

PRELIMINARY COOK COUNTY AND CHICAGO HYPERTENSION PREVALENCE AND CONTROL ESTIMATES

Report Date: Summer 2023

Surveillance information assessed as of August 2022

This resource was created prior to January 2025 and may contain terminology or references that are not in alignment with Executive Orders issued on January 20, 2025. The content of this resource does not reflect the official views or policies of the National Association of Chronic Disease Directors (NACDD).



NATIONAL ASSOCIATION OF
CHRONIC DISEASE DIRECTORS
Promoting Health. Preventing Disease.





What This Report Adds

What's New? This report provides adjusted estimates of hypertension prevalence and control calculated using electronic health record (EHR) data collected from August 2020 to August 2022 and accessed through the Multi-State EHR-Based Network for Disease Surveillance (MENDS). For the first time, Cook County and Chicago public health and population health stakeholders can study and share statewide and local information about hypertension control.

These estimates of hypertension prevalence and control have been weighted to adjust for bias in age, sex, and racial/ethnic representativeness, as well as uneven geographic distribution. The underlying data were robust enough to generate estimates for approximately 70% of the county's ZIP codes.

Access to timely chronic disease data creates opportunities to improve population health. This report provides users with the data needed to identify communities with the greatest burden of hypertension and to evaluate the impact of hypertension prevention efforts in near-real time. Repeated cross-sectional measures, which can be reproduced throughout the year, can monitor disease burden and hypertension control over time at the community level.

The collaboration that inspired this report highlights the value of partnerships among health systems, organizations that aggregate clinical data, and public health departments, each of which stands to benefit from the knowledge that collaborative data sharing brings.

More information about the MENDS network
<https://chronicdisease.org/page/mendsinfo/>

Table of Contents

This report includes the following sections.

Section 1

Background and Methods

Section 2

Hypertension Prevalence in Cook County

Section 3

Hypertension Control in Cook County

Section 4

Local Spotlight: Chicago

Section 5

Conclusions and Limitations

Appendix A

Data Tables



Section 1: Background and Methods

Section 1: Background and Method

Hypertension Basics

High blood pressure (BP), also known as hypertension, increases an individual's risk for heart disease and stroke, two leading causes of death. Hypertension can be controlled through medications and lifestyle modifications. Control of hypertension can reduce an individual's risk of experiencing hypertension-related health outcomes.¹

Surveillance of hypertension prevalence and control can identify populations with the highest burden and opportunities to improve hypertension control. The National Health and Nutrition Examination Survey (NHANES) is the primary source for national hypertension surveillance information.

NHANES estimates that roughly half (48%) of U.S. adults (≥18 years of age) have hypertension.¹ An analysis of 2017–2020 NHANES data shows that 48% of adults with hypertension have controlled hypertension. Control in this report is defined as <140/90 mmHg.²

Existing Surveillance Data

During 2021, an estimated 30% of Cook County adults age 18 years and older had high BP as seen in CDC PLACES.³ In the 2022 Chicago Health Atlas survey, 27% of Chicago adults age 18 years and older reported being diagnosed with hypertension.⁴

These hypertension estimates comes from self-reporting a hypertension diagnosis; undiagnosed hypertension may not be self-reported because individuals who are undiagnosed may be unaware and unable to accurately report their hypertension status.

It is worth noting that a gold standard does not exist for comparing hypertension estimates. These established public health surveillance data sources often differ considerably from each other due to differences in methodology.

Related Links:

1. Facts about Hypertension (CDC): <https://www.cdc.gov/bloodpressure/facts.htm>
2. Muntner, P., Miles, M. A., Jaeger, B. C., Hannon Iii, L., Hardy, S. T., Ostchega, Y., ... & Schwartz, J. E. (2022). Blood pressure control among US adults, 2009 to 2012 through 2017 to 2020. *Hypertension*, 79(9), 1971-1980. <https://www.ahajournals.org/doi/full/10.1161/HYPERTENSIONAHA.122.19222>
3. CDC PLACES Tool: <https://www.cdc.gov/places/>
4. Chicago Health Atlas: <https://chicagohealthatlas.org/indicators/HCSHYTP?topic=hypertension-rate&layer=place&geoid=1714000&tab=chart>

Surveillance Population

This report uses EHR data from AllianceChicago¹ that includes data from multiple healthcare delivery systems operating across Cook County and considers outpatient care encounters only.

Hypertension prevalence and control are estimated using outpatient data from August 2020 to August 2022 for adults (ages 20–84 years) residing in Cook County who had ≥ 1 healthcare encounter that included a BP measure during that time period. Adults ages 18-19 years and those >84 years were excluded in order to align the surveillance population with census age groups for the purposes of adjustment.

Race and ethnicity are combined into one variable for weighting, and patients with an unknown or missing race and ethnicity had to be excluded (Table 1). Patients with a missing sex or location were also excluded.

After exclusions, data were available from 136,511 adults ages 20-84 years, representing 4% of the estimated 2022 Cook County adult population aged 20-84 years (3,755,953).²

Related Links:

1. AllianceChicago: <https://alliancechicago.org/>
2. Cook County American Community Survey Data: <https://data.census.gov/table?q=Age+and+Sex&q=050XX00US17031&tid=ACSST1Y2021.S0101>

Surveillance Population Exclusions

Table 1: Counts of AllianceChicago Patient Population and Exclusions*

Starting AllianceChicago Patient Population	147,494
Patients with missing sex	280
Patients with unknown race	8,696
Patients without matching American Community Survey data	134
Surveillance Population	136,511

*Exclusion categories are not mutually exclusive



Definitions

Hypertension Prevalence

A hypertension case (*numerator*) was defined as an adult having any combination of (a) diagnosed hypertension (based on diagnosis codes), (b) prescription for an antihypertensive drug (with or without a diagnosis code), or (c) potentially undiagnosed hypertension (based on two or more BP readings above 140/90 in 1 year) in the preceding 2 years.¹ Hypertension diagnostic codes included 401.x and 405.x ICD-9 codes and I10 and I15 ICD-10 codes for essential and secondary hypertension.

Patients are included in the hypertension prevalence *denominator* if they had at least one outpatient medical encounter with measured BP in the past 2 years.

The hypertension prevalence percentage is calculated as the number of adults meeting the criteria for a hypertension case divided by the total number of adults in the denominator.

Notably, MENDS recognizes that many conditions other than hypertension may cause an increase in BP such that not all patients with elevated BP have hypertension. However, evidence² shows a substantial number of individuals with undiagnosed hypertension, and the inclusion of these individuals is important to public health surveillance.

Related Links:

1. MENDS hypertension algorithm: <https://public.3.basecamp.com/p/WNt21XSim7prLbG59estg6v3>
2. Wall HK, Hannan JA, Wright JS. Patients with undiagnosed hypertension: hiding in plain sight. JAMA. 2014 Nov 19;312(19):1973-4. <https://doi.org/10.1001/jama.2014.15388>



While hypertension is more prominent among older adults, it is not simply a condition of the elderly. All ages are impacted, and early identification and long-term control can preserve cardiovascular health now and into the future.

Dr. Jerome Adams

[Surgeon General's Call to Action to Control Hypertension](#)

Definitions

Diagnosed Hypertension Control

Hypertension control (*numerator*) is defined as individuals with diagnosed essential hypertension whose latest BP measure (post diagnosis) during the surveillance time period was <140/90 mm Hg, as denoted in the Centers of Medicare & Medicaid Services electronic clinical quality measure (eCQM).¹

Applying the same age and observation period criteria from hypertension prevalence, patients were included in the hypertension control *denominator* if they were identified with diagnosed essential hypertension, a subset of all hypertension cases. Patients with only elevated BPs, secondary hypertension, or only hypertension medications were excluded from the hypertension control denominator.

Diagnosed hypertension cases for which a BP measurement to determine control is not available and control status is unknown are considered not controlled.

Related Links:

1. Electronic clinical quality measure definition for controlling high blood pressure:
<https://ecqi.healthit.gov/ecqm/ec/2023/cms165v11>



While hypertension is more prominent among older adults, it is not simply a condition of the elderly. All ages are impacted, and early identification and long-term control can preserve cardiovascular health now and into the future.

Dr. Jerome Adams

[Surgeon General's Call to Action to Control Hypertension](#)

Definition Summary

Hypertension Prevalence

Numerator

Patients with ≥ 1 diagnostic codes for essential hypertension (diagnosed)

Patients with ≥ 1 diagnostic codes for secondary hypertension (diagnosed)

Patients with ≥ 1 order for hypertension treatment medications (treated)

Patients with ≥ 2 BP measures $>140/90$ mm Hg (potentially undiagnosed hypertension)*

Denominator

Adults 20-84 years of age who had ≥ 1 encounter with a BP measure in 2 years

Diagnosed Hypertension Control (eCQM)**

Numerator

Patients whose latest BP measure in the surveillance time period is $<140/90$ mm Hg

Denominator***

Patients with ≥ 1 diagnostic codes for essential hypertension (diagnosed)

*Including patients with only elevated BP may introduce some false positives.

**The CMS 165 eCQM is limited to patients with diagnosed essential hypertension (ICD-10-CM I10)

*** Exclusions include pregnancy and end-stage renal disease

Methods

The goal of weighting is to minimize bias in EHR data and improve precision of estimates by accounting for systemic differences between the MENDS patient population and the underlying geographic population using the 2021 American Community Survey data.

Because the distribution of data at the county and city levels differ, models to generate weighted estimates were built for Cook County and Chicago and fit independently to generate the best estimates. Thus, small differences in the methods at the county and city levels exist. Continuous refinements of the model and updates to the estimates are expected as the data are updated.

Models were adjusted for differences in age, sex, race/ethnicity, and geographic distribution for the surveillance population versus the target population.

Adjusted estimates were assessed for stability and fit. Five-digit ZIP Code adjusted estimates with a standard error greater than 5% are suppressed due to inadequate precision. Estimates for geographies with <125 individuals are also suppressed.

Hypertension control estimates are derived using subgroup analysis where the estimates of control are derived based on patients with an essential hypertension diagnosis.

To determine the statistical significance of differences between groups, please reference the tables available in the appendices and the overlap of confidence intervals.

Because these data have been weighted, the resulting adjusted estimates do not carry a risk that patients could be re-identified. This report is a de-identified product.

Weighting methods evolve as new information emerges and more data become available. Additional details describing these methods are available upon request.



Section 2: Hypertension Prevalence in Cook County

Hypertension Prevalence in Cook County

Overall, 31% of Cook County adults 20–84 have hypertension. By demographics:

- Adults ages 65–84 years have a significantly higher prevalence (76%) compared with other age groups.
- Black adults have a significantly higher prevalence (40%) compared with other racial/ethnic groups
- By insurance type, Medicare recipients have the highest prevalence (74%), which likely reflects that Medicare recipients are significantly older than other payer categories

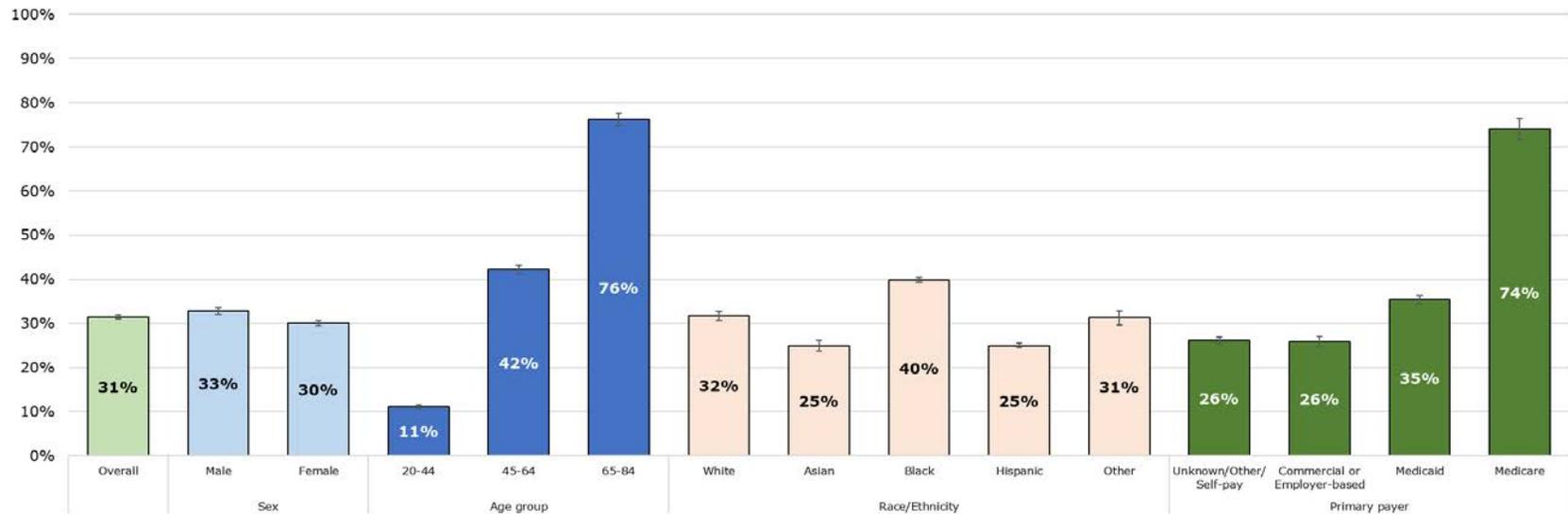


Figure 1: Hypertension Prevalence in Cook County by Sex, Age Group, Race/Ethnicity, and Primary Payer – August 2022

Surveillance population used to create estimates: 136,511 adults 20–84 years of age.

Hypertension Prevalence in Cook County

Geographic Patterns by ZIP Code

This map displays adult hypertension prevalence for 113 (69%) of Cook County's 164 ZIP Codes. Prevalence varies in these 113 ZIP Codes from 3% to 53%.

ZIP Codes with high hypertension prevalence (**dark blue**) indicate a negative health outcome, while areas with low hypertension prevalence (light blue) represent a lower burden of illness.

Hypertension prevalence is higher in the northern part of the county, and communities in the central east have the lowest burden of hypertension.

The western part of the county has the most ZIP Codes with insufficient data, which indicates that data from healthcare providers in this area are not available through this data source.

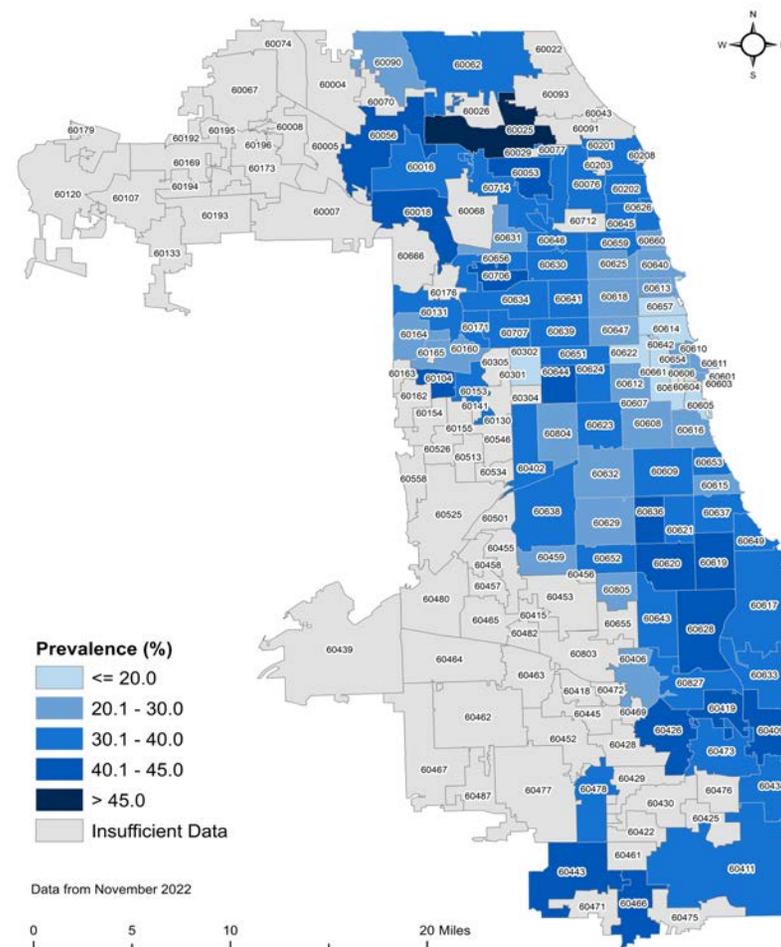


Figure 2: Hypertension Prevalence in Cook County by ZIP Code—August 2022

Surveillance population used to create estimates: 136,511 adults 20–84 years of age.

Data are suppressed where the population is less than 125 people or where the standard error is larger than 5%.

Summary of Hypertension Prevalence Findings

Demographic and Socioeconomic Patterns

Nearly a third (31%) of Cook County adults have hypertension.

By age, hypertension is most common in adults ages 65–84 years old (76%).

A slightly higher proportion of men have hypertension compared with women (33% versus 30%).

Hypertension prevalence is highest in Black adults (40%) compared with White, Hispanic, Asian, or individuals of other races or ethnicities.

Medicare recipients (who are mostly older adults) have the highest prevalence (74%) by insurance type.

Geographic Patterns

Among the 113 ZIP Codes with data:

- Hypertension prevalence varies by 50 percentage points.
- Sixty-seven (59%) have a prevalence greater than or equal to the county prevalence of 31%.

Despite differences in methodology, at the county level, hypertension prevalence (31%) is similar to the 2021 CDC PLACES estimate of 30%.

Prevalence estimates are unavailable in 51 ZIP Codes (31%); this is likely a reflection of areas where access to care is challenging and where MENDS data have low population coverage. Recruiting more data from these communities could improve the accuracy of these estimates and tell a different story.



Section 3: Hypertension Control in Cook County

Hypertension Control in Cook County

Fifty-seven percent of Cook County adults with hypertension are controlled.

- Hypertension control is nearly equivalent for males (56%) and females (58%).
- Across age groups, control is nearly equivalent.
- Asian adults have the highest hypertension control (66%) by race/ethnicity.
- Hypertension control is highest for patients who have commercial/employer-based insurance (62%).

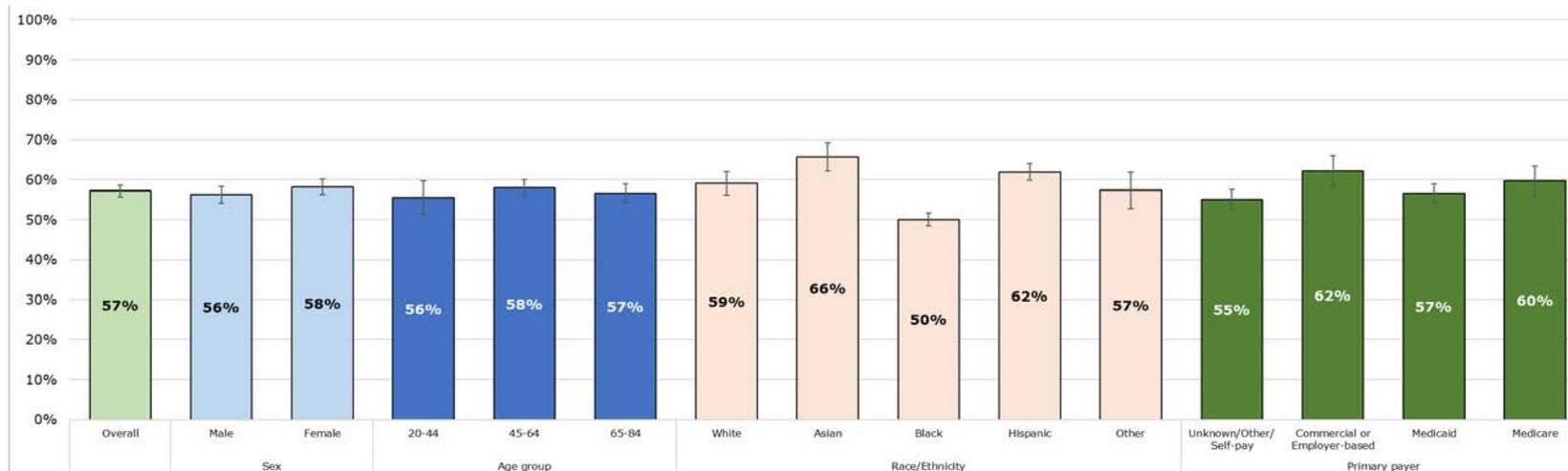


Figure 3: Hypertension Control in Cook County by Sex, Age Group, Race/Ethnicity, Payer—August 2022

Surveillance population used to create estimates: 23,167 adults 20–84 years of age with diagnosed hypertension.

Hypertension Control in Cook County

Geographic Patterns by ZIP Code

This map displays the percentage of individuals with hypertension control for 27 (16%) of Cook County's 164 ZIP Codes.

Because the denominator for hypertension control is patients with hypertension, many more ZIP Codes have insufficient data, compared with the map of hypertension prevalence.

ZIP Codes with high hypertension control (dark green) are a positive health outcome, while areas with low hypertension control (light green) represent a population with elevated risk for negative outcomes, such as heart attacks and strokes.

Among ZIP Codes with adequate data, hypertension control ranges from 45% to 74%. Hypertension control estimates are only available for parts of central western Cook County.

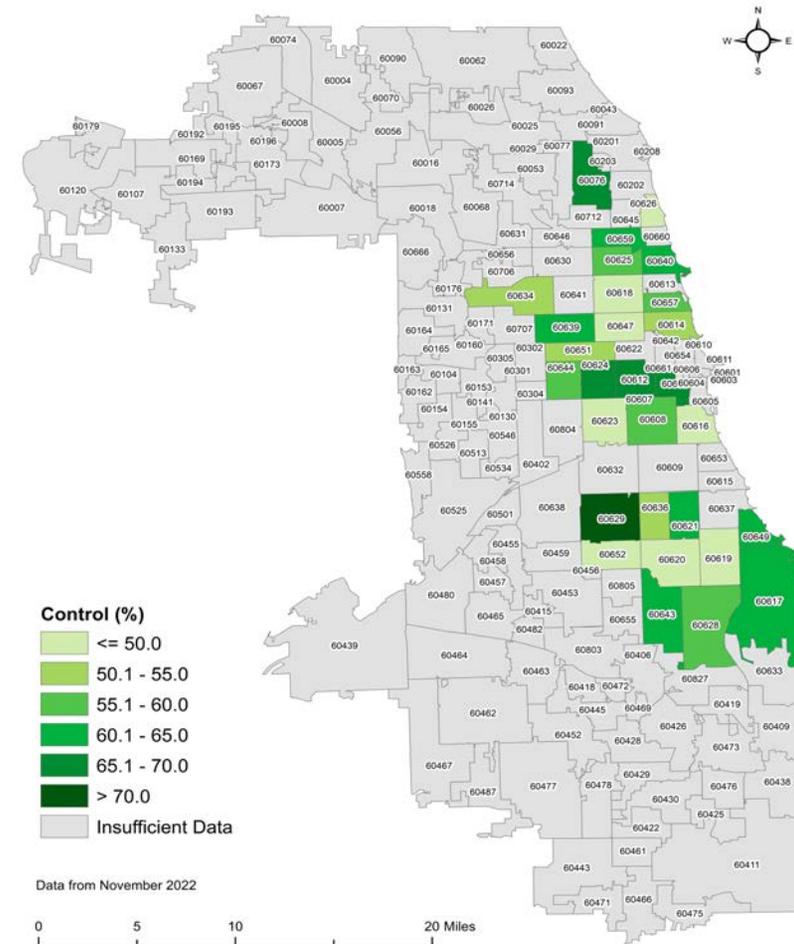


Figure 4: Hypertension Control in Cook County by ZIP Code—August 2022

Surveillance population used to create estimates: 23,167 adults 20–84 years of age with diagnosed hypertension

Data are suppressed where the population is less than 125 people or where the standard error is larger than 5%.

Summary Hypertension Control Findings

Demographic and Socioeconomic Patterns

Among 23,167 adults 20–84 years of age in Cook County with diagnosed hypertension, 57% have their hypertension controlled.

Hypertension control is nearly equivalent by sex and age group.

Asian adults have higher hypertension control (66%) compared with other races.

Patients whose primary payer is commercial/ employer-based insurance have the highest hypertension control (62%) compared with other payer types.

Geographic Patterns

Hypertension control has some variability, with a range of 29 percentage points (45%–74%).

Many ZIP Codes had insufficient data to estimate hypertension control.

Hypertension control estimates are more available for the central western Cook County, where MENDS population coverage is highest.



Section 4: Local Spotlight Chicago

Section 4 examines hypertension prevalence and control in Chicago, the largest city in Cook County.

MENDS provides data from 121,315 Chicago residents, representing 6% of the 2,012,254 adults 20–84 in Chicago (2021 American Community Survey).¹

Hypertension prevalence and control maps feature adjusted estimates derived for each five-digit ZIP Code.

Related Links:

2021 American Community Survey:

https://data.census.gov/table?q=Age+and+Sex&g=050XX00US17031_160XX00US1714000&tid=ACSST1Y2021.S0101

Hypertension Prevalence in Chicago

Overall, 31% of Chicago adults 20–84 have hypertension. By demographics:

- Adults ages 65–84 have a significantly higher prevalence (76%) compared with other age groups.
- Black adults have a significantly higher prevalence (41%) compared with other racial/ethnic groups.
- Medicare patients have a significantly higher prevalence (74%) compared with other payer categories.

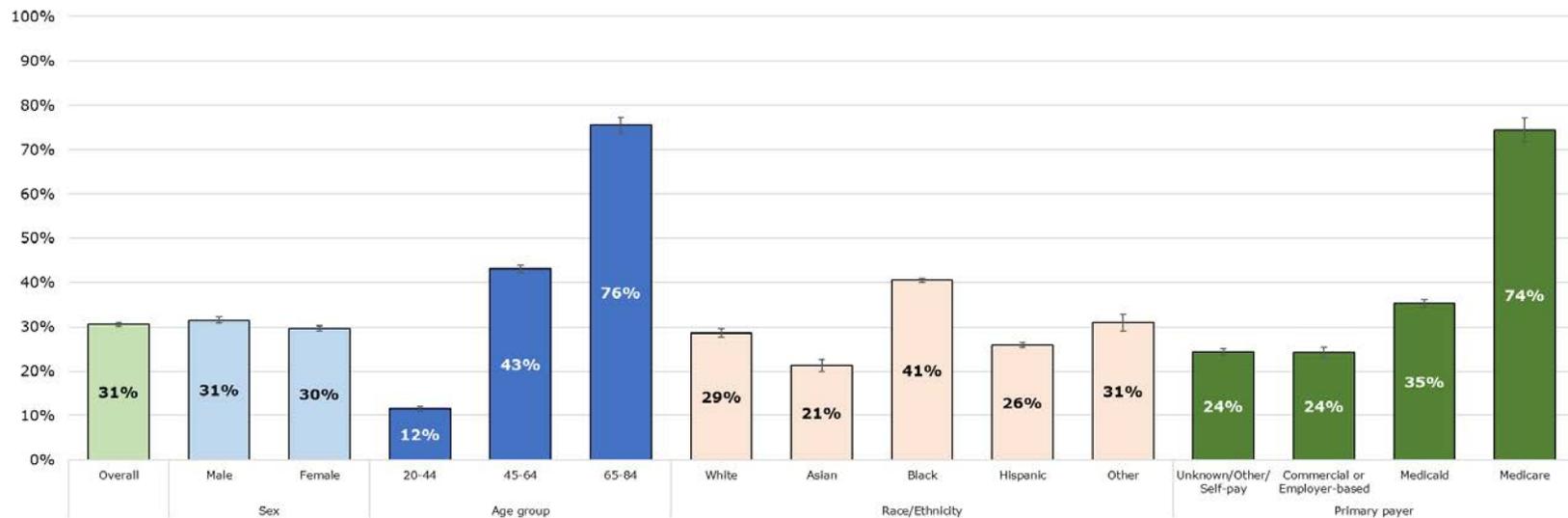


Figure 5: Hypertension Prevalence in Chicago by Sex, Age Group, Race/Ethnicity, and Payer—August 2022

Surveillance population used to create estimates: 121,315 adults 20–84 years of age.

Modeled Hypertension Prevalence

Chicago has 66 residential ZIP Codes (PO Box ZIP Codes were excluded), of which 55 have data available. Overall, hypertension prevalence across Chicago is estimated to be 31% and varies by five-digit ZIP Code within the city from 15% to 44%.

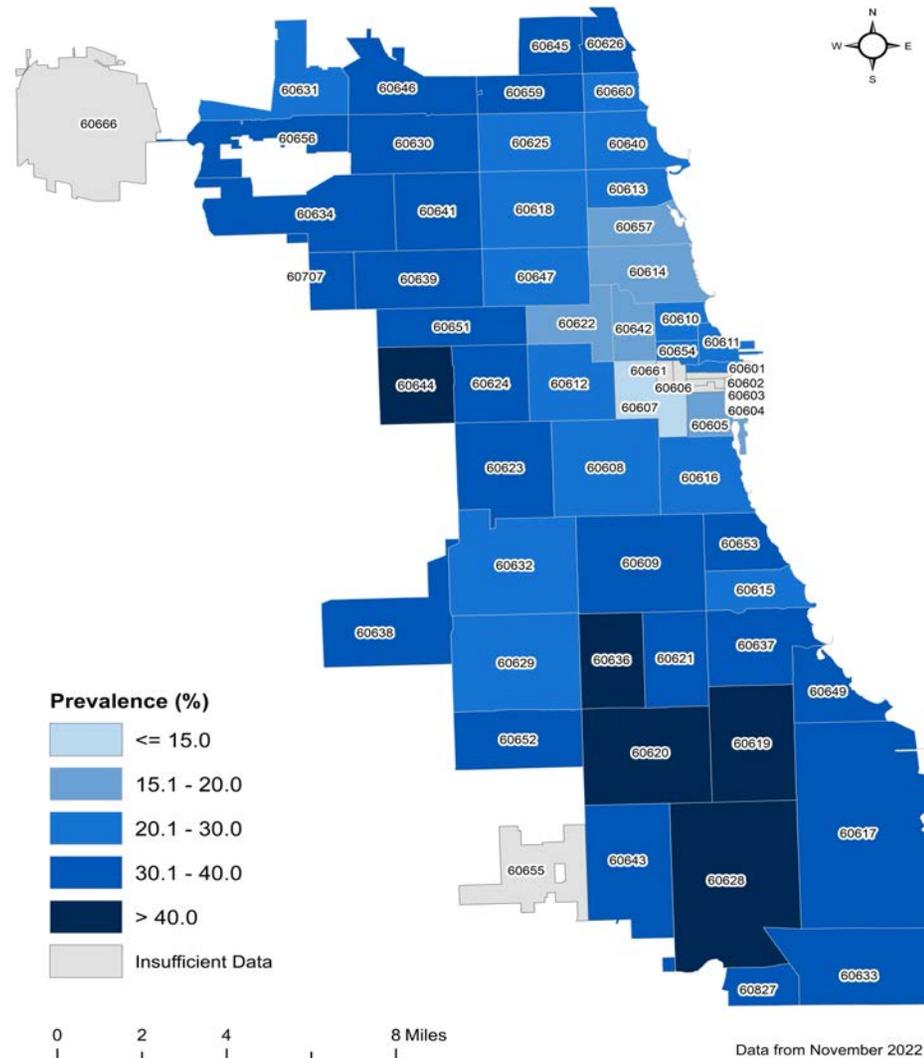


Figure 6: Hypertension Prevalence in Chicago by Five-Digit ZIP Code—August 2022

Surveillance population used to create estimates: 121,315 adults 20–84 years of age.

Data are suppressed where the population is less than 125 people or where the standard error is larger than 5%.

Hypertension Control in Chicago

Overall, 58% of Chicago adults 20–84 have their hypertension controlled. By demographics:

- No significant difference in control exists by sex or age.
- Asian adults have slightly higher control (65%) compared with other racial/ethnic groups.
- By insurance payer, commercial/employer-based patients have higher control than other categories.

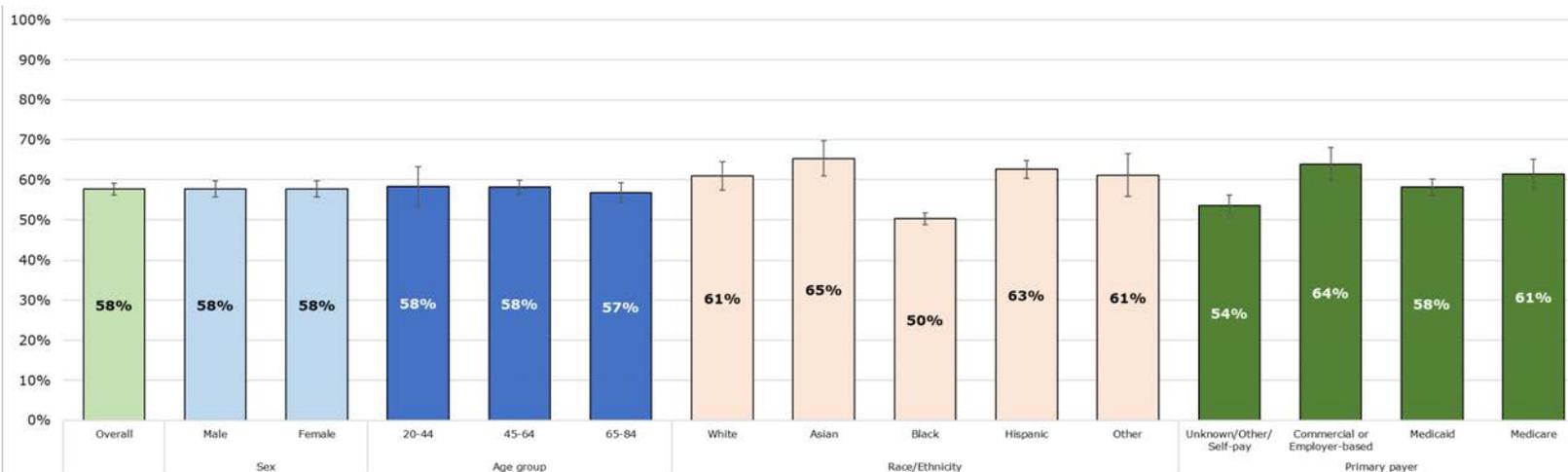


Figure 7: Chicago Adult Hypertension Control by Sex, Age Group, Race/Ethnicity, and Payer—August 2022

Surveillance population used to create estimates: 20,759 adults 20–84 years of age.

Modeled Hypertension Control

Overall hypertension control for Chicago is 58%. A comparison across five-digit ZIP Codes shows variation in Chicago, ranging from 45% to 74%, for a difference of 29 percentage points.

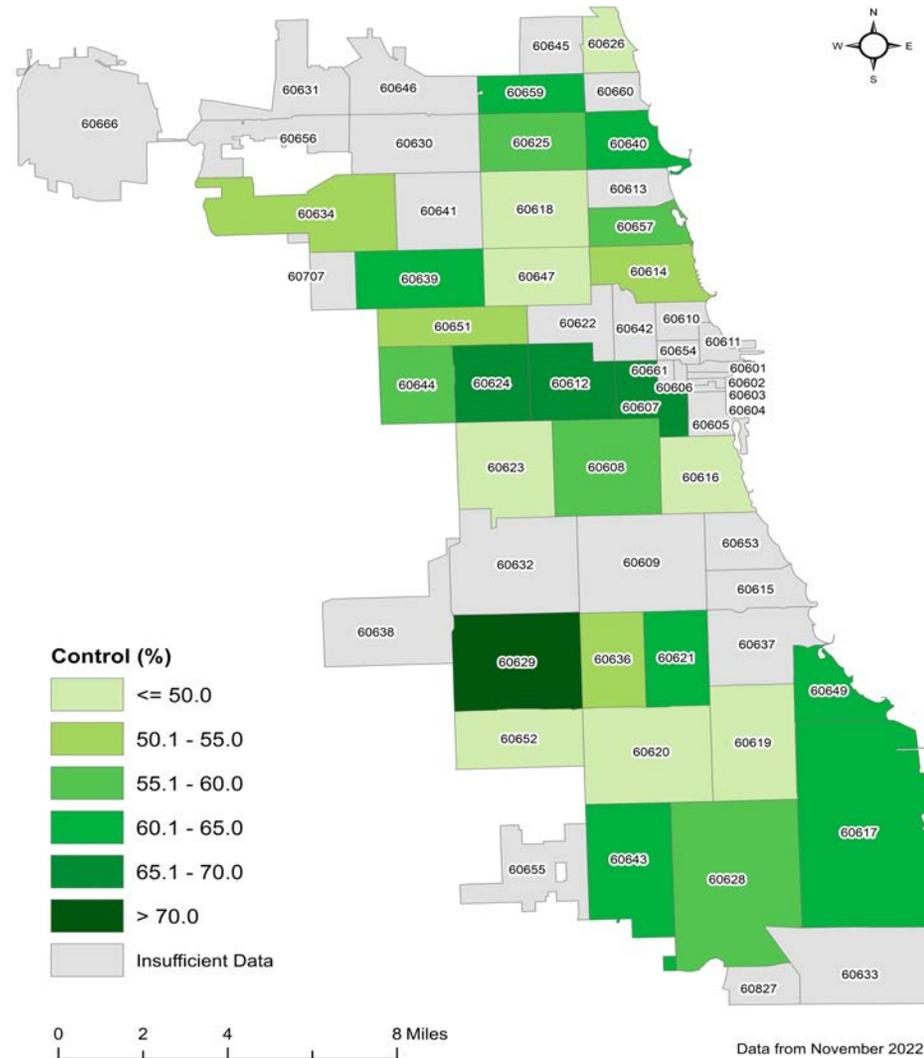


Figure 8: Hypertension Control in Chicago by Five-Digit ZIP Code—August 2022

Surveillance population used to create estimates: 20,759 adults 20–84 years of age with diagnosed hypertension.

Data are suppressed where the population is less than 125 people or where the standard error is larger than 5%.



Section 5: Conclusions and Limitations

Preliminary Conclusions

Hypertension prevalence:

- Thirty-one percent of Cook County adults, ages 20–84 years, have hypertension.
- Thirty-one percent of Chicago adults, ages 20–84 years, have hypertension.
- Prevalence varies across the county by 50% (3% to 53%) and within Chicago by 29% (15% to 44%).
- CDC PLACES estimated Cook County adult hypertension prevalence (30%) is approximately the same as the MENDS estimate (31%) due to differences in methodology and sample population.
- For Chicago, the estimated adult hypertension prevalence from Chicago Health Atlas¹ is slightly lower (27%) than the MENDS estimate (31%) due to differences in methodology and sample population.

Hypertension control:

- Fifty-seven percent of Cook County adults (20-84 years of age) with hypertension have their hypertension controlled.
- Fifty-eight percent of Chicago adults (20-84 years of age) with hypertension have their hypertension controlled.
- Control in both Cook County and Chicago varies by 29% (45% to 74%)

1. Chicago Health Atlas: <https://chicagohealthatlas.org/indicators/HCSHYTP?topic=hypertension-rate&layer=place&geoid=1714000&tab=chart>

Limitations of Weighted Estimates

Data used in this report have several limitations.

EHR data are collected for clinical and administrative purposes, and using these data for public health surveillance is a secondary use.

Adjusted estimates are derived from healthcare-seeking patients alone. These patients are not a random selection of the state population but rather a specific subset. Findings in this report may not be representative of the general population.

Missing data is a known EHR data quality challenge. Patients who do not report a value needed for weighting could not be included in this analysis.

Notably, race and ethnicity are distinct concepts that are transformed into one variable; this limits the ability to see the interaction of race and ethnicity on health.

MENDS' weighting does adjust for differences in age, race/ethnicity, and sex between the MENDS population and the county population, but adjusted estimates cannot adjust for all the factors that affect health.

The COVID-19 pandemic occurred during the time period for which data for this report was collected. COVID-19 disrupted healthcare delivery, and a decrease in screening for chronic disease, including hypertension, has been documented.

EHR data do not always have a consistent and normal distribution across geographic areas.

The MENDS hypertension algorithm is subject to misclassification that could lead to either over- or underestimation of prevalence. For example, some antihypertensive medications can be used to treat conditions other than hypertension, which could result in an overestimation of hypertension prevalence. The use of 140/90 as the threshold for diagnosis and control could result in the underestimation of hypertension prevalence compared to estimates based on a lower clinical threshold.

Related Links

More information about the MENDS network: <https://chronicdisease.org/page/mendsinfo/>

Facts about Hypertension (CDC): <https://www.cdc.gov/bloodpressure/facts.htm>

Muntner, P., Miles, M.A., Jaeger, B.C., Hannon, L., Hardy, S.T., Ostchega, Y., & Schwartz, J.E. (2022). Blood pressure control among US adults, 2009 to 2012 through 2017 to 2020. *Hypertension*, 79(9), 1971-1980. <https://www.ahajournals.org/doi/full/10.1161/HYPERTENSIONAHA.122.19222>

Cook County CDC PLACES:

https://nccd.cdc.gov/PLACES/rdPage.aspx?rdReport=DPH_500_Cities.ComparisonReport&Locations=06029,22071,17031&rdRequestForwarding=Form

Chicago Health Atlas: <https://chicagohealthatlas.org/indicators/HCSHYTP?topic=hypertension-rate&layer=place&geoid=1714000&tab=chart>

CDC PLACES Tool: <https://www.cdc.gov/places/index.html>

AllianceChicago: <https://alliancechicago.org/>

2021 American Community Survey Data:

https://data.census.gov/table?q=Age+and+Sex&g=050XX00US17031_160XX00US1714000&tid=ACSSST1Y2021.S0101

MENDS Hypertension Algorithm: <https://public.3.basecamp.com/p/WNt21XSim7prLbG59estg6v3>

Electronic clinical quality measure definition for controlling high blood pressure:

<https://ecqi.healthit.gov/ecqm/ec/2023/cms165v11>

Appendix A: Data Tables

Hypertension Prevalence in Cook County

N, Estimates, Standard Errors, and Confidence Intervals

Patient group	Number of patients	Weighted (post-stratified) by sex, age group, and race/ethnicity		
		Prevalence	SE	95% Confidence Interval
Overall	136,511	31%	0.2%	(31%, 32%)
Sex				
Male	57,414	33%	0.4%	(32%, 34%)
Female	79,097	30%	0.3%	(29%, 31%)
Age group				
20-44	52,706	11%	0.3%	(11%, 12%)
45-64	72,224	42%	0.5%	(41%, 43%)
65-84	11,581	76%	0.8%	(75%, 78%)
Race/Ethnicity				
White	22,094	32%	0.5%	(31%, 33%)
Asian	5,214	25%	0.6%	(24%, 26%)
Black	54,572	40%	0.3%	(39%, 40%)
Hispanic	50,434	25%	0.3%	(24%, 26%)
Other	4,197	31%	0.8%	(30%, 33%)
Primary payer				
Unknown/other/self-pay	63,274	26%	0.4%	(25%, 27%)
Commercial or employer-based	18,967	26%	0.6%	(25%, 27%)
Medicaid	48,409	35%	0.5%	(34%, 36%)
Medicare	5,861	74%	1.2%	(72%, 76%)

Hypertension Control in Cook County

N, Estimates, Standard Errors, and Confidence Intervals

Patient group	Number of patients	Weighted (post-stratified) by sex, age group, and race/ethnicity		
		Prevalence	SE	95% Confidence Interval
Overall	23,167	57%	0.7%	(56%, 59%)
Sex				
Male	11,631	56%	1.1%	(54%, 58%)
Female	11,536	58%	1.0%	(56%, 60%)
Age group				
20-44	1,752	56%	2.1%	(51%, 60%)
45-64	16,954	58%	1.1%	(56%, 60%)
65-84	4,461	57%	1.2%	(54%, 59%)
Race/Ethnicity				
White	3,052	59%	1.5%	(56%, 62%)
Asian	854	66%	1.8%	(62%, 69%)
Black	11,940	50%	0.8%	(48%, 52%)
Hispanic	6,532	62%	1.1%	(60%, 64%)
Other	789	57%	2.4%	(53%, 62%)
Primary payer				
Unknown/other/self-pay	8,934	55%	1.3%	(53%, 58%)
Commercial or employer-based	2,772	62%	2.0%	(58%, 66%)
Medicaid	9,477	57%	1.2%	(54%, 59%)
Medicare	1,984	60%	1.9%	(56%, 63%)

Hypertension Prevalence in Chicago

N, Estimates, Standard Errors, and Confidence Intervals

Patient group	Number of patients	Weighted (post-stratified) by sex, age group, and race/ethnicity		
		Prevalence	SE	95% Confidence Interval
Overall	121,315	31%	0.2%	(30%, 31%)
Sex				
Male	51,494	31%	0.3%	(31%, 32%)
Female	69,821	30%	0.3%	(29%, 30%)
Age group				
20-44	46,858	12%	0.3%	(11%, 12%)
45-64	64,134	43%	0.4%	(42%, 44%)
65-84	10,323	76%	0.9%	(74%, 77%)
Race/Ethnicity				
White	19,345	29%	0.5%	(28%, 30%)
Asian	4,043	21%	0.7%	(20%, 23%)
Black	49,544	41%	0.3%	(40%, 41%)
Hispanic	44,672	26%	0.3%	(25%, 26%)
Other	3,711	31%	1.0%	(29%, 33%)
Primary payer				
Unknown/other/self-pay	55,556	24%	0.4%	(24%, 25%)
Commercial or employer-based	17,090	24%	0.6%	(23%, 25%)
Medicaid	43,401	35%	0.4%	(34%, 36%)
Medicare	5,268	74%	1.4%	(72%, 77%)

Hypertension Control in Chicago

N, Estimates, Standard Errors, and Confidence Intervals

Patient group	Number of patients	Weighted (post-stratified) by sex, age group, and race/ethnicity		
		Prevalence	SE	95% Confidence Interval
Overall	20,759	58%	0.7%	(56%, 59%)
Sex				
Male	10,440	58%	1.0%	(56%, 60%)
Female	10,319	58%	1.0%	(56%, 60%)
Age group				
20-44	1,591	58%	2.5%	(53%, 63%)
45-64	15,214	58%	0.9%	(56%, 60%)
65-84	3,954	57%	1.3%	(54%, 59%)
Race/Ethnicity				
White	2,621	61%	1.8%	(57%, 65%)
Asian	638	65%	2.2%	(61%, 70%)
Black	10,953	50%	0.7%	(49%, 52%)
Hispanic	5,842	63%	1.1%	(60%, 65%)
Other	705	61%	2.7%	(56%, 67%)
Primary payer				
Unknown/other/self-pay	7,809	54%	1.3%	(51%, 56%)
Commercial or employer-based	2,503	64%	2.1%	(60%, 68%)
Medicaid	8,636	58%	1.1%	(56%, 60%)
Medicare	1,811	61%	1.9%	(58%, 65%)



NATIONAL ASSOCIATION OF
CHRONIC DISEASE DIRECTORS

Promoting Health. Preventing Disease.



MULTI-STATE EHR-BASED NETWORK
FOR DISEASE SURVEILLANCE

We acknowledge the contribution of MENDS partner sites and project team who participated in the creation of this information (www.chronicdisease.org/MENDSinfo/).

“Improving Chronic Disease Surveillance and Management Through the Use of Electronic Health Records/Health Information Systems” project is supported by the Centers for Disease Control and Prevention (CDC) of the U.S. Department of Health and Human Services (HHS) as part of a financial assistance award totaling \$2,500,000 with 100 percent funded by CDC/HHS. Disclaimer: The contents are those of the authors and do not necessarily represent the official views of, nor an endorsement, by CDC/HHS, or the U.S. Government.