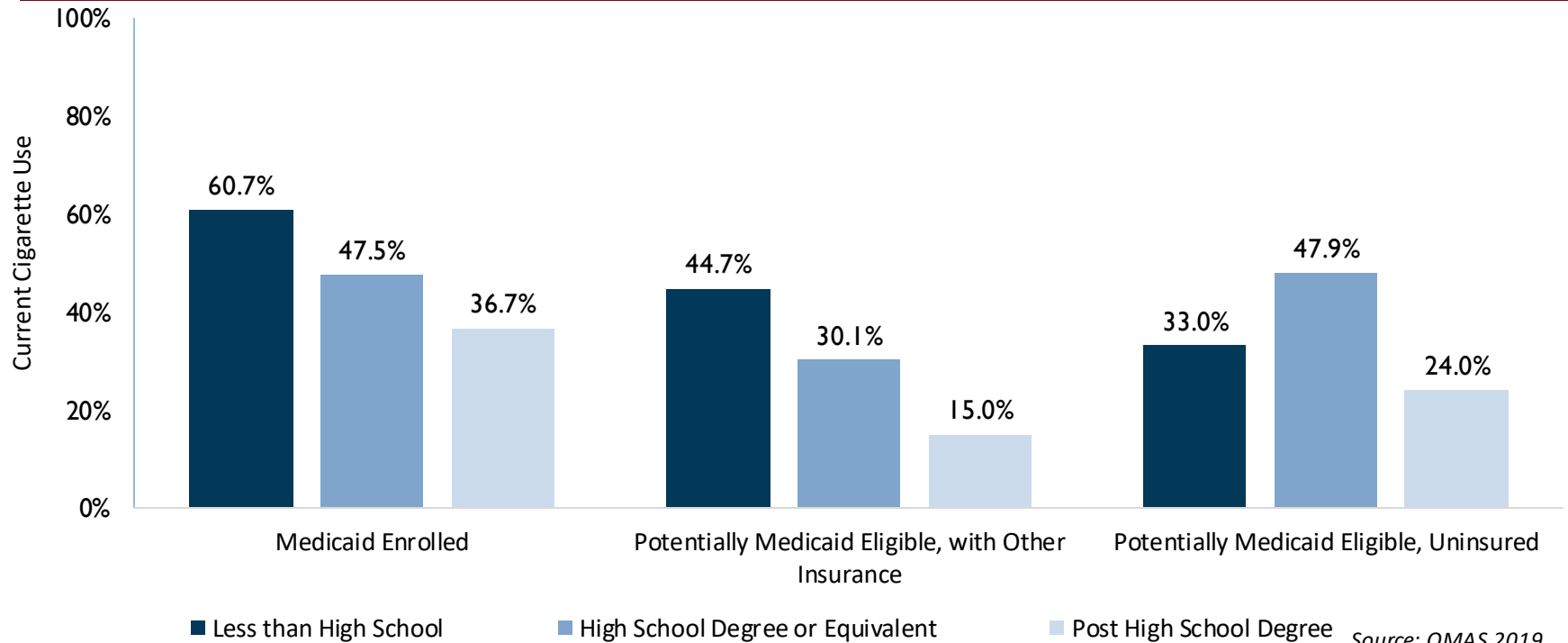


Current cigarette use is defined as smoking at least 100 cigarettes in a lifetime and currently smoking some days or every day.

Respondents were asked whether in the last year they worried whether food in the household would run out before getting money to buy more, and whether their food actually ran out before they had money to buy more. We created a measure consisting of mutually exclusive categories: 1) Food Secure (answering 'No' to both questions), 2) Worried about having enough food (indicating worry about food, but not running out of food), and 3) Ran out of food.

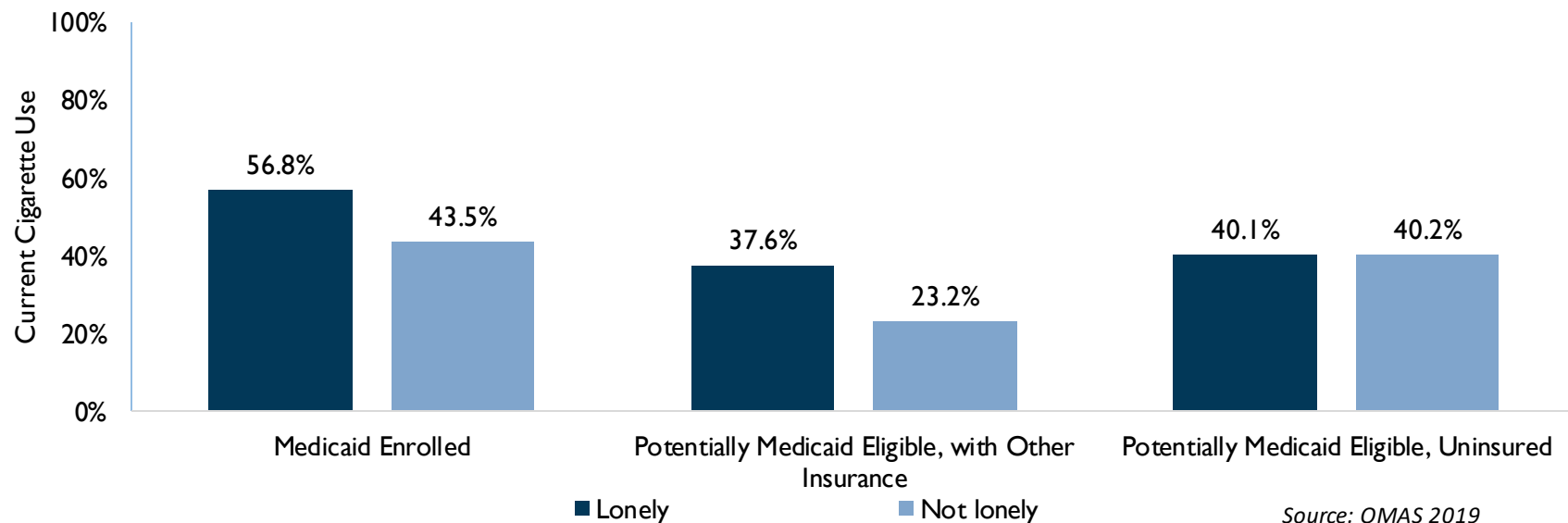
- In 2019, the prevalence of current cigarette use was highest among lower-income working age adults who also faced the added burden of food insecurity. Among the Medicaid enrolled, the prevalence of cigarette use was 41.4% among the food secure, rising to 57.7% among those who ran out of food in the past year.

Figure 19. Percent of Lower-Income ($\leq 138\%$ FPL) Working Age Ohioans (ages 19 to 64) reporting Current Cigarette Use by Educational Attainment & Insurance Status



- For most lower-income adults, the prevalence of current cigarette use declined with increasing levels of education.
- In 2019, 60.7% of adults enrolled in Medicaid who had less than a high school degree reported current cigarette use. This fell to 36.7% for Medicaid enrolled adults who held a post high school degree.

Figure 20. Percent of Lower-Income ($\leq 138\%$ FPL) Working Age Ohioans (ages 19 to 64) reporting Current Cigarette Use by Loneliness & Insurance Status

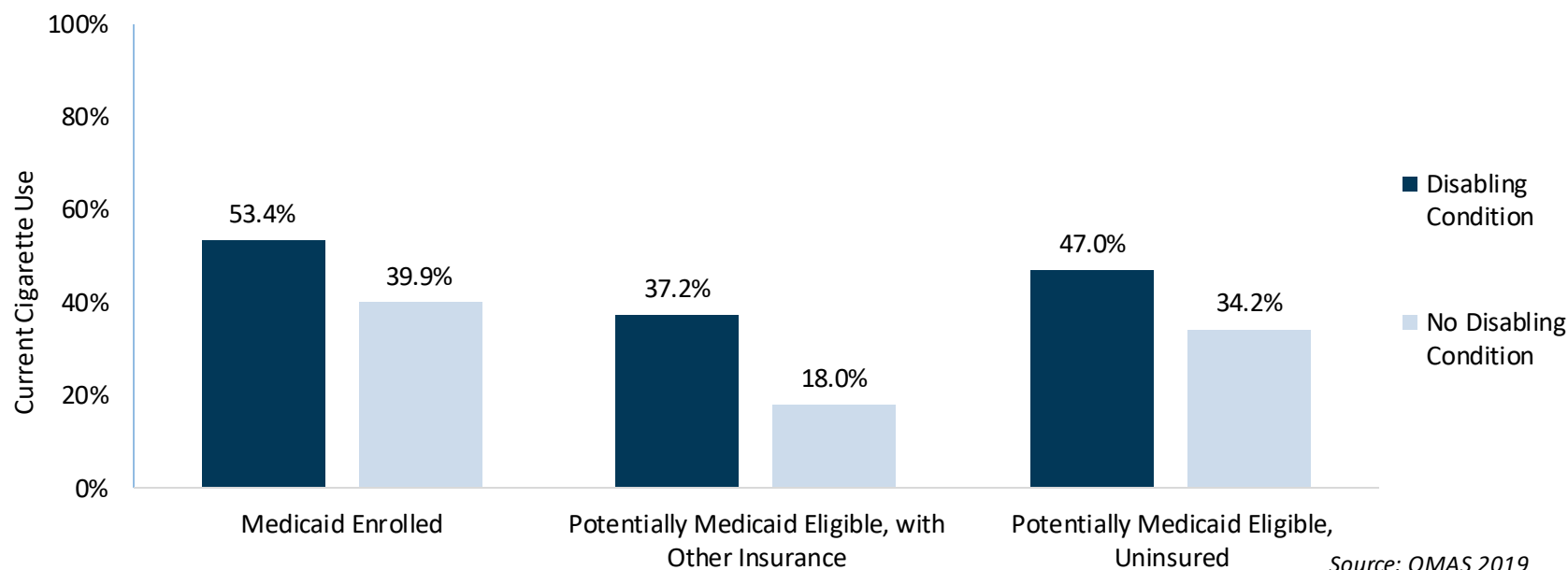


Current cigarette use is defined as smoking at least 100 cigarettes in a lifetime and currently smoking some days or every day.

Loneliness is constructed as a count of the number of times a woman answers 'sometimes or often' to questions about the frequency of lacking companionship, feeling left out, and feeling isolated from others. Loneliness in this case can range from a count greater than or equal to three, but less than or equal to nine. Here, we consider the state of being lonely as having a score

- The prevalence of current cigarette use was highest among working age adults enrolled in Medicaid who also reported being lonely. Almost 57% of Medicaid-enrolled adults who were lonely reported current cigarette use compared with 43.5% of the Medicaid-enrolled who were not lonely.
- Among the uninsured, there were no differences in the prevalence of current cigarette use between working age adults who were lonely and those who were not lonely.

Figure 21. Percent of Lower-Income ($\leq 138\%$ FPL) Working Age Ohioans (ages 19 to 64) reporting Current Cigarette Use by Disabling Condition Status



Disabling Condition is defined as having serious difficulty hearing, seeing even when wearing glasses, walking or climbing stairs, bathing or dressing, concentrating, remembering or making decisions, difficulty doing errands alone, having a developmental disability, and/or having 14 or more days in the past month where one's mental health interfered with daily functioning.

Current cigarette use is defined as smoking at least 100 cigarettes in a lifetime and currently smoking some days or every day.

- In 2019, the prevalence of current cigarette use was substantially higher among lower-income working age adults with a disabling condition than those without, within each insurance status.
- Among lower-income adults with a disabling condition, those enrolled in Medicaid reported substantially higher rates of current cigarette use than others who were potentially Medicaid-eligible but not enrolled.



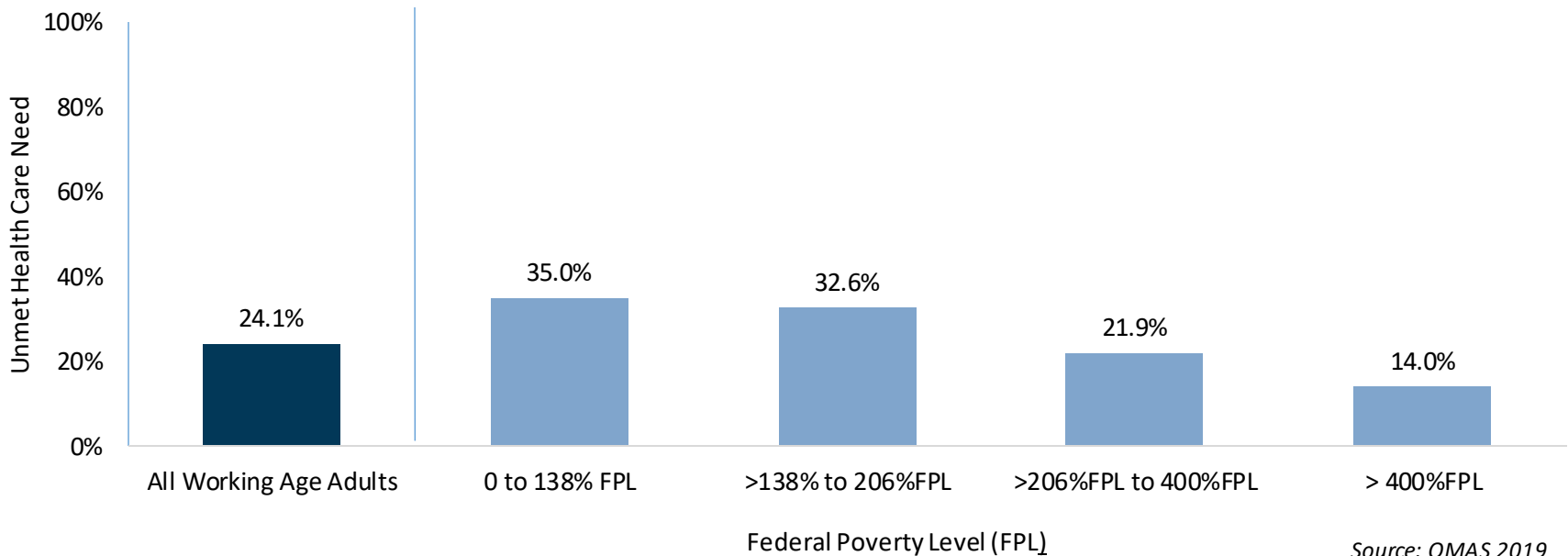
RESULTS: UNMET HEALTH CARE NEEDS

This section presents the prevalence of unmet health care needs by federal poverty level, educational attainment, food insecurity, disabling condition status and loneliness

Key Findings: Unmet Health Care Needs

- There was an income gradient in the prevalence of having an unmet health care need among working age Ohioans—35% of lower-income adults reported an unmet health care need compared to 14% living above 400% FPL.
- Among lower-income working age Ohioans, the uninsured reported the highest rates of unmet health care needs across levels of educational attainment, disabling condition, and loneliness.
- Unmet health care needs were highest among lower-income working age adults who were also experiencing food insecurity.
- Unmet health care needs were substantially higher among lower-income working age adults with a disabling condition than those without a disabling condition. Almost two-thirds (66.1%) of lower-income uninsured adults with a disabling condition reported having an unmet health care need in 2019.

Figure 22. Percent of Working Age Ohioans (ages 19 to 64) reporting an Unmet Health Care Need by Poverty Level

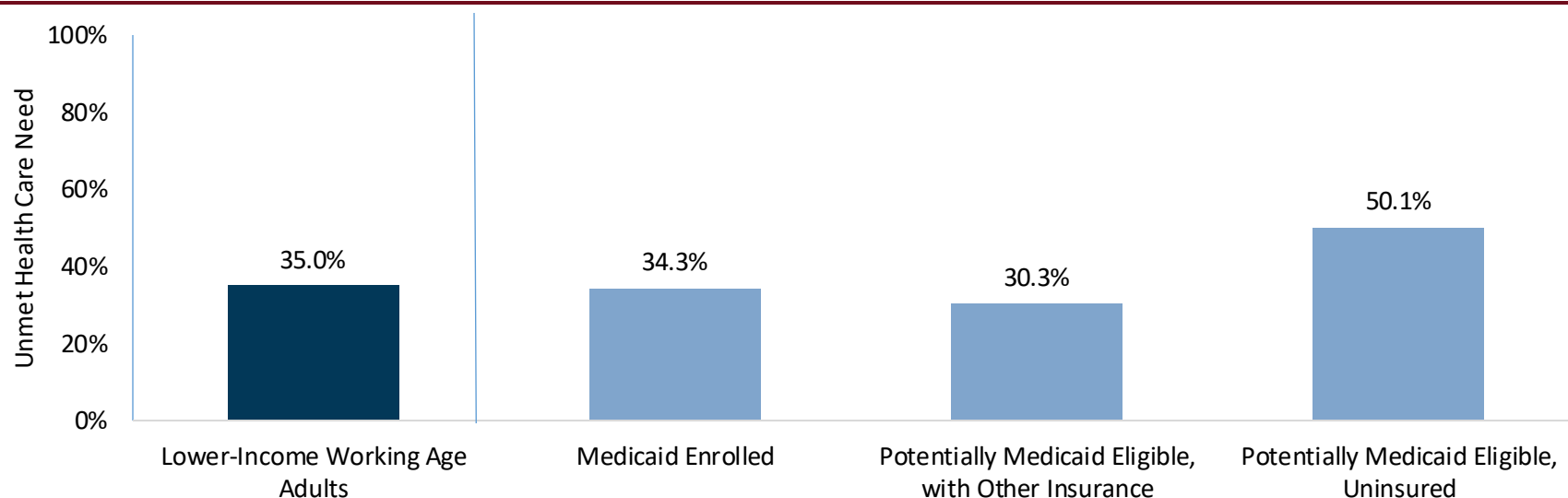


Source: OMAS 2019

To measure *unmet health care needs*, OMAS asked a series of questions: “During the past 12 months, was there a time when you needed any of the following, but could not get it at that time: dental care/mental health care/ alcohol or other drug treatment/any other care such as medical exam or medical supplies? Respondents who responded ‘yes’ to any of these questions is considered having an unmet health care need.

- In 2019, almost a quarter (24.1%) of working age adults in Ohio reported having an unmet health care need, but there were marked differences in the prevalence by poverty level. Among lower-income Ohioans (0 to 138% FPL), 35.0% reported an unmet health care need compared to 14.0% of those living above 400% FPL.

Figure 23. Percent of Lower-Income ($\leq 138\%$ FPL) Working Age Ohioans (ages 19 to 64) who reported an Unmet Health Care Need by Insurance Status

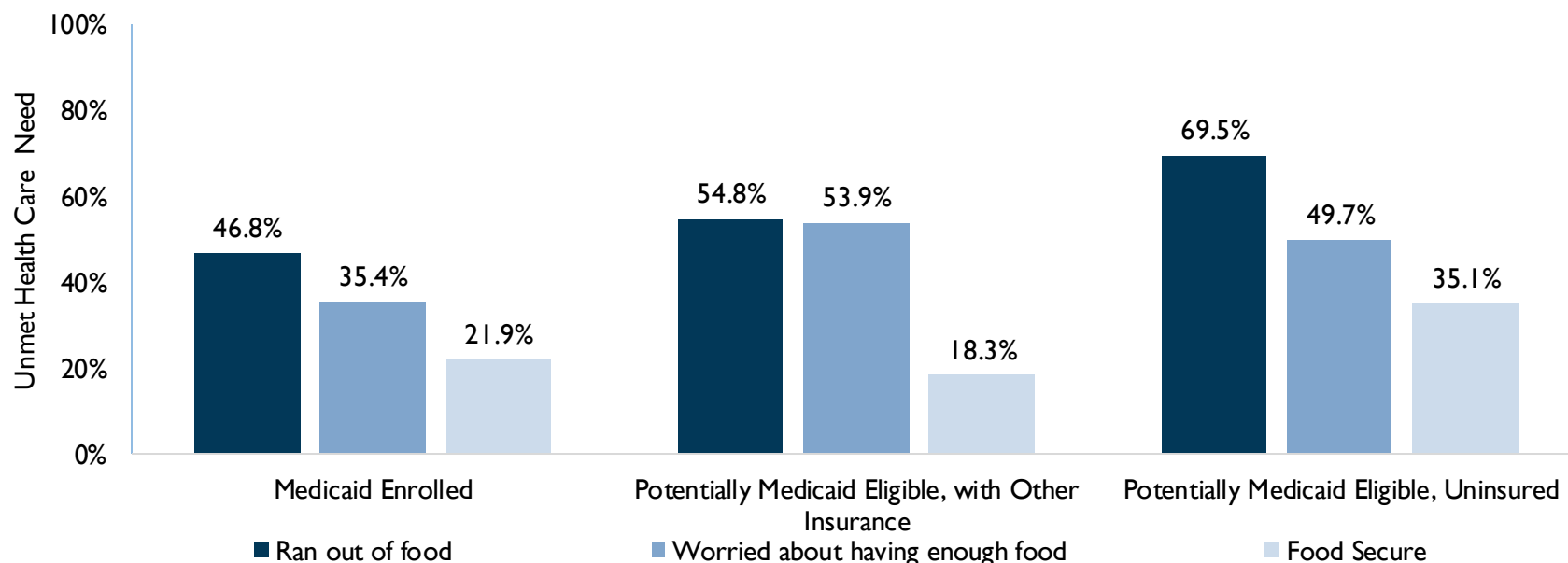


Source: OMAS 2019

To measure *unmet health care needs*, OMAS asked a series of questions: “During the past 12 months, was there a time when you needed any of the following, but could not get it at that time: dental care/mental health care/ alcohol or other drug treatment/any other care such as medical exam or medical supplies? Respondents who responded ‘yes’ to any of these questions is considered having an unmet health care need.

- Half (50.1%) of lower-income uninsured Ohioans reported an unmet need for health care in 2019 compared with roughly a third of those covered by Medicaid or by other insurance.

Figure 24. Percent of Lower-Income ($\leq 138\%$ FPL) Ohioans (ages 19 to 64) with an Unmet Health Care Need by Food Insecurity & Insurance Status



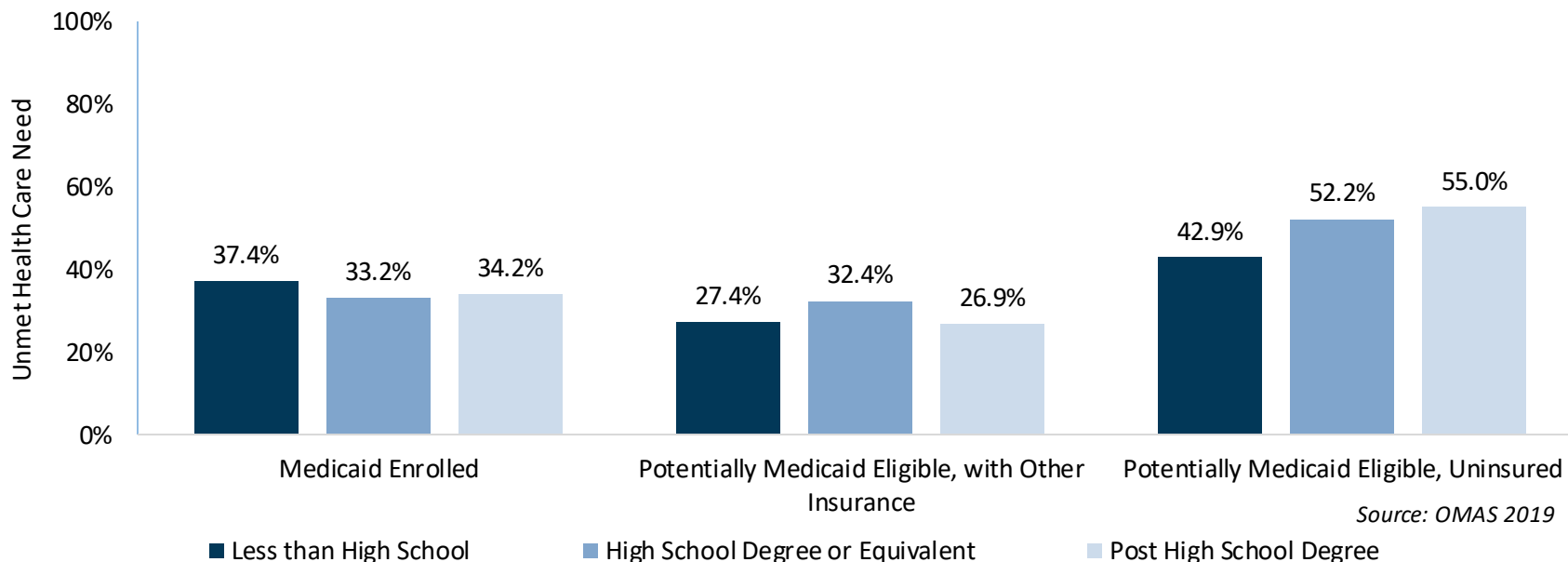
Source: OMAS 2019

Respondents were asked whether in the last year they worried whether food in the household would run out before getting money to buy more, and whether their food actually ran out before they had money to buy more. To measure food insecurity, we created a measure consisting of mutually exclusive categories: 1) Food Secure (answering 'No' to both questions), 2) Worried about having enough food (indicating worry about food, but not running out of food), and 3) Ran out of food.

To measure *unmet health care needs*, OMAS asked a series of questions: "During the past 12 months, was there a time when you needed any of the following, but could not get it at that time: dental care/mental health care/ alcohol or other drug treatment/any other care such as medical exam or medical supplies? Respondents who responded 'yes' to any of these questions is considered having an unmet health care need.

- Within each insurance status, lower-income working age adults who worried about running out of food or who ran out of food in the past year reported higher rates of having an unmet health care need than adults who were food secure.

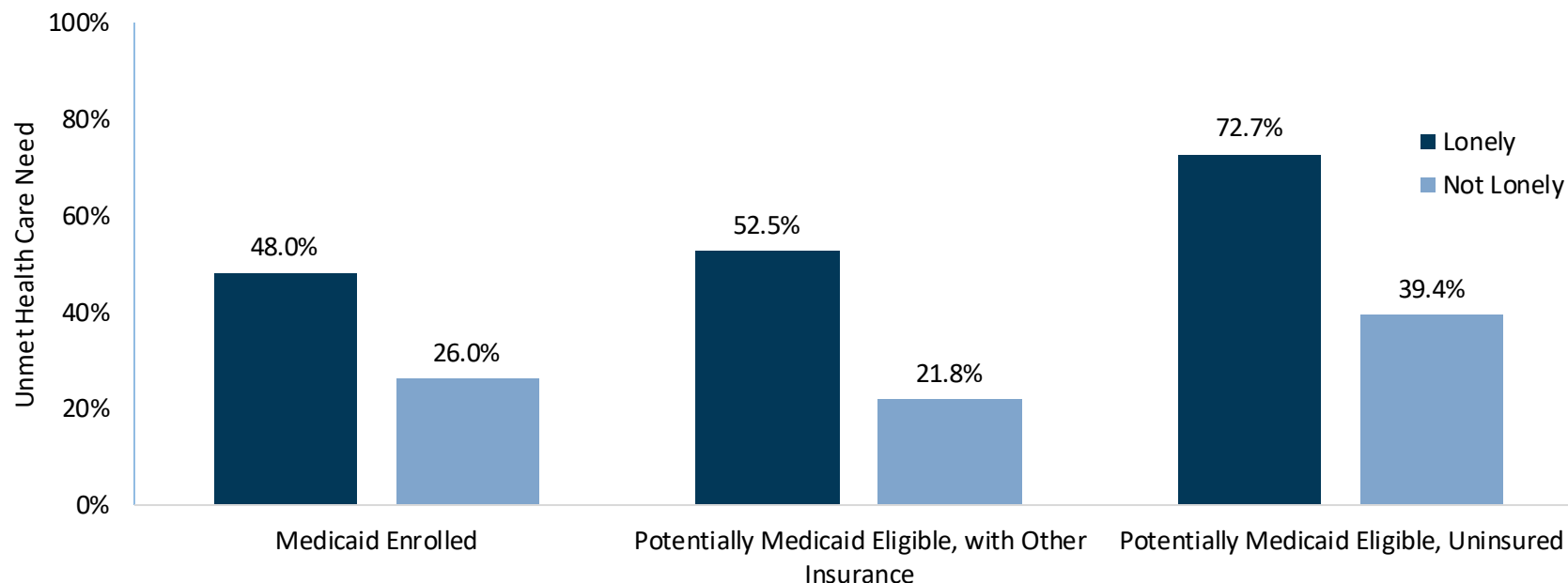
Figure 25. Percent of Lower-Income ($\leq 138\%$ FPL) Working Age Ohioans (ages 19 to 64) who had an Unmet Health Care Need by Educational Attainment & Insurance Status



To measure *unmet health care needs*, OMAS asked a series of questions: “During the past 12 months, was there a time when you needed any of the following, but could not get it at that time: dental care/mental health care/ alcohol or other drug treatment/any other care such as medical exam or medical supplies? Respondents who responded ‘yes’ to any of these questions is considered having an unmet health care need.

- Within each insurance status, there were few notable differences in the prevalence of unmet health care needs by educational attainment among lower-income working age adults in Ohio.
- Across educational levels, lower-income working age adults without insurance coverage reported substantially higher rates of unmet health care needs than those enrolled in Medicaid or those potentially Medicaid-eligible but covered by other insurance. This pattern may be partially attributed to the younger age structure of the uninsured population.

Figure 26. Percent of Lower-Income ($\leq 138\%$ FPL) Working Age Ohioans (ages 19 to 64) who had Unmet Health Care Needs by Loneliness & Insurance Status



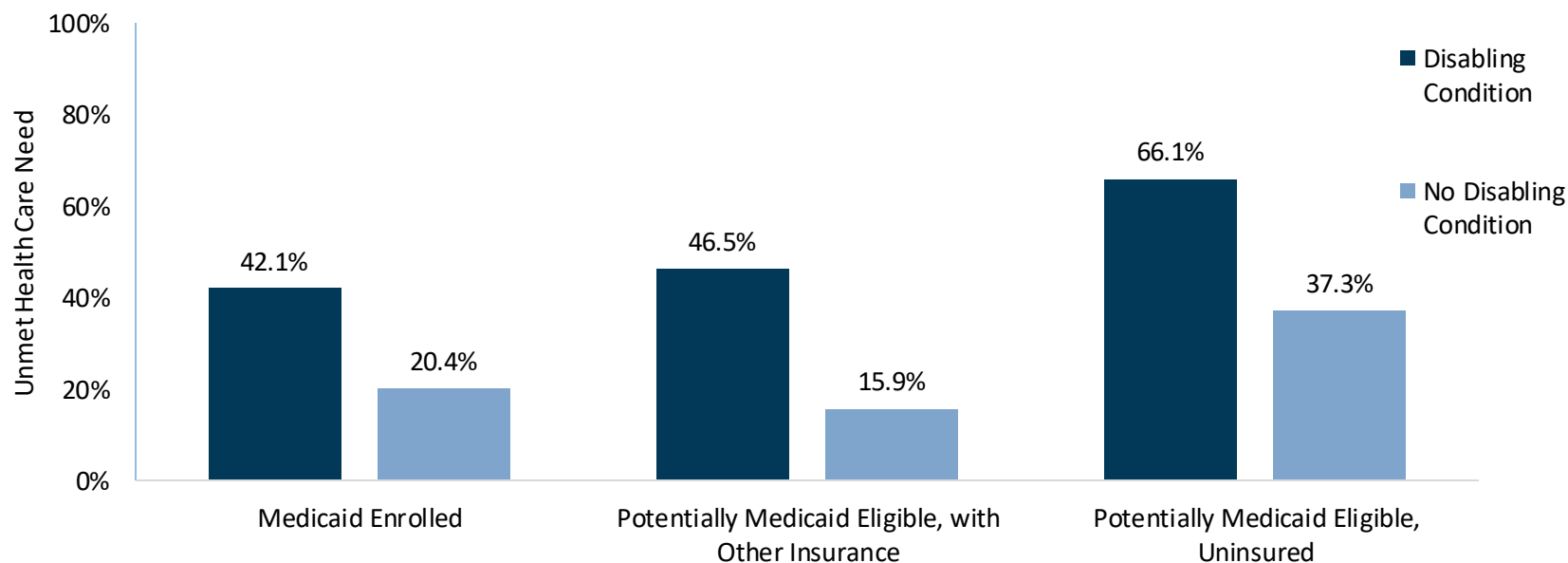
Source: OMAS 2019

Loneliness is measured by summing the number of times a respondent answers 'sometimes or often' to questions about the frequency of lacking companionship, feeling left out, and feeling isolated from others. The total summed score ranges from a low of 3 to a high of 9 with a higher score indicating greater loneliness. Here, we consider respondents 'lonely' if they scored 6 or higher, and respondents as 'not lonely' if they scored less than 6.

To measure *unmet health care needs*, OMAS asked a series of questions: "During the past 12 months, was there a time when you needed any of the following, but could not get it at that time: dental care/mental health care/ alcohol or other drug treatment/any other care such as medical exam or medical supplies? Respondents who responded 'yes' to any of these questions is considered having an unmet health care need.

- In 2019, lower-income working age adults who were lonely reported substantially higher rates of having an unmet health care need than those who were not lonely. The uninsured, whether lonely or not, reported higher rates of unmet needs for health care than the Medicaid enrolled or the potentially Medicaid-eligible who were covered by other insurance.

Figure 27. Percent of Lower-Income ($\leq 138\%$ FPL) Working Age Ohioans (ages 19 to 64) who had an Unmet Health Care Need by Disabling Condition Status & Insurance Status



Source: OMAS 2019

Disabling condition is defined as having serious difficulty hearing, seeing even when wearing glasses, walking or climbing stairs, bathing or dressing, concentrating, remembering or making decisions, difficulty doing errands alone, having a developmental disability, and/or having 14 or more days in the past month where one's mental health interfered with daily functioning.

To measure *unmet health care needs*, OMAS asked a series of questions: "During the past 12 months, was there a time when you needed any of the following, but could not get it at that time: dental care/mental health care/ alcohol or other drug treatment/any other care such as medical exam or medical supplies? Respondents who responded 'yes' to any of these questions is considered having and unmet health care need.

- In 2019, unmet health care needs were substantially higher among lower-income adults with a disabling condition than those without a disabling condition within each insurance status. Almost two-thirds (66.1%) of uninsured adults with a disabling condition reported having an unmet health care need in 2019.

A photograph of a family walking on a beach. A baby is being held up by the parents, looking up at the sky. The image is overlaid with a semi-transparent blue filter. The text 'SUMMARY OF RESULTS' is centered in a white, bold, sans-serif font.

SUMMARY OF RESULTS

SUMMARY OF RESULTS

Our results show that the social determinants of health—here measured as income, education, food insecurity and loneliness—were not evenly distributed among the working age population of Ohio.

- Income is a key factor influencing health and health behaviors. Over a quarter (27%) of working age adults in Ohio lived at lower-incomes ($\leq 138\%$ FPL). In addition, 54.5% of working age adults living at lower-incomes reported a disabling condition (Slide 14).
- Food insecurity was an added stressor for lower-income populations, and prior research has shown that it has serious and substantial consequences for health.⁴ Issues of food insecurity, whether worrying about running out of food, or worse, running out of food before there was money to purchase more were concentrated among adults enrolled in Medicaid (Slide 15).
- Educational attainment—an important predictor of later health outcomes—varied by insurance status. Among lower-income adults, 21.6% enrolled in Medicaid and 27% of the uninsured held less than a high school degree compared with 9.7% of adults who were potentially Medicaid-eligible but covered by other insurance (Slide 16).
- Extensive prior research has shown that social relationships are critical for health and well-being.⁵ Our results show that over 38% of adults enrolled in Medicaid reported being lonely compared with roughly 28% of the potentially Medicaid-eligible but otherwise insured population (Slide 17).

SUMMARY OF RESULTS

Our results demonstrate an association between the uneven distribution of SDOH and the health outcomes and behaviors of working age Ohioans.

- Lower socioeconomic status, whether it was assessed by income or by educational attainment, showed a clear link to higher rates of fair/poor health, mental health impairment, and unmet health care needs (Slides 20, 23, 27, 30, 42, 45).
- The prevalence of fair/poor health and mental health impairment was highest among Medicaid-enrolled adults who experienced the most food insecurity (Slides 22, 29).
- The prevalence of current cigarette use was higher among lower-income adults who also reported food insecurity (Slide 36). These findings highlight the multiple stressors (i.e., barriers to obtaining healthy foods, tobacco use as a coping mechanism) associated with living in or near poverty.
- The findings on loneliness as a social determinant of health presented a consistent pattern. The prevalence of fair/poor health (Slide 24), mental health impairment (Slide 31), cigarette use (Slide 38), and unmet health care needs (Slide 46) were all higher among lower-income Ohioans who were lonely compared to Ohioans who were not lonely. A third of uninsured Ohioans reported loneliness (Slide 17).
- The association between loneliness and cigarette use was particularly salient among adults enrolled in Medicaid—almost 57% of working age adults enrolled in Medicaid who were lonely reported current cigarette use compared with roughly 44% who were not lonely (Slide 38).
- Unmet health care needs were substantially higher among lower-income working age adults with a disabling condition than among those without a disabling condition, across insurance types (Slide 47).

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