OMAS
Ohio Medicaid Assessment Survey

Social Determinants of Health and their Association with Chronic Disease and Mental Health among Adults in Ohio

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OBJECTIVE

This brief describes how two priority topics for the State Health Improvement Plan (SHIP) – *chronic disease* and *mental health* – are associated with important social determinants of health among adults in Ohio.

Social determinants of health (SDOH) refer to social and economic factors that can affect health status and outcomes. The specific determinants considered in this brief are:

- Income: annual household income as a percent of the Federal Poverty Level (FPL): ≤ 138% FPL, 139-206% FPL, 207-400% FPL, > 400% FPL
- Race/Ethnicity: non-Hispanic White (hereafter referred to as White), non-Hispanic African-American (hereafter referred to as African-American), Hispanic, and Other
- County type: Appalachian,[1] Metropolitan, rural non-Appalachian, Suburban
- Educational attainment: less than high school, high school/GED, more than high school

Using data from the 2017 Ohio Medicaid Assessment Survey (OMAS), the presence of chronic disease was defined by three self-reported measures: 1) having fair or poor health status, 2) history of cardiovascular disease (CVD; i.e, heart attack, coronary artery disease, or heart failure), and 3) history of diabetes (either Type 1 or Type 2, but not diabetes that only occurred during pregnancy). Mental health-related impairment (MHI) was defined as having 14 or more days in the past month where one's mental health interfered with their daily functioning.

SDOH do not directly cause chronic disease and mental health outcomes, but operate through other pathways such as health behaviors or access to healthcare. Therefore, this report also examines how current smoking (a health behavior) and having a usual source of healthcare are associated with chronic disease and MHI.

The final section focuses on a special population of adults who are both working age (19-64 years old) and potentially eligible for Medicaid (household income ≤ 138% FPL).

KEY FINDINGS

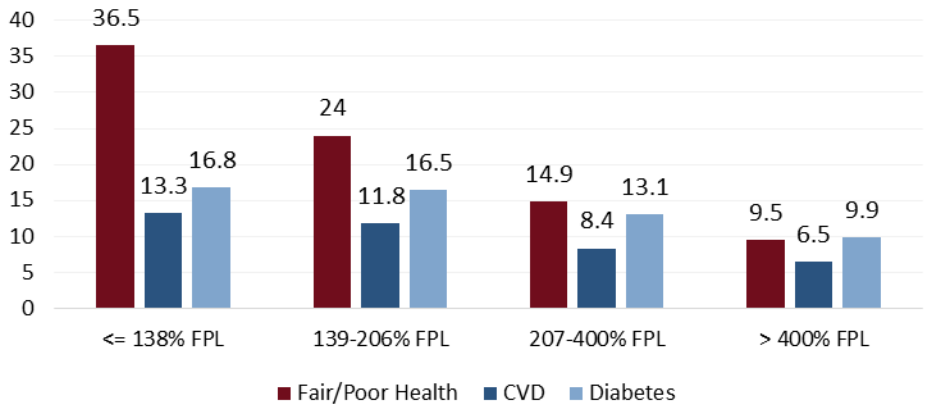
- The prevalence of fair or poor self-rated health decreased as income increased.
- Health indicators were poorest among residents in the Appalachian counties in Ohio.
- There were higher rates of smoking in African-American adults.
- The relationship between educational attainment and not having a usual source of care was evident throughout the data.

METHODS

The 2017 Ohio Medicaid Assessment Survey (OMAS) is a telephone survey that samples both landline and cell phones of Ohio residents. The survey examines insurance status, access to the health system, health status, demographics and other characteristics of Ohio's Medicaid, Medicaid-eligible, and non-Medicaid populations. In 2017, researchers completed 39,711 interviews with adults (29,010 White, 5,067 African-American, 1,103 Hispanic, and 4,521 Other race/ethnicity adults) and 9,202 proxy interviews of children. The 2017 OMAS is the sixth iteration of the survey (previously known as Ohio Family Health Survey). For details, please see the 2017 OMAS Methodology Report (http://www.grc.osu.edu/OMAS/2017Survey).

OMAS samples a sufficient number of households in each county of Ohio to allow for stable estimates by county groupings. Moreover, African-American adults are oversampled in the Metropolitan counties. The sample sizes for the social determinants of health subcategories were large enough to result in stable estimates of the indicators. Descriptive statistics will be presented in this brief. No statistical comparisons were performed because of the number of comparisons we would have to make, which could result in some "significant" findings by chance.

Figure 1. Prevalence of Fair/Poor Self-Rated Health, Cardiovascular Disease, and Diabetes by Income among Adults in Ohio in 2017



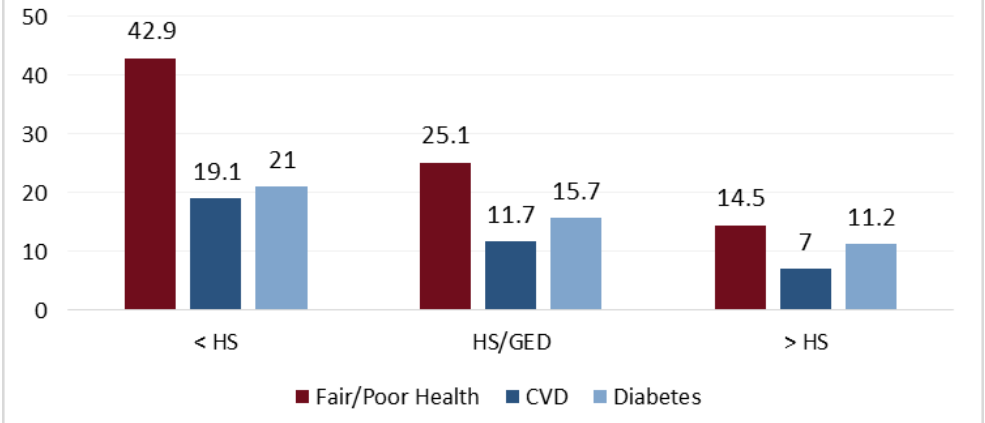
RESULTS

Chronic Disease

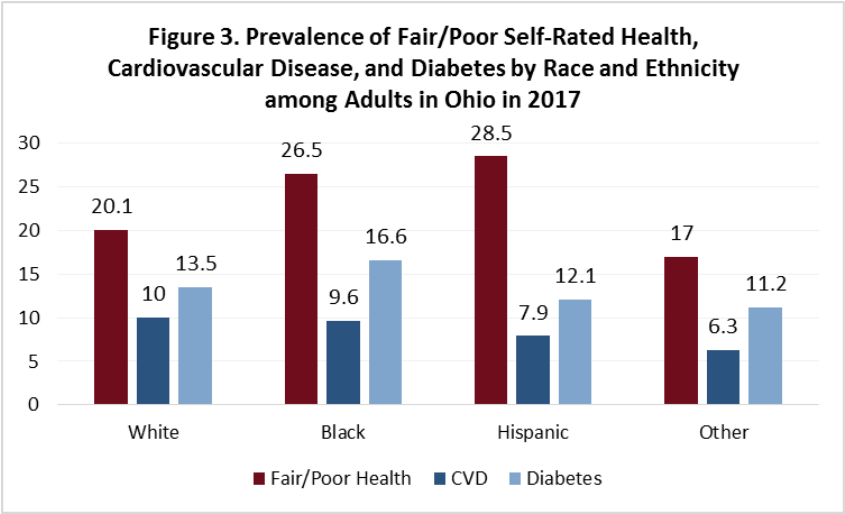
Among all adults in Ohio, 21.0% self-rated their health as fair or poor. For higher income groups, the prevalence of fair or poor self-rated health was lowest, from 36.5% among adults ≤138% FPL to 9.5% among those in the highest income group. The prevalence estimates for CVD and diabetes in the entire adult population of Ohio were 9.8% and 13.7%, respectively. Although the gradient in prevalence by income was not as steep for CVD or diabetes, prevalence was still lower in higher income groups.

When examining the prevalence of these three chronic disease indicators by educational attainment (Figure 2), a similar pattern emerged, with steep decreases in self-rated fair or poor health as educational attainment increased and less steep, but still apparent, decreases in CVD and diabetes with increasing education.

Figure 2. Prevalence of Fair/Poor Self-Rated Health, Cardiovascular Disease, and Diabetes by Education among Adults in Ohio in 2017

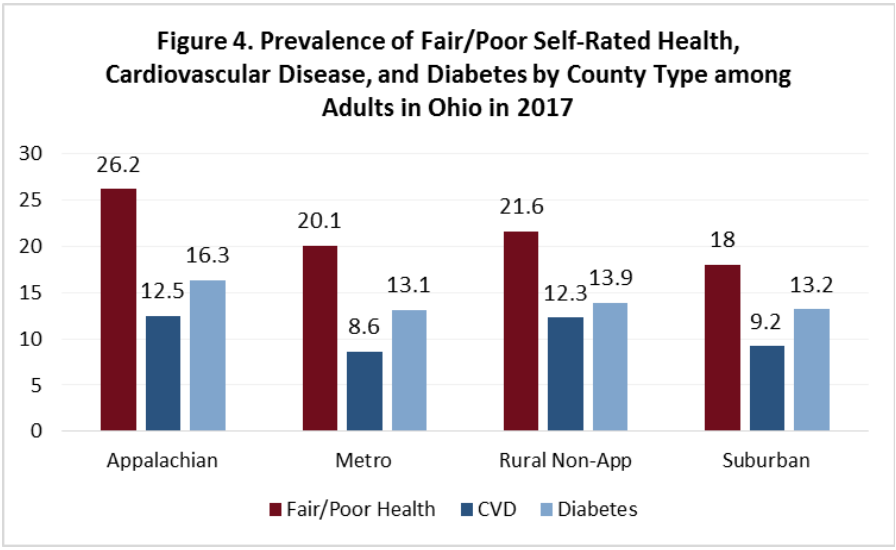


These three chronic disease indicators also varied by race and ethnicity, as indicated in Figure 3. Hispanic adults had the highest prevalence of fair or poor self-rated health, followed by African-American, White, and Other race/ethnicity, which includes Asian adults. However, when examining CVD, there was a slightly higher prevalence among White adults compared to African-American

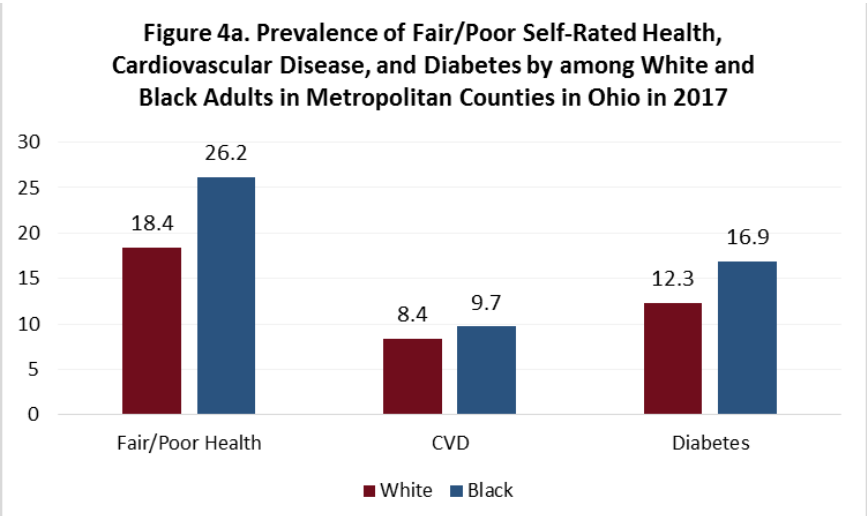


adults. Diabetes prevalence was highest among African-American adults and did not vary greatly among the other three groups.

Place is also considered a social determinant of health and in Figure 4, it is clear that health indicators were poorest among residents in the Appalachian counties in Ohio. These adults experienced the highest prevalence of fair or poor self-rated health, CVD, and diabetes. No clear pattern emerged among residents of the other county types.



In Figure 4a, the prevalence of the three chronic disease indicators is presented by race and ethnicity group within Metropolitan counties. This breakdown was only performed in the Metropolitan counties because there is not as much racial and ethnic diversity in the other county types in Ohio. For all three chronic disease indicators, African-American adults had a higher prevalence compared to White adults.



Mental Health Impairment

Mental health impairment (MHI), defined as experiencing 14 or more days in the past month where activities were altered because of a mental, emotional, or substance use condition, exhibited a strong pattern with the social determinants of health, as indicated Table 1. There was a steep decline in the prevalence of MHI as income increased. A similar gradient emerged for educational attainment, with the highest prevalence of MHI among adults with less than a high school degree, followed by adults with a high school degree or GED, and finally adults with more than a high school education. With respect to race and ethnicity, Hispanic adults experienced the highest prevalence of MHI, followed closely by African-American adults, White adults, and Other race/ethnicity adults. Similar to the pattern that emerged for chronic conditions, Appalachian adults experienced the highest prevalence of MHI.

Current Smoking

Cigarette smoking is a key health behavior to track because of its strong relationship with both chronic disease and MHI. The prevalence of smoking among all adults in Ohio was 23.8%. As indicated in Table 1, smoking was most prevalent among the

groups with the greatest burden of chronic disease and MHI, with a few differences. Adults living up to 138% FPL smoked at the highest rate among income groups. Of all groups examined here, adults with less than a high school education smoked at the highest rate. Just under a third of adults with a high school education or GED smoked and less than one in five with more than a high school education smoked. Among the race/ethnicity groups, smoking was highest among African-American adults, followed by White, Hispanic, and Other race or ethnicity groups. The higher rate of smoking among African-American adults was consistent with recent findings from other surveys in Ohio. With respect to county type, smoking was most prevalent in Appalachian counties.

No Usual Source of Care

The final health indicator examined in this brief is no usual source of medical care. This indicator reflects availability of providers, insurance status, and health status, among other factors. The prevalence of not having a usual source of care was 8.2% among all adults in Ohio. As indicated in Table 1, the prevalence was similar between the two lowest income groups, and fewer adults living at 207-400% FPL or > 400% FPL did not have a usual source of care. The relationship between educational attainment and not having a usual source of care exhibited a clear gradient. Lacking a usual source of care was the most common among Hispanic adults, followed by those reporting an Other race/ethnicity. Fewer than one in ten African-American adults did not have a usual source of care and the lowest

Table 1. Prevalence of the Three Health Indicators by Income, Education, Race/Ethnicity, and County Type among Adults in Ohio in 2017 (2017 OMAS)

Group	Mental Health Impairment	Current Smoking	No Usual Source of Care
Income Category			
0 – 138% FPL	13.6%	38.3%	10.1%
139 – 206% FPL	6.7%	26.1%	10.0%
207 – 400% FPL	3.2%	18.8%	7.6%
> 400% FPL	1.9%	13.0%	6.1%
Education Level			
< High School	13.8%	43.6%	11.0%
High School/GED	7.0%	29.2%	9.3%
> High School	4.6%	17.1%	7.0%
Race/Ethnicity			
White	6.2%	23.6%	7.6%
African-American	7.0%	27.5%	9.1%
Hispanic	7.8%	22.4%	18.0%
Other	5.6	20.2%	12.1%
County Type			
Appalachian	7.6%	27.3%	7.8%
Metropolitan	6.3%	23.6%	8.5%
Rural non-Appalachian	5.6%	23.0%	7.6%
Suburban	5.8%	22.2%	8.1%

prevalence of not having a usual source of care was observed among White adults. The regional variation of not having a usual source of care was low.

How do the key indicators vary among low-income adults in Ohio?

Table 2, below, contains the prevalence of the six health indicators by insurance type among Medicaid-eligible (138% FPL or less) adults who are of working age, defined as age 19-64 years. The results are presented for African-American and White adults separately. The highest prevalence of fair/poor self-rated health, CVD, diabetes, MHI, and current smoking was observed among adults enrolled in Medicaid and the lowest for nearly all indicators (except for CVD and diabetes) was observed among adults with other insurance. These findings were expected because Medicaid insures a higher proportion of vulnerable adults with chronic diseases and mental illnesses. Given that, it is encouraging to see that less than 8.0% of adults enrolled in Medicaid did not have a usual source of care. While racial disparities in health were smaller among those covered by Medicaid than they were among the population overall, there were large differences in rates of smoking and MHI among the Medicaid population with White adults experiencing a greater burden of these two indicators compared to African-American adults.

Conclusions

Health disparities persist in Ohio, as in most states. The data in this brief suggest that adults living near or below poverty, who have less than a high school education, who are African-American or Hispanic, and who live in Appalachian counties experienced the greatest burden of chronic disease and mental health impairment. Additionally, smoking, which is one of the leading contributors to death in the United States, was higher among the most disadvantaged groups in Ohio, including African-American adults. Data from the 2017 OMAS also demonstrated that Medicaid covered more vulnerable low-income adults in Ohio compared to other providers of insurance. It is important for all state health-related agencies to address the social determinants of health. In the next section, implications of these findings will be presented, with specific recommendations for how to address the social determinants of health.

Policy Considerations

Data

- The acquisition, use, and support of geospatial mapping technology at State and County levels may improve how we identify and prioritize populations with low educational attainment, low income, and in high need census geographies.

Table 2. Prevalence of the Health Indicators by Insurance Type and Non-Hispanic White and African-American Race/Ethnicity among Medicaid-Eligible, Working-Age (19-64) Adults in Ohio in 2017 (2017 OMAS)

Indicator	Medicaid		Other Insurance		Uninsured	
	White	African-American	White	African-American	White	African-American
Fair/poor self-rated health	38.2%	34.2%	13.5%	18.1%	19.4%	19.5%
CVD	11.1%	9.7%	5.1%	5.0%	4.6%	2.4%
Diabetes	13.3%	14.3%	9.2%	12.7%	6.4%	6.7%
MHI	19.2%	10.6%	4.0%	5.4%	7.1%	6.2%
Current smoking	50.0%	37.3%	18.9%	19.8%	49.4%	39.3%
No usual source of care	7.5%	7.9%	7.3%	8.3%	25.7%	26.9%

Social Determinants of Health

- Given the strong associations between socioeconomic status and the outcomes considered in this report, organizations could continue to work towards regional strategies to improve employment and graduation rates.

Provider Access

- State and local organizations could develop strategies to diversify the health professional pool from which to staff medically underserved/ health professional shortage areas across Ohio.
- To improve the prevalence of having a usual source of care, organizations could ensure that provider quality measures reward providers with a disproportional number of disadvantaged minorities and/or Medicaid recipients.
- Strategies could be developed to promote primary care in rural and urban communities where the physician to patient ratios are low.

Chronic Disease Prevention, Education, Management

- Programs that address obesity and diabetes prevention should be culturally and linguistically appropriate and designed to meet the needs of affected populations, given the high prevalence of chronic disease in diverse and disadvantaged populations in Ohio.

Tobacco Use

- To further address diabetes, smokers could be routinely screened for diabetes.
- Tobacco users could be referred to the Ohio Tobacco Quit Line.

Care Coordination

- Given that chronic and behavioral conditions tend to co-occur and be more prevalent in disadvantaged populations, organizations could promote programs and peer support programs that are culturally appropriate and patient centered.

[1]Appalachian counties are defined by the Appalachian Regional Commission (ARC); however, when ARC reclassified Mahoning County as an Appalachian County, the OMAS continued to classify it as a Metropolitan County for the purposes of promoting consistency in trending across survey iterations.

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FOR MORE INFORMATION

To view more information about OMAS and the findings in this policy brief, please visit the OMAS website at the Ohio Colleges of Medicine Government Resource Center http://www.grc.osu.edu/OMAS.