Healthy Metric

Advancing Health Equity in Wisconsin

2024

Evaluating Change in Health Disparities in Wisconsin:

Blood Sugar, Blood Pressure, and Colorectal Cancer Screening

FUNDING PROVIDED BY:

MCW MEDICAL SCHOOL | ADVANCING A HEALTHIER WISCONSIN ENDOWMENT

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UNIVERSITY OF WISCONSIN
SCHOOL OF MEDICINE AND PUBLIC HEALTH

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Healthy Metric

Healthy Metric is a partnership between the University of Wisconsin-Madison, the Medical College of Wisconsin, Marshfield Clinic Research Institute, the Wisconsin Collaborative for Healthcare Quality, and the Wisconsin Health Information Organization that aims to eliminate health disparities in Wisconsin through collaboration, measurement, and interventions.

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Executive Summary

In 2021, the Wisconsin Collaborative for Healthcare Quality (WCHQ) hosted an executive summit on health disparities. The summit convened health system leaders from throughout the state. At the summit, health systems committed to prioritizing improvement for three critical measures to reduce disparities and improve care: blood sugar control in diabetes, blood pressure control, and colorectal cancer screening.

This report presents recent clinical data on these priority measures in Wisconsin across various demographics to examine performance before the COVID-19 pandemic (December 2018) and the recovery phase of the pandemic (June 2023).

The COVID-19 pandemic significantly impacted the lives of residents and the delivery of healthcare services. A commitment to reducing these disparities has been evident across health systems, aligning with the broader objective of ensuring equitable healthcare for all. Some population subgroups have worse health status than others, and these disparities are the targets of improvement efforts. There is more work to be done to reduce preventable health disparities in Wisconsin and improve care for all residents. This report provides a snapshot of some of the changes in selected health measures during the COVID-19 pandemic, and where additional efforts are needed

KEY FINDINGS

- Compared to pre-pandemic values, there have been notable improvements in blood sugar control in diabetes for Hispanic/Latino and American Indian Wisconsinites. This narrowed the disparity gap for these groups, though gaps still exist.
- Blood pressure control in 2023 was slightly lower than or similar to pre-pandemic levels for all race/ethnicity and geography groups. As a result, disparity gaps were unchanged.
- Colorectal cancer screening performance worsened, most likely due to longer wait times for colonoscopies during the pandemic and ongoing recovery from the pandemic. The groups most impacted include Black and Hispanic/Latino Wisconsinites and residents of urban underserved areas. This widened the disparity gaps for these groups.

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Introduction

About this Report

On December 3, 2021, the Wisconsin Collaborative for Healthcare Quality (WCHQ) hosted an executive summit on health disparities, bringing together health system leaders from across the state. At the summit, health systems committed to prioritizing improvement for three critical measures to reduce disparities and improve care: blood sugar control in diabetes, blood pressure control, and colorectal cancer screening.

This report presents recent clinical data on these priority measures in Wisconsin across various demographics to examine performance before the COVID-19 pandemic (using data through December 2018) and in the phase of recovery from the pandemic (using data through June 2023). The data are stratified to look at disparities by race/ethnicity and geography. Some population subgroups have worse health status than others, and these disparities are the targets of improvement efforts.

Key findings are noted for specific groups that had a 3% change or greater between 2018 and 2023, with findings over 5% designated as substantial.

The COVID-19 pandemic significantly impacted the lives of residents and delivery of healthcare. A commitment to reducing these disparities has been evident across health systems, aligning with the broader objective of ensuring equitable healthcare for all. There is more work to be done to reduce preventable health disparities in Wisconsin and improve care for all residents. This report is meant to provide a snapshot of some of the changes in selected health measures during the COVID-19 pandemic, and where additional efforts are needed.

This report also includes resources for improving quality and reducing disparities across population subgroups for these selected health measures. While the potential opportunities and resources listed in this report are not exhaustive, they offer direction for stakeholders across the state. Several health systems participating in this project undertook disparities reduction initiatives that used these or similar resources.

Healthy Metric is confident that by identifying and publicly reporting these disparities, this report will draw attention to and promote public accountability, improvement, and action by multiple stakeholders.

Data

WCHQ member organizations submitted standardized clinical data. Data for performance measures for the year ending December 31, 2018 was aggregated to represent the pre-pandemic period. Data for performance measures for the year ending June 30, 2023 was also aggregated to represent the pandemic recovery period. These data provide a statewide snapshot that identified disparities across measures. Differences in statewide performance are presented separately for populations defined by race and ethnicity, and geography (rural and urban ZIP code group of patients' residence). For all WCHQ measures, higher performance is considered better.

Race and Ethnicity

Nationally, disparities in health outcomes and health care exist for people of color (even when controlling for insurance status and income).[1] These disparities are preventable and are often related to social determinants of health, unequal distribution of power and resources, or other factors. This report utilizes race and ethnicity categories of American Indian, Asian/Pacific Islander, Black, Hispanic/Latino, and White.

Geography

Geographic disparities may exist due to differences in income levels, the distribution of health care service providers, and access to health-promoting or health-harming resources. This report uses a grouping of Wisconsin ZIP codes developed by researchers and staff at UW-Madison that reflects different levels of health-related characteristics.[2,3] The six geographic groups are: rural underserved, rural, rural advantaged, urban underserved, urban, and urban advantaged. More information about the ZIP code groups can be found here: https://www.hipxchange.org/RuralUrbanGroups

Blood Sugar Control in Diabetes

Background

In Wisconsin, about 1 in 10 people have diabetes, and 1 in 3 have prediabetes.[4] Diabetes can lead to serious health problems such as heart disease, stroke, kidney disease, and eye and foot problems. The COVID-19 pandemic impacted diabetes management and care in several ways. The pandemic led to an increased use of telehealth, which improved access for some patients but created barriers for others due to technical challenges or lack of broadband access.[5] Loss of employment and/or health insurance also made it more challenging for some people to afford insulin or other medications.[6] People with diabetes were also more likely to have serious complications with COVID-19 infection, so controlling blood sugar and maintaining health became even more important.[5]

Blood Sugar Control in Wisconsin

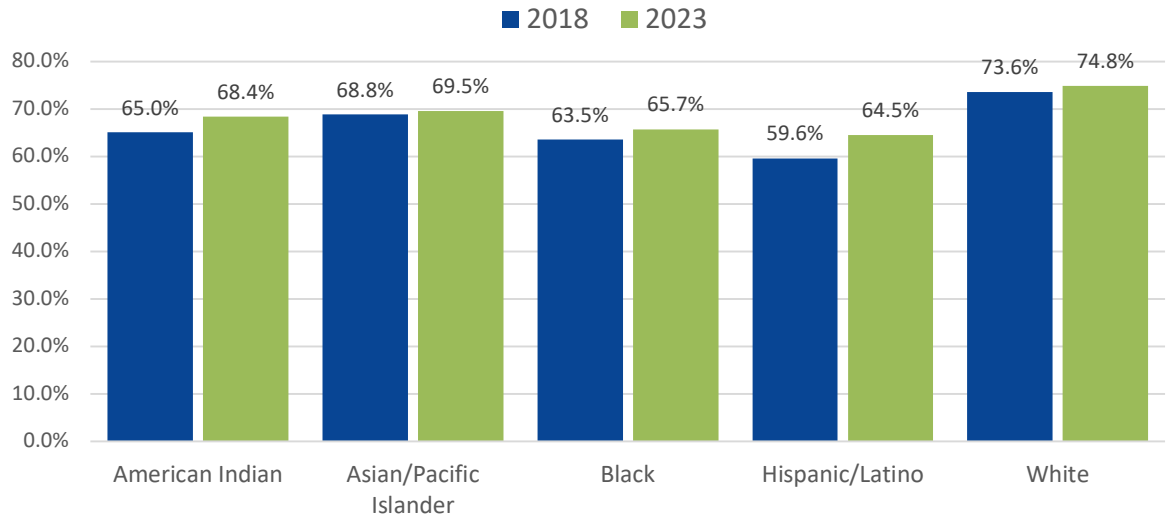
Results (2018 and 2023)

This measure assesses the percentage of adults with diabetes, aged 18-75, whose most recent A1c blood sugar level was controlled to less than 8.0% within the one-year measurement period.

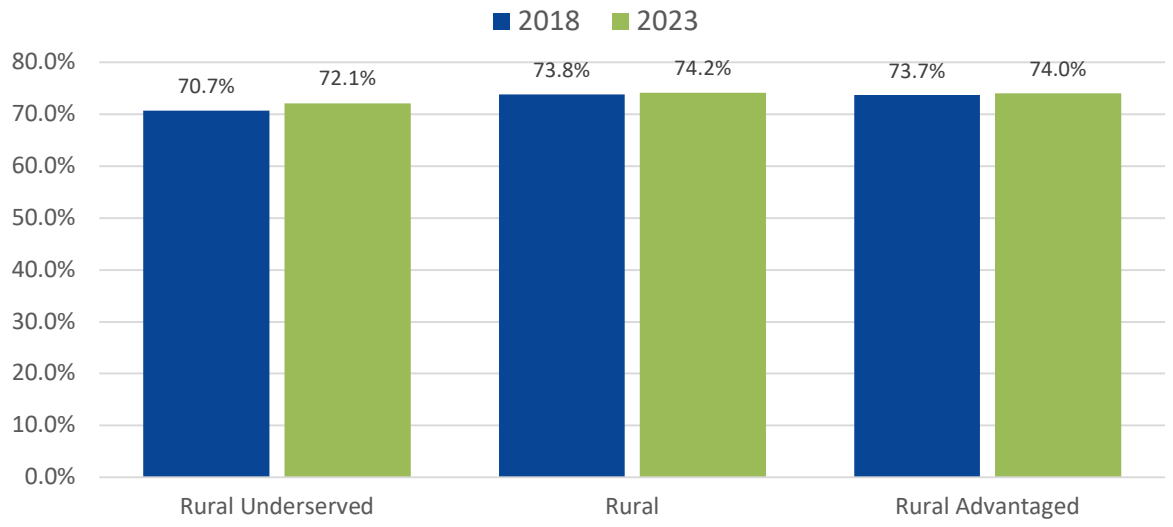
KEY FINDINGS

- Compared to pre-pandemic levels in 2018, blood sugar control in diabetes improved among all race/ethnicity and geographic groups in Wisconsin in 2023.
- Blood sugar control improved by 4.9% among Hispanic/Latino Wisconsinites and by 3.4% among American Indian Wisconsinites, which helped narrow the disparity gaps.
- There were slight improvements in blood sugar control in all rural and urban geographies.

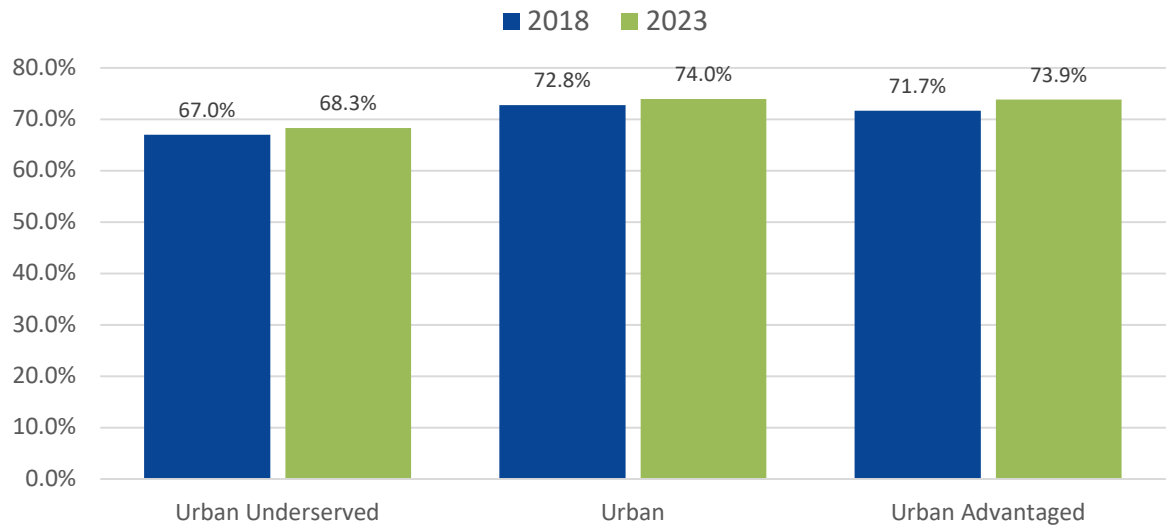
BLOOD SUGAR CONTROL IN WISCONSIN BY RACE/ETHNICITY



BLOOD SUGAR CONTROL IN WISCONSIN BY RURAL GEOGRAPHY



BLOOD SUGAR CONTROL IN WISCONSIN BY URBAN GEOGRAPHY



Considerations

1. **Progress and Resilience:** The improvement in A1c control rates highlights effective healthcare strategies, resilience to the COVID-19 pandemic's disruptions, and the potential benefits of innovative care models like telehealth.
2. **Successful Strategies:** Analyzing and sharing strategies behind the improvements can help apply effective approaches across other regions and demographics.
3. **Health Equity Achievements:** Advancements signal strides toward health equity, encouraging continued efforts to replicate success in other groups.
4. **Geographic and Socioeconomic Disparities:** The data show the ongoing challenge of geographic disparities, emphasizing the need for targeted policies and resources, especially in underserved areas.

Blood Pressure Control

Background

About 1 in 3 adults in Wisconsin have high blood pressure, and it is often undiagnosed and uncontrolled. Uncontrolled high blood pressure increases the risk for major cardiovascular disease events, such as heart disease, stroke, and heart failure.[7] Blood pressure control worsened nationally with the onset of the COVID-19 pandemic, exacerbating pre-existing disparities. In a 2021 study that used National Health and Nutrition Examination Survey (NHANES) data, non-Hispanic Black and Hispanic participants had a significantly lower blood pressure control compared to non-Hispanic White participants.[8] The COVID-19 pandemic introduced significant obstacles, disrupting routine healthcare services and exacerbating pre-existing disparities in blood pressure management.

Blood Pressure Control in Wisconsin

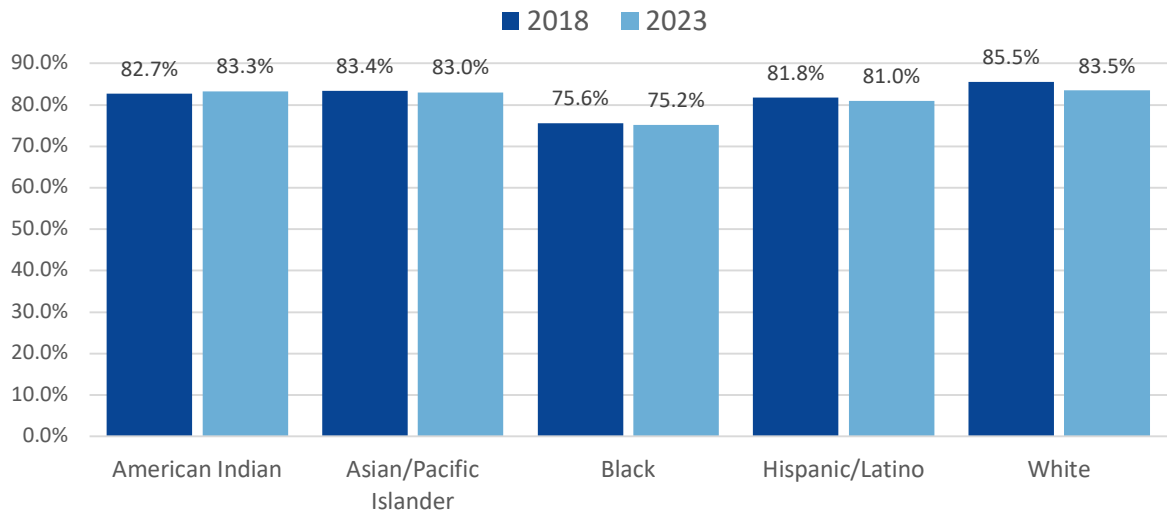
Results (2018 and 2023)

This measure assesses the percentage of patients with hypertension (high blood pressure), aged 18-85, whose blood pressure was in control (<140/90 mmHg) based on the most recent measurement during the one-year measurement period.

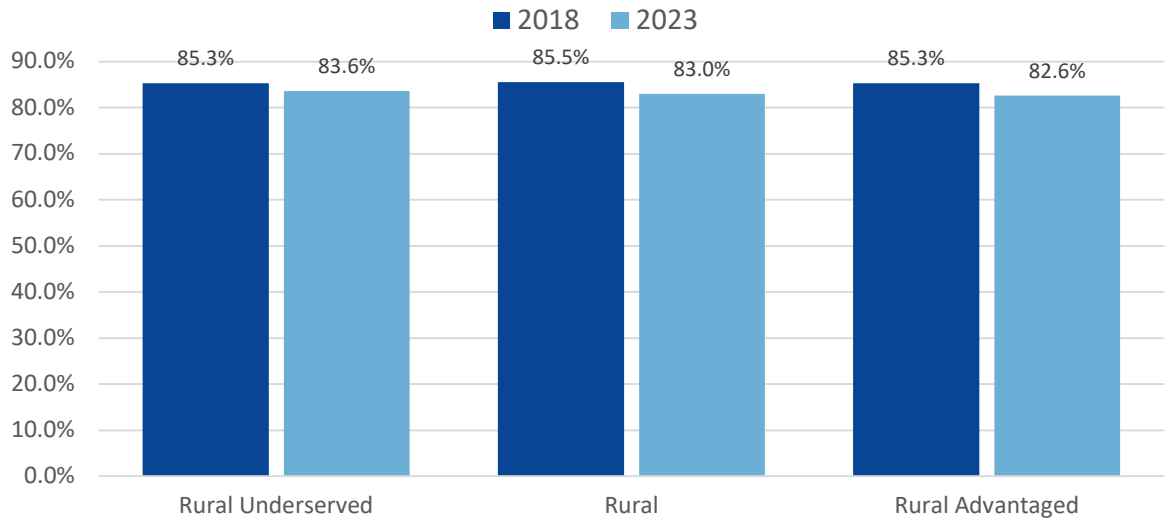
KEY FINDINGS

- Blood pressure control in 2023 was slightly lower or similar to pre-pandemic levels for all race/ethnicity and geographic groups. As a result, disparity gaps were unchanged.

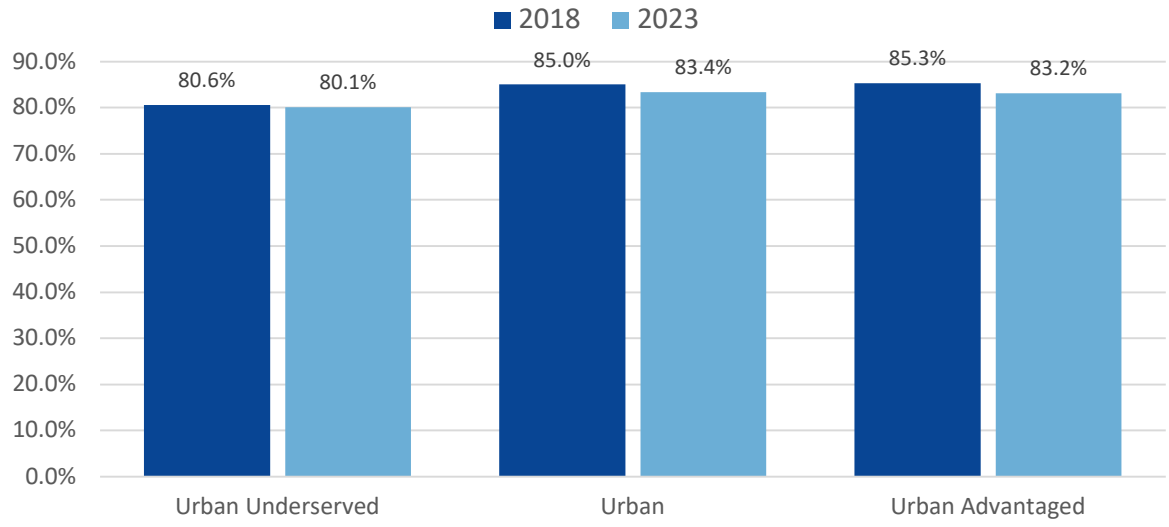
BLOOD PRESSURE CONTROL IN WISCONSIN BY RACE/ETHNICITY



BLOOD PRESSURE CONTROL IN WISCONSIN BY RURAL GEOGRAPHY



BLOOD PRESSURE CONTROL IN WISCONSIN BY URBAN GEOGRAPHY



Considerations

1. **The COVID-19 Pandemic's Impact and Health System Resilience:** The relative stability in blood pressure control rates across demographics despite the COVID-19 pandemic shows the resilience of patients and healthcare systems and the importance of maintaining chronic disease management.
2. **Need for Targeted Interventions:** Any changes in the control rates, even if small, emphasize the need for targeted interventions to improve blood pressure management in groups that are lagging, especially considering the additional burden of the pandemic on these populations.

Colorectal Cancer Screening

Background

Colorectal cancer is the second most common cancer in Wisconsin and the third-leading cause of cancer death nationwide.[9] Getting recommended screenings for colorectal cancer is important because screening tests can help find cancer at an earlier stage, when it may be easier to treat. Timely screening can allow for the opportunity to identify and remove pre-cancerous polyps before they develop into cancer. During the pandemic, clinic closures resulted in significant delays for getting recommended in-person screenings like colonoscopies or CT colonography.

NOTE: In 2021, the U.S. Preventive Services Task Force issued a new recommendation that colorectal cancer screening for people at average risk should begin at age 45 instead of 50. For consistency between years, the data in this report uses the previous recommendation of screening between ages 50-75.

Colorectal Cancer Screening in Wisconsin

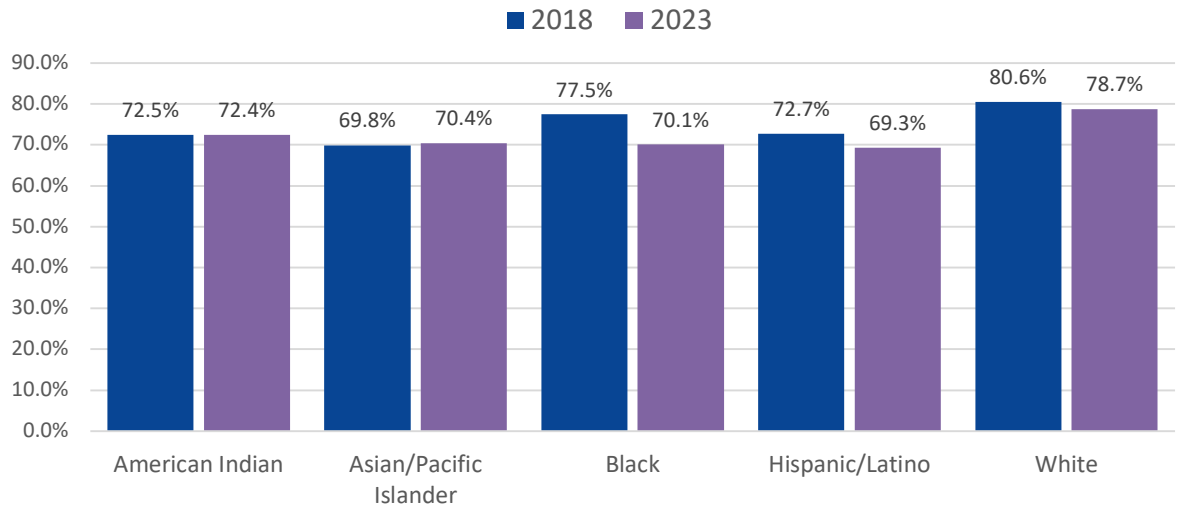
Results (2018 and 2023)

This measure assesses the percentage of adults, aged 50-75, who were eligible for colorectal cancer screening during the measurement year, and who were up to date with their guideline concordant screening for colorectal cancer
by the end of the measurement year. This could include a colonoscopy in the past 10 years, a CT colonography or flexible sigmoidoscopy in the past 5 years, a test for blood in the stool (FOBT/FIT) in the past year, or a multi-target stool DNA test in the past 3 years.

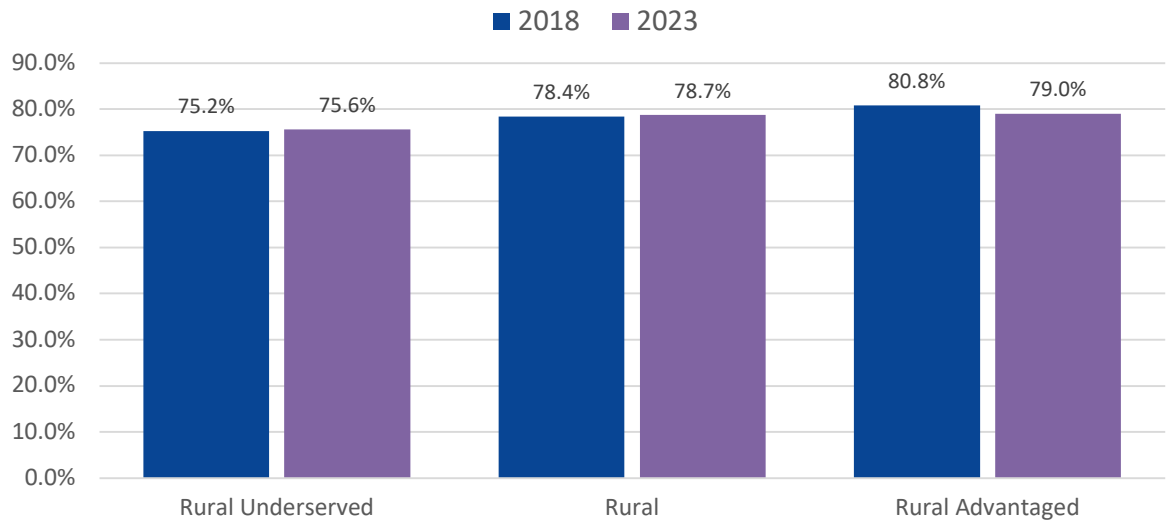
KEY FINDINGS

- Compared to 2018, colorectal cancer screening performance was worse for most groups in 2023, most likely due to longer wait times for colonoscopies during the pandemic and recovery period, exacerbated by increased demand from the change in recommendations.
- Colorectal cancer screening decreased substantially (7.4%) among Black Wisconsinites. Screening also decreased 3.4% among Hispanic/Latino Wisconsinites, widening the existing disparity gap for these populations.
- Colorectal cancer screening decreased substantially (6.8%) among residents of urban underserved areas. Screening also declined among residents of urban and urban advantaged areas, with decreases of 3.2% and 3.1% respectively.

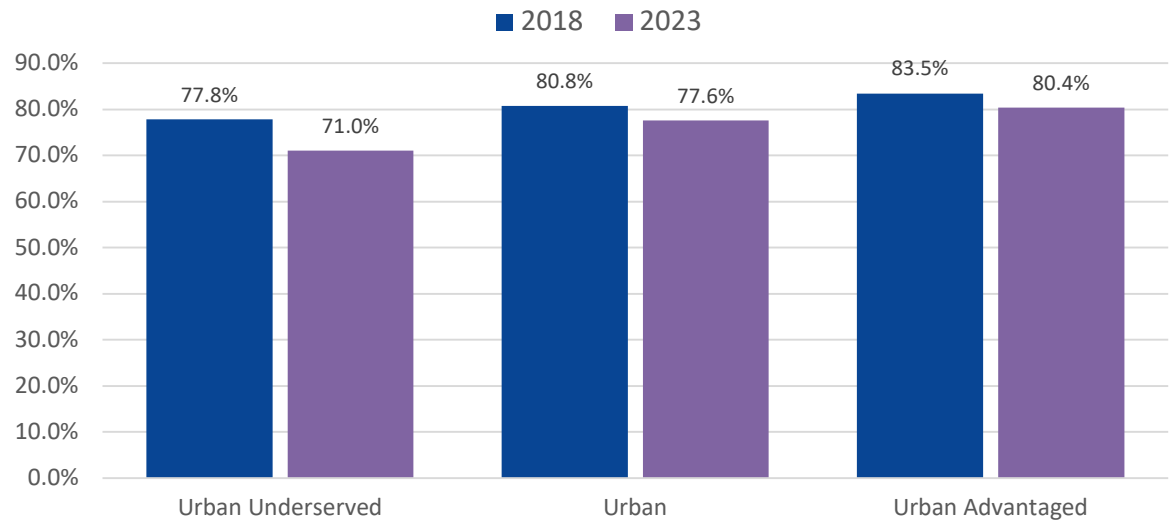
COLORECTAL CANCER SCREENING IN WISCONSIN BY RACE/ETHNICITY



COLORECTAL CANCER SCREENING IN WISCONSIN BY RURAL GEOGRAPHY



COLORECTAL CANCER SCREENING IN WISCONSIN BY URBAN GEOGRAPHY



Considerations

1. **Screening Urgency:** During the COVID-19 pandemic, many recommended screenings were postponed. While many health systems have worked hard to catch up, some still have significant backlogs of patients in need of screening. The decrease in screening rates, particularly in urban underserved areas, underscores the critical need for maintaining and promoting screening programs.
2. **Overcoming Disparities:** The disparities in screening rates that persist between groups demand targeted health interventions and policies to improve accessibility to multiple screening options, especially considering the pandemic's impact on healthcare.
3. **Recovery and Outreach:** Community outreach is a key strategy to increase awareness of the importance of colorectal cancer screening, the different screening methods available, how to access screening, and lifestyle changes to reduce cancer risk.

Taking Action

Data is an important tool to understand trends in health outcomes and care in Wisconsin. However, it is just one component in identifying and addressing health disparities. Health systems participating in our project responded to health disparities by meeting monthly to develop targeted initiatives and share challenges and successes. There is more work to be done to reduce preventable health disparities in Wisconsin and improve care for all residents.

Call to Action

Based on the findings of this report, below are some considerations and recommendations for reducing health disparities and improving healthcare quality.

Foster Collaborative Partnerships: Promote collaboration among healthcare providers, community organizations, and public health institutions to address health disparities and enhance outcomes through collective action and shared resources.

Focus on Health Equity: Implement policies and programs aimed at reducing health disparities, with a focus on providing culturally responsive care, improving access to healthcare services, and supporting the needs of historically underserved or disadvantaged groups. Health equity should be a priority embedded in policies and procedures throughout organizations.

Leverage Successful Strategies: Identify and share best practices and lessons learned from areas and populations that have shown improvement in diabetes A1c control, blood pressure management, and colorectal cancer screening rates. Encourage healthcare systems to adopt these strategies widely.

Address Geographic Disparities: Develop targeted interventions to improve care in rural and underserved areas, focusing on increasing the availability of healthcare providers, improving access to specialized care, and enhancing telehealth services.

Promote Chronic Disease Management: Strengthen initiatives for managing chronic conditions like diabetes and hypertension, particularly during public health crises, to ensure continuity of care through innovative solutions.

Improve Access to Screenings: Increase efforts to ensure that all populations, especially those experiencing disparities, have access to necessary screenings such as for colorectal cancer. This includes utilizing telehealth, at-home screening kits, and community outreach programs to educate and encourage participation.

Public Health Campaigns and Education: Launch focused public health campaigns to raise awareness about the importance of regular screenings and chronic disease management, tailored to reach diverse communities in a culturally responsive manner.

Research and Data Analysis: Conduct ongoing research to understand barriers to effective management of chronic diseases and screenings and utilize data to guide the development of targeted interventions and resource allocation.

Invest in Broadband and Telehealth Access: Continue to invest in and expand broadband and telehealth capabilities to improve access to care, especially for those with transportation barriers, facilitating telehealth as an integrated component of chronic disease management and preventive care.

Policy and Resource Allocation: Call on policymakers to consider these findings in guiding health policy and allocating resources to support populations experiencing disparities, focusing on improving access, affordability, and the quality of care.

Questions to Consider for Taking Action

- What other organizations and communities are working to address health disparities, and how could more collaborative partnerships be formed?
- What other data sources can be used to get a more complete picture of health and healthcare in Wisconsin?
- What barriers exist to accessing quality, affordable healthcare (e.g. clinic location, inflexible employment, transportation barriers) and how can we address these barriers?

- What barriers to accessing healthcare worsened during the COVID-19 pandemic?
- Is communication about the benefits of screening tailored to the population(s) experiencing disparities and available in a variety of formats?
- What factors shape people's access to nutritious food, safe places to exercise, and medications?
- How might past experiences contribute to some communities' lack of trust in healthcare providers?
- How might we encourage the recruitment, training, and retention of a more skilled, culturally responsive, and diverse healthcare workforce?

Examples

Examples from our participating health systems are included:

Priority	Example Interventions
Blood pressure control for African American community and patients with Medicaid insurance	• Adapting education/counseling to community needs • Addressing complex social situations
Diabetes A1c control for Hmong community	• Adapting materials/messaging for language, literacy and culture • Involving families in care delivery
Colorectal cancer screening for Hispanic/Latinx/ Spanish-speaking community	• Addressing barriers to access • Identifying and engaging community champions

Resources for Taking Action to Reduce Disparities and Improve Care

Some resources for addressing disparities and improving blood sugar control in diabetes, blood pressure control, and colorectal cancer screening rates are included below. This is not an exhaustive list but intended to offer some resources for stakeholders across the state.

Blood Sugar Control in Diabetes

- CDC National Diabetes Prevention Program
- Wisconsin Department of Health Services Chronic Disease Prevention Program: Prediabetes page
- Wisconsin Department of Health Services Chronic Disease Prevention Program: Diabetes page
- Toolkit for Improving Chronic Conditions, Hypertension & Diabetes: Care & Outcomes
- What Works for Health: Diabetes

Blood Pressure Control

- Toolkit for Improving Chronic Conditions, Hypertension & Diabetes: Care & Outcomes
- What Works for Health: Blood Pressure Control
- The Community Guide: Blood Pressure Control
- Quit Connect: A Protocol to Improve Tobacco Quit Line Referrals
- Wisconsin Tobacco Quit Line

Colorectal Cancer Screening

- Improving Colorectal Cancer Screening Rates Toolkit
- Health Care Systems for Tracking Colorectal Cancer Screening Tests
- Wisconsin Cancer Collaborative
- National Colorectal Cancer Roundtable Resources
- What Works for Health: Colorectal Cancer Screening
- The Community Guide: Colorectal Cancer Screening

Conclusion and Future Directions

Efforts by health systems and other stakeholders in Wisconsin to combat disparities and recover from the COVID-19 pandemic represent significant progress toward health equity, particularly in blood sugar control. Blood pressure control and colorectal cancer screening may need additional focused effort to ensure recovery from the pandemic and progress in the pursuit of health equity. By focusing on improving access, targeted care management, cultural responsiveness, community engagement, and data-driven strategies, these systems are laying the groundwork for more equitable healthcare outcomes over time. This process is one of constant learning. Moving forward, building on these successes and addressing the identified gaps will be crucial in continuing to improve health outcomes for all communities.

Methodology

Data

WCHQ members submitted standardized clinical data. Data for performance measures for the year ending December 31, 2018 was aggregated to represent the pre-pandemic period. Data for performance measures for the year ending June 30, 2023 was also aggregated to represent the pandemic recovery period. These data provide a statewide snapshot that identified disparities in the blood sugar control in diabetes, blood pressure control, and colorectal cancer screening measures. This includes data for over 220,000 patients for blood sugar control in diabetes, over 574,000 patients for blood pressure control, and over 1 million patients for colorectal cancer screening. Differences in statewide performance are presented separately for populations defined by race and ethnicity and rural and urban residence. For all WCHQ measures, higher performance is considered better.

Data Quality and Validation

Data from WCHQ member organizations underwent a rigorous validation process, including a series of quality checks and comparisons with publicly reported WCHQ measure results. This consisted of a series of quality checks, including comparing denominators and performance rates with their publicly reported WCHQ measure results and ensuring that all data mappings were complete. Some member-level data was excluded from analysis due to incompleteness or quality issues.

WCHQ Data Limitations

There are several limitations to the findings of this report. First, some of the population sizes are small. This means that small fluctuations in health outcomes or care could have an inflated impact on the measure results. Second, this report only includes data from health care organizations that are members of WCHQ. Therefore, a subset of individuals throughout the state who are treated in other health systems or who have not recently visited a health system are not included. This particularly impacts patient population groups who receive care through Federally Qualified Health Centers (FQHCs), free & charitable clinics, Indian Health Service clinics, and clinics in northwestern Wisconsin. Lastly, due to the varied methods of data submission, statistical significance testing was not able to be performed on the data in this report.

WCHQ Measure Descriptions

Blood Sugar Control in Diabetes

This measure assesses the percentage of adults with diabetes, aged 18-75, whose most recent A1c blood sugar level was controlled to less than 8.0% within the one-year measurement period. For 2018 data this represents January 1 to December 31, 2018. For 2023 data this represents July 1, 2022 to June 30, 2023, which represents the most recent data available.

Blood Pressure Control

This measure assesses the percentage of patients with hypertension (high blood pressure), aged 18-85, whose blood pressure was in control based on the most recent measurement during the one-year measurement period. For 2018 data this represents January 1 to December 31, 2018. For 2023 data this represents July 1, 2022 to June 30, 2023.

Colorectal Cancer Screening

This measure assesses the percentage of adults, aged 50-75*, who were eligible for colorectal cancer screening during the measurement year, and who were up to date with their guideline concordant screening for colorectal cancer by the end of the measurement year. This could include a colonoscopy in the past 10 years, a CT colonography or flexible sigmoidoscopy in the past 5 years, a test for blood in the stool (FOBT/FIT) in the past year, or a multi-target stool DNA test in the past 3 years. For 2018 data, the end date for this variable measurement period (depending on look back) was December 31, 2018. For 2023 data, the end date for this variable measurement period was June 30, 2023.

*NOTE: In 2021, the U.S. Preventive Services Task Force issued a new recommendation that colorectal cancer screening for people at average risk should begin at age 45. The data in this report uses the prior recommendation to start screening at age 50. WCHQ is currently updating their measure, and future reporting periods will use the updated guideline.

Data Tables

Blood Sugar Control in Diabetes

Indicator	Dec. 2018		Jun. 2023	
	# Eligible	% Met	# Eligible	% Met
RACE/ETHNICITY				
American Indian	907	65.0%	1,775	68.4%
Asian/Pacific Islander	3,479	68.8%	5,524	69.5%
Black	13,365	63.5%	16,508	65.7%
Hispanic/Latino	8,692	59.6%	13,011	64.5%
White	147,073	73.6%	183,915	74.8%
GEOGRAPHY				
Rural Underserved	5,951	70.7%	7,695	72.1%
Rural	22,766	73.8%	29,175	74.2%
Rural Advantaged	15,489	73.7%	20,595	74.0%
Urban Underserved	17,139	67.0%	19,237	68.3%
Urban	66,284	72.8%	85,160	74.0%
Urban Advantaged	31,866	71.7%	41,672	73.9%

Blood Pressure Control

Indicator	Dec. 2018		Jun. 2023	
	# Eligible	% Met	# Eligible	% Met
RACE/ETHNICITY				
American Indian	1,265	82.7%	2,858	83.3%
Asian/Pacific Islander	5,109	83.4%	7,726	83.0%
Black	26,923	75.6%	30,811	75.2%
Hispanic/Latino	11,169	81.8%	16,168	81.0%
White	433,305	85.5%	516,932	83.5%
GEOGRAPHY				
Rural Underserved	16,064	85.3%	19,383	83.6%
Rural	64,855	85.5%	78,596	83.0%
Rural Advantaged	46,363	85.3%	57,877	82.6%
Urban Underserved	36,247	80.6%	37,893	80.1%
Urban	181,932	85.0%	214,398	83.4%
Urban Advantaged	93,277	85.3%	119,723	83.2%

Colorectal Cancer Screening

Indicator	Dec. 2018		Jun. 2023	
	# Eligible	% Met	# Eligible	% Met
RACE/ETHNICITY				
American Indian	2,148	72.5%	5,361	72.4%
Asian/Pacific Islander	9,410	69.8%	14,355	70.4%
Black	32,561	77.5%	41,121	70.1%
Hispanic/Latino	19,468	72.7%	29,591	69.3%
White	786,453	80.6%	924,072	78.7%
GEOGRAPHY				
Rural Underserved	28,094	75.2%	33,153	75.6%
Rural	113,711	78.4%	135,247	78.7%
Rural Advantaged	86,279	80.8%	105,240	79.0%
Urban Underserved	51,876	77.8%	58,000	71.0%
Urban	313,655	80.8%	372,547	77.6%
Urban Advantaged	191,732	83.5%	234,711	80.4%

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