

# PRELIMINARY INDIANA AND INDIANAPOLIS HYPERTENSION PREVALENCE AND CONTROL ESTIMATES

**Report Date: Summer 2024**

*Surveillance information assessed as of March 2023*



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 hypertension control prevalence using electronic health record (EHR) data collected from March 2021 to March 2023 and accessed through the Multi-State EHR-Based Network for Disease Surveillance (MENDS).

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 most counties across the state and five-digit ZIP codes in Indianapolis.

Access to timely chronic disease data creates an opportunity 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 at the community level over time.

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/>

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## **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.<sup>1</sup>

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.<sup>1</sup> 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.<sup>2</sup>

### Related Links:

1. Facts about Hypertension (CDC): <https://www.cdc.gov/high-blood-pressure/data-research/facts-stats>
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. Indiana State Health Assessment: <https://www.cdc.gov/nchs/pressroom/states/indiana/in.htm#lcod>
4. Behavioral Risk Factor Surveillance System: <https://www.cdc.gov/brfss/brfssprevalence/index.html>
5. CDC PLACES Tool: <https://www.cdc.gov/places/>

## Existing Surveillance Data

In Indiana, heart disease was the leading cause of death in 2021.<sup>3</sup> Hypertension is a risk factor for heart disease.

The 2021 Behavioral Risk Factor Surveillance System (BRFSS) survey estimated 35% of Indiana adults age 18 years or older had ever been told that they had high BP or hypertension.<sup>4</sup>

Using 2019 BRFSS survey data, the CDC PLACES tool estimates that 33% of Indianapolis adults had high bp.<sup>5</sup>

Hypertension control estimates are not available for Indiana or Indianapolis.

It is worth noting that public health surveillance data sources often differ considerably from each other due to differences in methodology and condition definitions.

# Surveillance Population

This report uses EHR data from the Regenstrief Institute<sup>1</sup> that includes data from multiple healthcare delivery systems operating across Indiana and considers outpatient care encounters only.

Hypertension prevalence and control are estimated using outpatient data from March 2021 – March 2023 for adults (ages 20–84 years) residing in Indiana 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 751,993 adults, representing 15% of the 4,910,918 Indiana adults ages 20–84 years.<sup>2</sup>

## Surveillance Population Exclusions

**Table 1: Counts of Regenstrief Patient Population and Exclusions\***

Starting Regenstrief Patient Population	768,995
Patients with missing sex	35
Patients with unknown race	808
Patients without matching American Community Survey data	1,336
<b>Surveillance Population</b>	<b>751,993</b>



### Related Links:

1. Regenstrief Institute <https://www.regenstrief.org/>
2. 2021 American Community Survey Data: <https://data.census.gov/table/ACSST1Y2021.S0101?g=040XX00US18>

# 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.<sup>1</sup> 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, evidence<sup>2</sup> 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/miEyQGT8Yh9DgKFBu3bw9zgA>
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 (I10) whose latest BP measure (post diagnosis) during the surveillance time period was <140/90 mm Hg, as denoted in the Centers for Medicare & Medicaid Services electronic clinical quality measure (eCQM).<sup>1</sup>

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 (I15), 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>



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**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***

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Surgeon General's Call to Action to Control Hypertension



# Definition Summary

## Hypertension Prevalence

### Numerator

Patients with  $\geq 1$  diagnostic codes for essential hypertension (diagnosed)

Patients with  $\geq 1$  diagnostic codes for secondary hypertension (diagnosed)

Patients with  $\geq 1$  order for hypertension treatment medications (treated)

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

### Denominator

Adults 20-84 years of age who had  $\geq 1$  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  $\geq 1$  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 Indiana and Indianapolis 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.

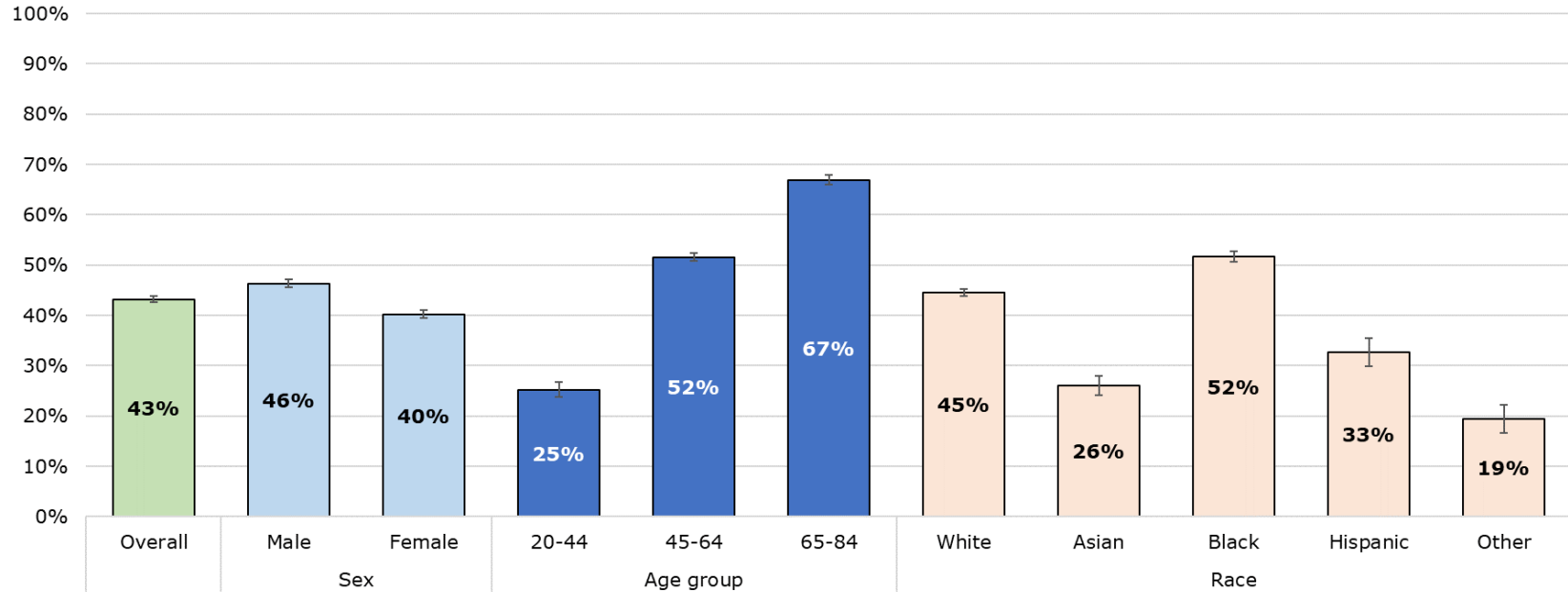


## **Section 2: Hypertension Prevalence in Indiana**

# Estimated Hypertension Prevalence in Indiana

Overall, 43% of Indiana adults 20–84 years of age have hypertension.

- Adults ages 65–84 years (67%) have a significantly higher prevalence compared with other age groups.
- Black adults (52%) have a significantly higher prevalence compared with other racial/ethnic groups.



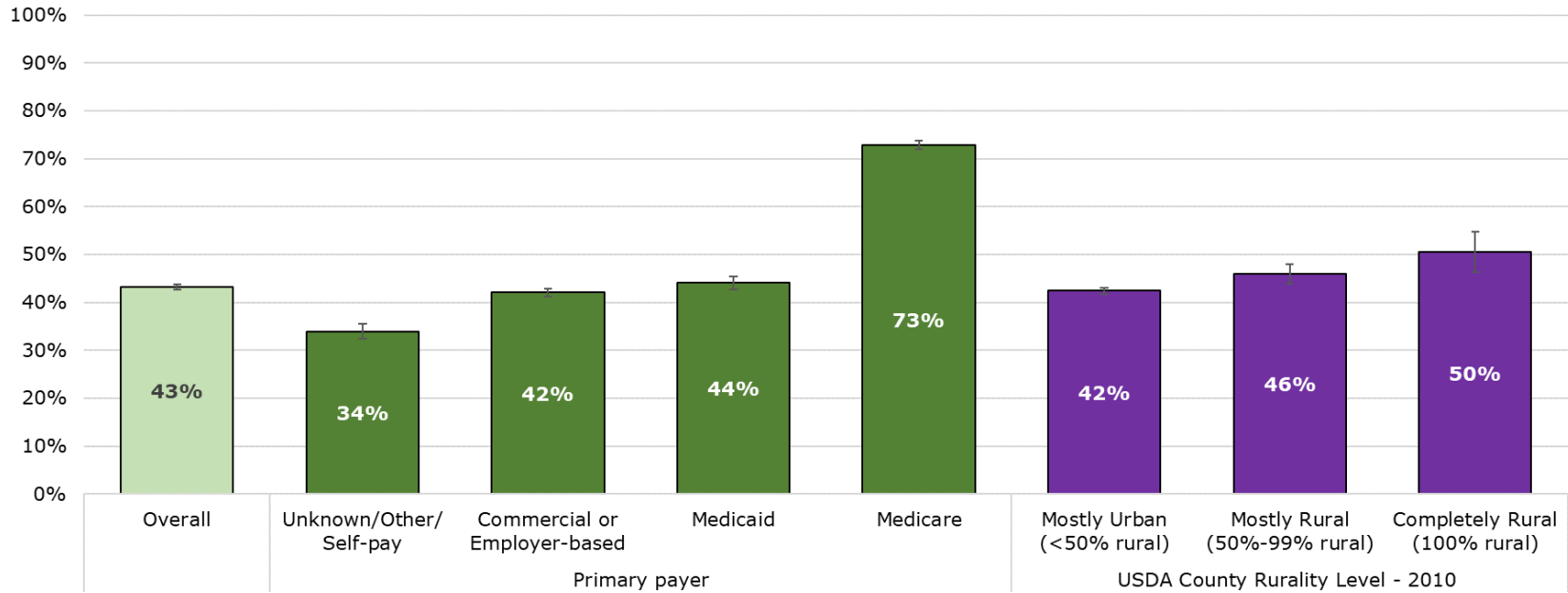
**Figure 1: Hypertension Prevalence in Indiana by Sex, Age Group, and Race/Ethnicity—March 2023**

Surveillance population used to create estimates: 751,993 adults 20–84 years of age.

# Estimated Hypertension Prevalence in Indiana

By insurance type, Medicare recipients have the highest hypertension prevalence (73%), which likely reflects that Medicare recipients are significantly older than other payer categories.

Patients living in completely rural areas have a slightly higher hypertension prevalence (50%) than those in mostly rural or mostly urban areas.



**Figure 2: Hypertension Prevalence in Indiana by Primary Payer and Rurality—March 2023**

Surveillance population used to create estimates: 751,993 adults 20–84 years of age.

# Estimated Hypertension Prevalence in Indiana

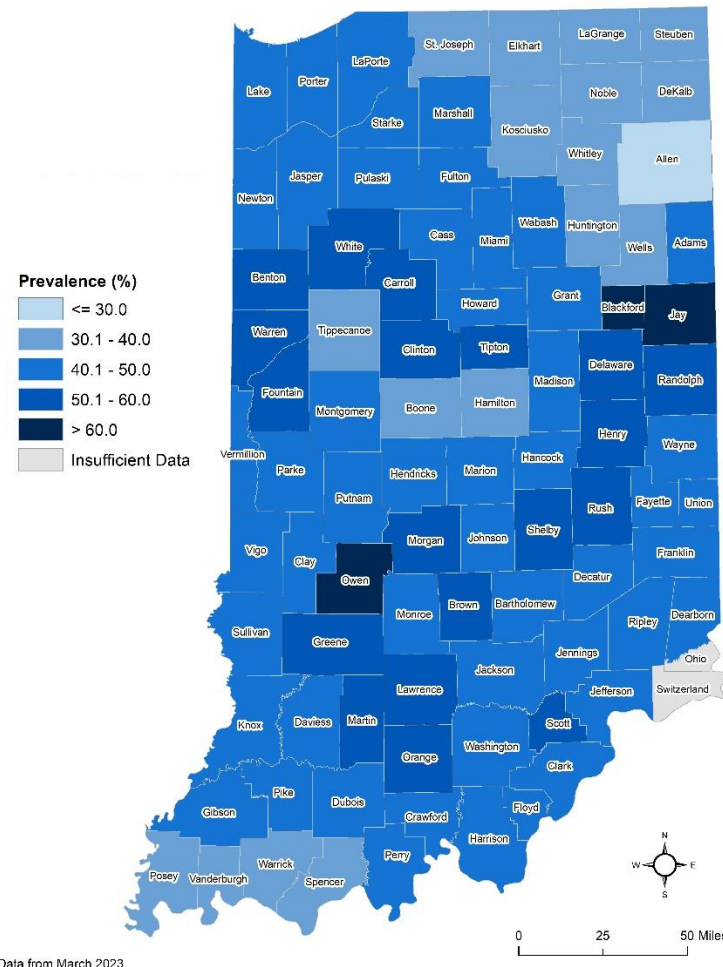
## Geographic Patterns by county

This map displays adult hypertension prevalence for 90 (98%) of Indiana's 92 counties. Prevalence varies in these 90 counties from 29% to 62%.

Counties with high hypertension prevalence (dark blue) indicate a negative risk factor, while areas with low hypertension prevalence (light blue) represent a lower burden of illness.

Hypertension prevalence is spread evenly throughout the state, with some pockets of higher rates.

Only two counties have insufficient data, due to small sample size.



**Figure 3: Hypertension Prevalence in Indiana by county—March 2023**

Surveillance population used to create estimates: 751,993 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

43% of Indiana adults ages 20-84 years have hypertension.

By age, hypertension is most common in adults ages 65–84 years old (67%).

A higher proportion of men have hypertension compared with women (46% versus 40%).

Hypertension prevalence is highest in Black adults (52%) compared with White, Hispanic, Asian, or individuals of other races or ethnicities.

Medicare recipients (who are mostly older adults) have the highest hypertension prevalence (73%) by insurance type.

## Geographic Patterns

Among the 90 counties with hypertension prevalence estimates, hypertension prevalence varies by 33 percentage points.

Sixty-two counties (69%) have a prevalence greater than or equal to the state prevalence of 43%.

Rural residents have higher prevalence (50%) than other geographies.

MENDS Indiana hypertension prevalence estimate (43%) is greater than the 2021 BRFSS estimates (35%).

Differences between MENDS and BRFSS estimates may reflect differences in population, with MENDS reflecting a healthcare-seeking population or differences in awareness of hypertension.

MENDS was able to generate 98% prevalence coverage for the state; only two counties had a sample size too small to provide estimates.



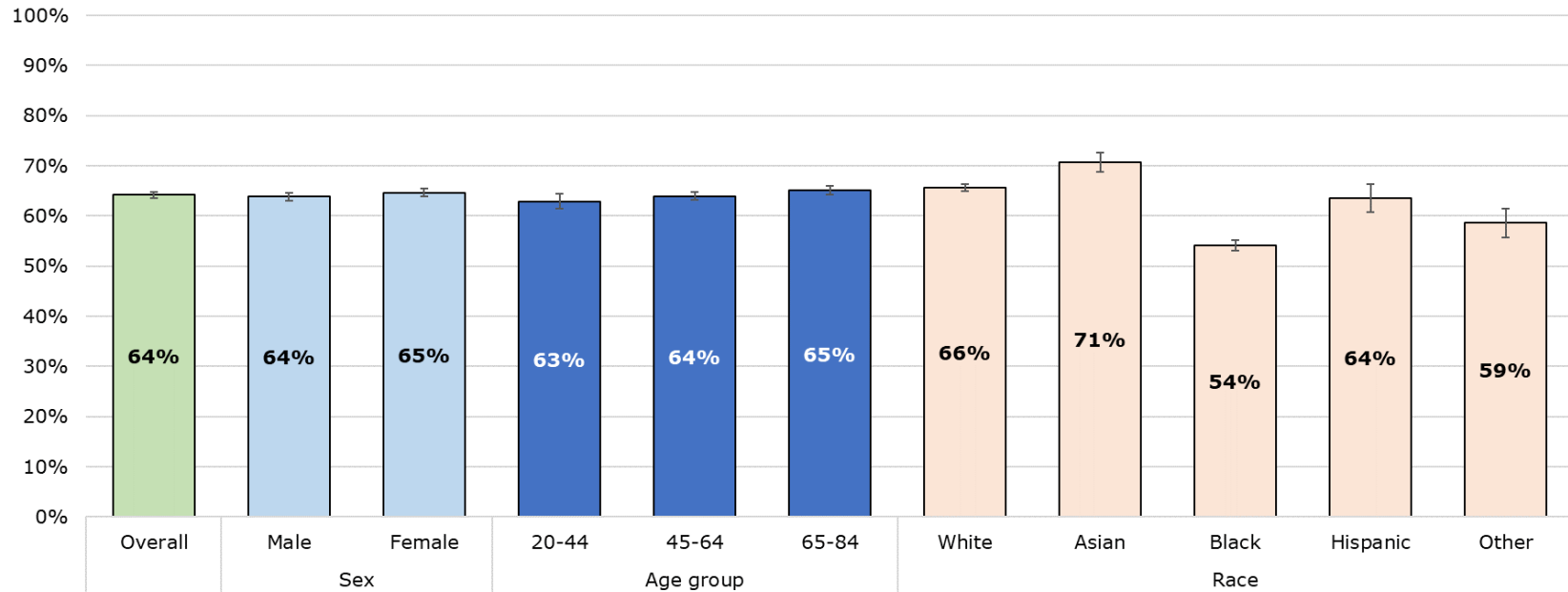
## **Section 3: Hypertension Control in Indiana**



# Estimated Hypertension Control in Indiana

Sixty-four percent of Indiana adults with diagnosed hypertension have controlled hypertension.

- Hypertension control is similar for males (64%) and females (65%).
- Across age groups, hypertension control is lowest in ages 20–44 (63%).
- Asian adults (71%) have the highest hypertension control by race/ethnicity.



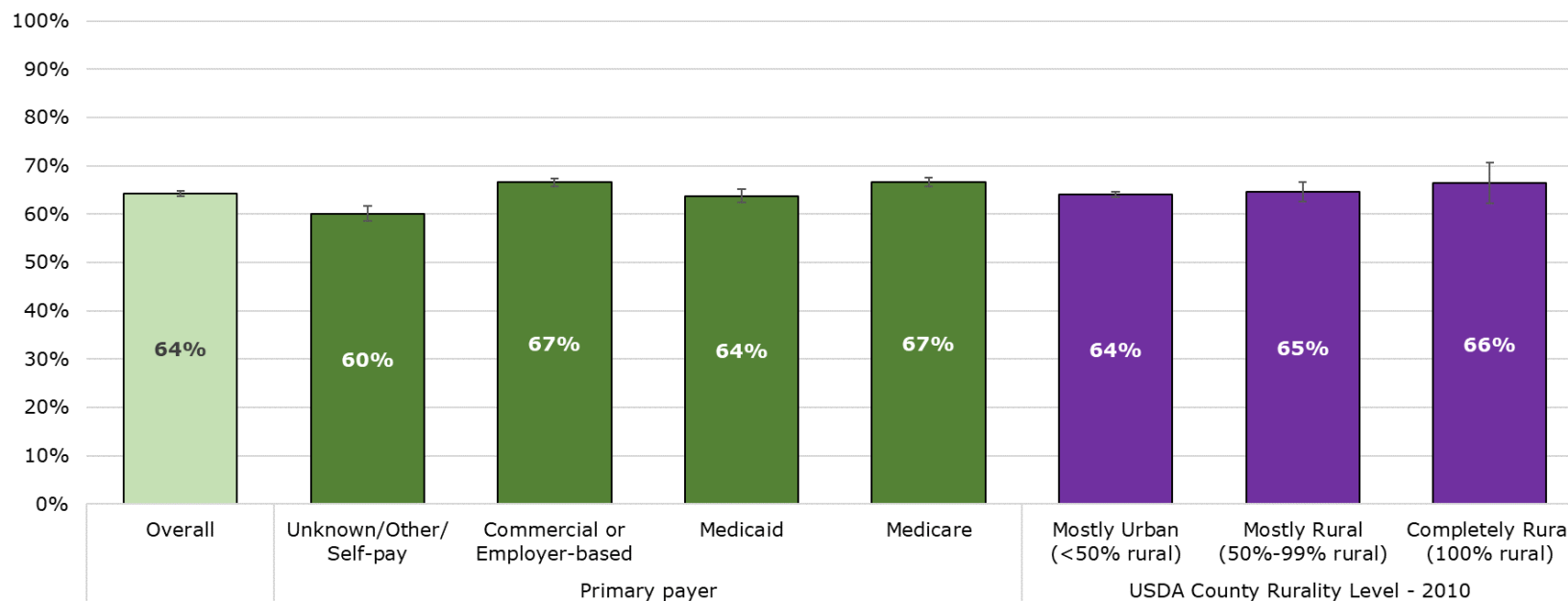
**Figure 4: Hypertension Control in Indiana by Sex, Age Group, and Race/Ethnicity—March 2023**

Surveillance population used to create estimates: 224,451 adults 20–84 years of age with diagnosed hypertension.

# Estimated Hypertension Control in Indiana

Sixty-four percent of Indiana adults with diagnosed hypertension have controlled hypertension.

- Hypertension control is highest for patients on Medicare or those who have commercial/employer-based insurance (67%).
- Hypertension control is lowest in mostly urban geographies (64%).



**Figure 5: Hypertension Control in Indiana by Primary Payer and Rurality—March 2023**

Surveillance population used to create estimates: 224,451 adults 20–84 years of age with diagnosed hypertension.

# Estimated Hypertension Control in Indiana

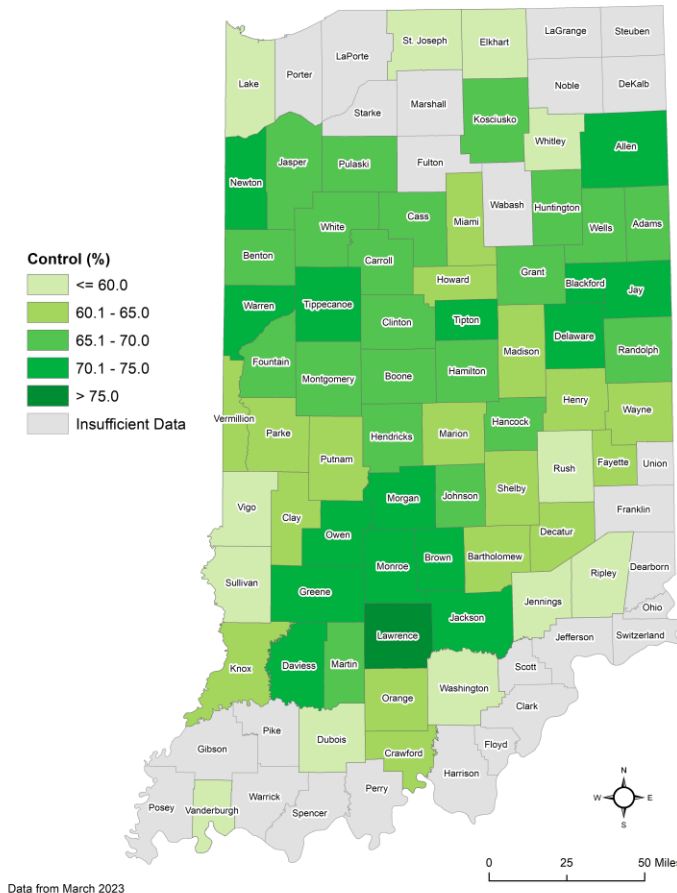
## Geographic Patterns by county

This map displays the percentage of Indiana adults with diagnosed hypertension who have their hypertension controlled for 66 of Indiana's 92 counties (72%).

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

Counties 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.

For the data shown, hypertension control ranges from 54% to 75%. Hypertension control estimates are more available for middle Indiana.



**Figure 6: Hypertension Control in Indiana by county—March 2023**

Surveillance population used to create estimates: 224,451 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 of Hypertension Control Findings

## Demographic and Socioeconomic Patterns

Among 224,451 adults 20–84 years of age in Indiana with diagnosed hypertension, 64% have controlled hypertension, which is higher compared with the national estimate of 48% from NHANES.

Hypertension control did not differ by sex.

Asian adults have higher hypertension control (71%) compared with other races.

By age group, ages 20–44 years have the lowest hypertension control (63%).

Patients whose primary payer is Medicare or commercial/employer-based insurance have the highest hypertension control (67%) compared with other payer types.

## Geographic Patterns

Hypertension control has some variability by Indiana county, with a range of 21 percentage points (54%–75%).

Many counties in northern Indiana had insufficient data to estimate hypertension control.

Hypertension control estimates are more available for the middle part of the state, where MENDS population coverage is highest.

Patients in mostly urban areas have the lowest hypertension control (64%) compared with other geographies.

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*"Although individuals with hypertension are receiving care at rates higher than the national average, we must do better to reduce rates of hypertension. Prevention is critical to improving the health of all Hoosiers."*

**Dr. Brian E. Dixon**  
PhD, MPA, FACMI,  
FHIMSS, FAMIA, MACE

**Director of Public Health  
Informatics for  
Regenstrief Institute and  
IU Richard M. Fairbanks  
School of Public Health**

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## Section 4: Local Spotlight Indianapolis

Section 4 examines hypertension prevalence and control in the city of Indianapolis.

MENDS provides data from 215,278 Indianapolis residents, representing 34% of the 632,126 adults 20–84 in Indianapolis (2021 American Community Survey).<sup>1</sup>

### Related Links:

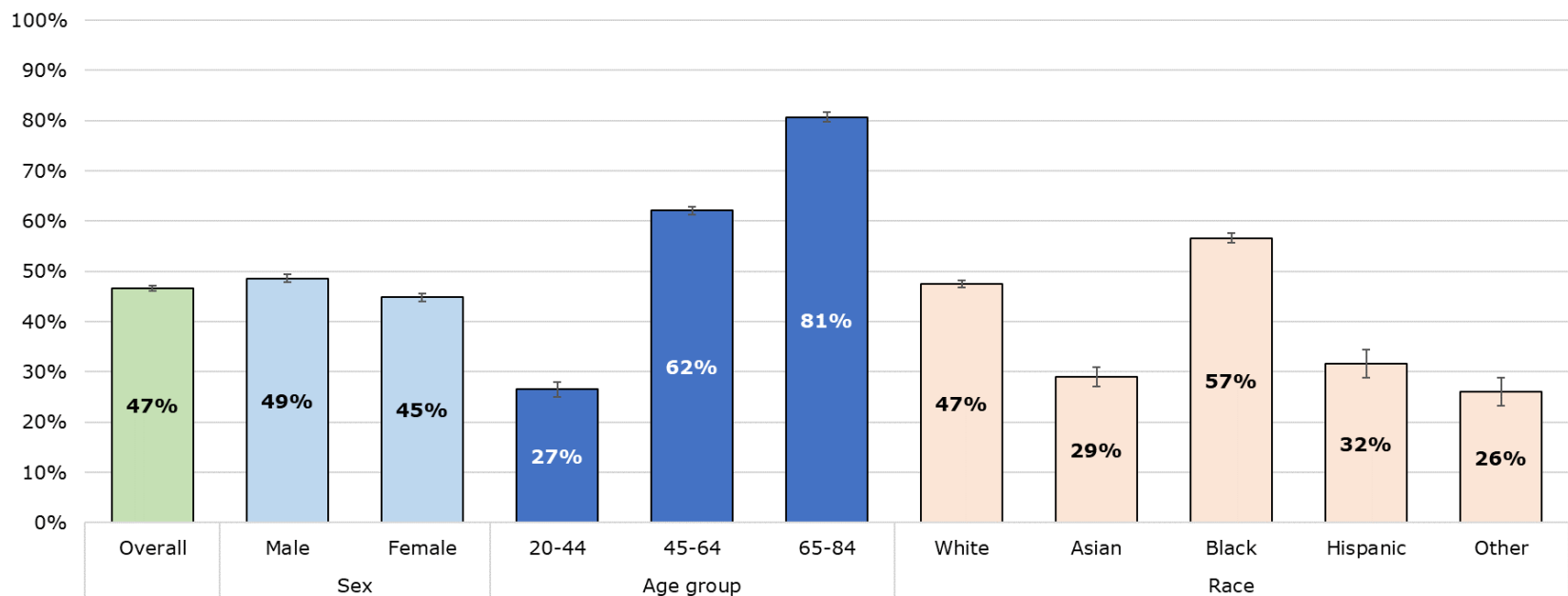
2021 American Community Survey:

[https://data.census.gov/table/ACSST1Y2021.S0101?g=040XX00US18\\_160XX00US1836003](https://data.census.gov/table/ACSST1Y2021.S0101?g=040XX00US18_160XX00US1836003)

# Estimated Hypertension Prevalence in Indianapolis

Overall, 47% of Indianapolis adults 20–84 years of age have hypertension.

- Adults ages 65–84 years (81%) have a significantly higher hypertension prevalence compared with other age groups.
- Black adults (57%) have a significantly higher hypertension prevalence compared with other racial/ethnic groups.

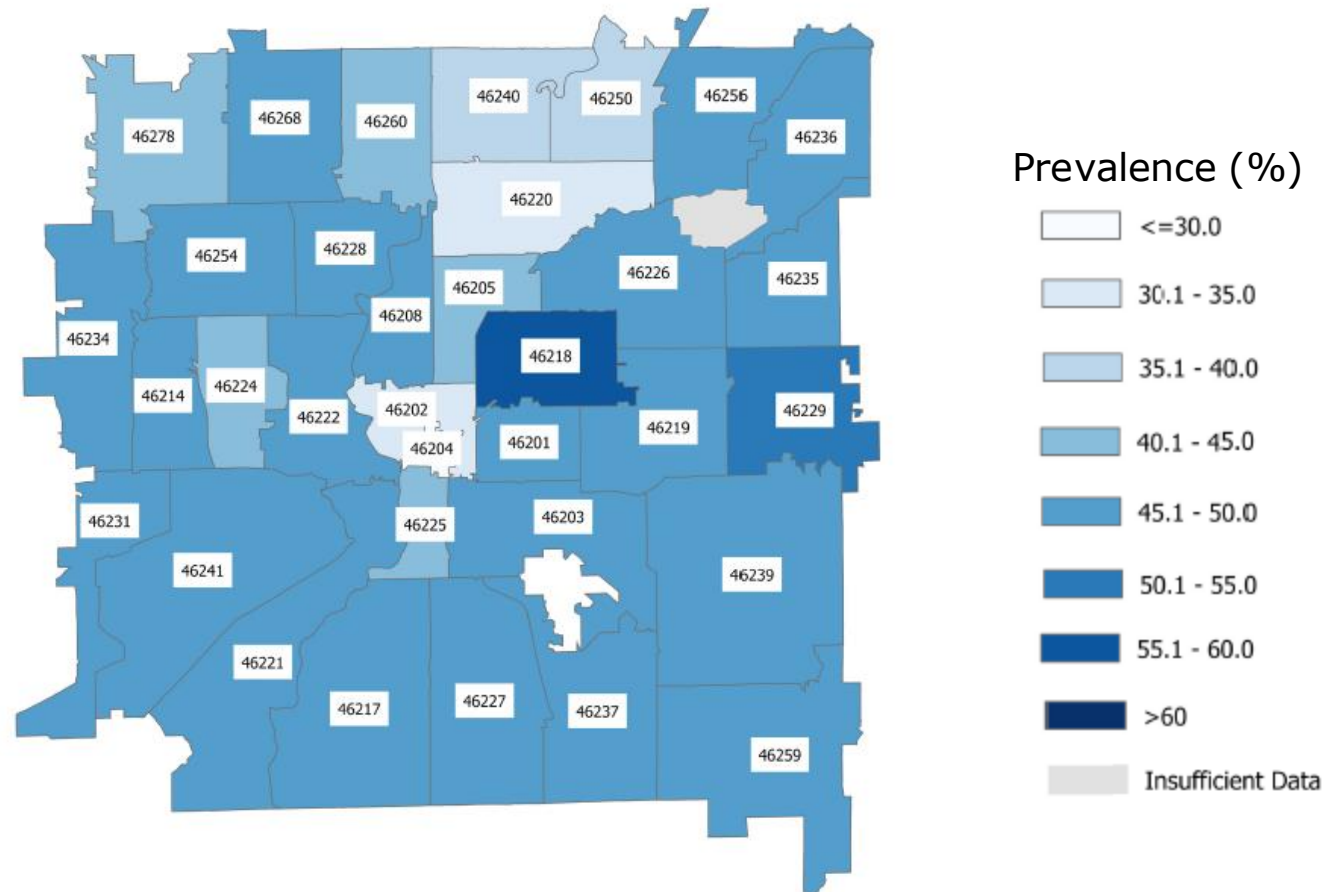


**Figure 7: Hypertension Prevalence in Indianapolis by Sex, Age Group, and Race/Ethnicity—March 2023**

Surveillance population used to create estimates: 215,278 adults 20–84 years of age.

# Estimated Hypertension Prevalence in Indianapolis

Available hypertension prevalence varies by five-digit ZIP Code within the city from 29% to 60%.



**Figure 8: Hypertension Prevalence in Indianapolis by Five-Digit ZIP Code—March 2023**

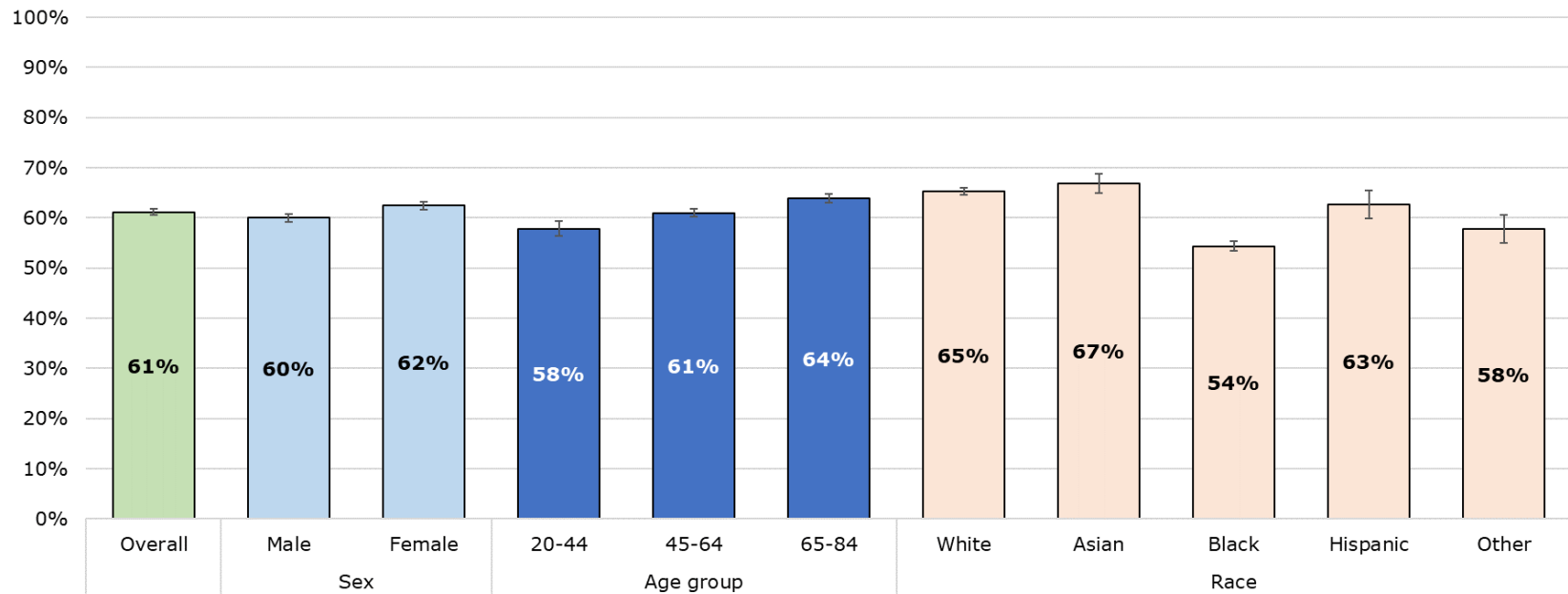
Surveillance population used to create estimates: 215,278 adults 20–84 years of age.

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

# Estimated Hypertension Control in Indianapolis

Overall, 61% of Indianapolis adults 20–84 years of age have their diagnosed hypertension controlled.

- Adults ages 65–84 years (64%) have higher hypertension control compared with other age groups.
- Asian adults (67%) have a higher hypertension control compared with other racial/ethnic groups.



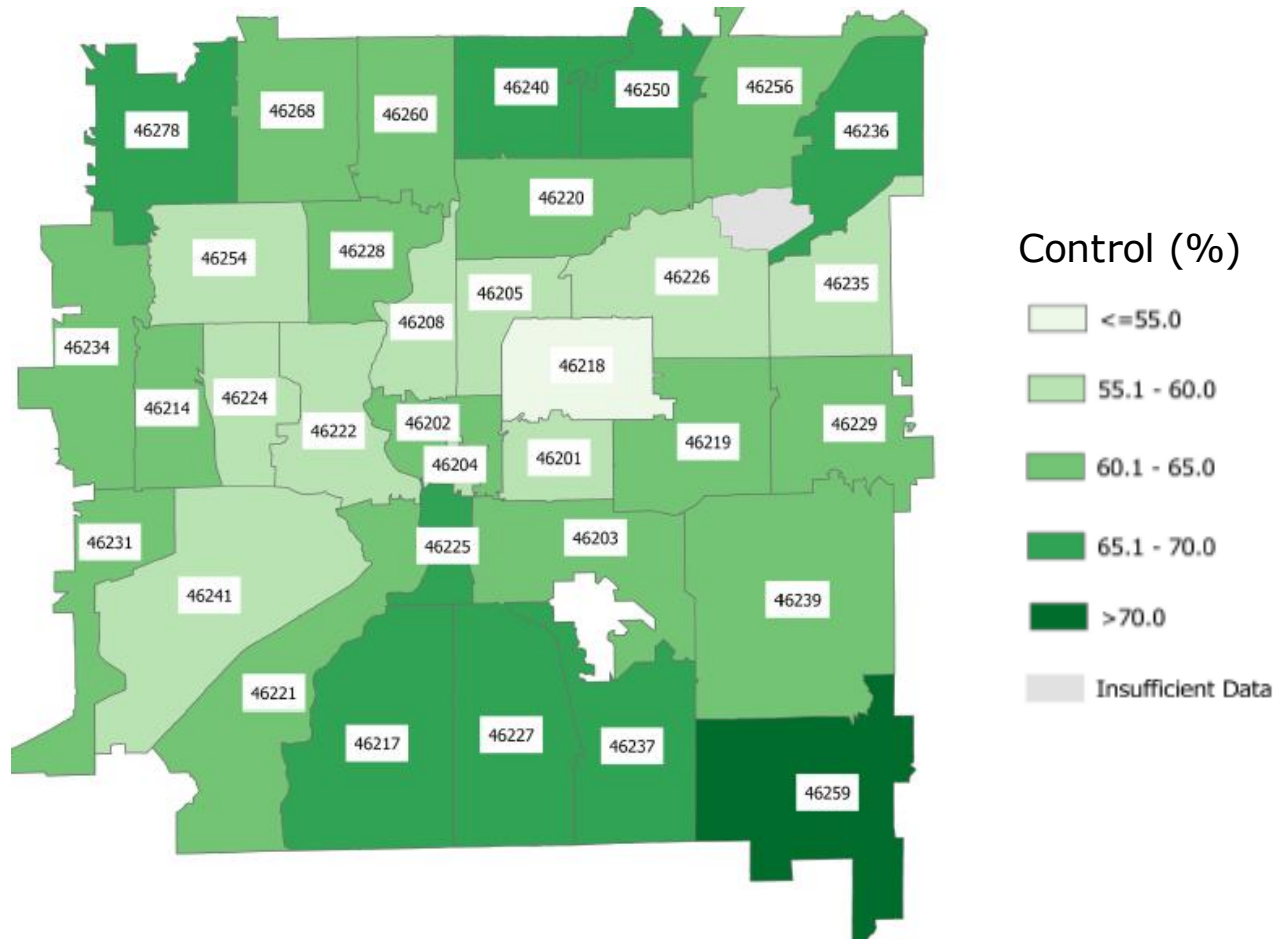
**Figure 9: Hypertension Control in Indianapolis by Sex, Age Group, Race/Ethnicity—March 2023**

Surveillance population used to create estimates 71,271 adults 20–84 years of age.



# Estimated Hypertension Control in Indianapolis

A comparison across five-digit ZIP Codes shows modest variation in Indianapolis, ranging from 54% to 72%, for a difference of 18 percentage points.



**Figure 10: Hypertension Control in Indianapolis by Five-Digit ZIP Code—March 2023**

Surveillance population used to create estimates: 71,271 adults 20–84 years of age with diagnosed hypertension.



## **Section 5: Conclusions and Limitations**

# Preliminary Conclusions

## Hypertension prevalence:

- Forty-three percent of Indiana adults, ages 20–84 years, have hypertension.
- Forty-seven percent of Indianapolis adults, ages 20–84 years, have hypertension.
- Prevalence varies across the state by 33 percentage points (29% to 62%) and within Indianapolis by 31 percentage points (29% to 60%).
- The MENDS estimated Indiana adult hypertension prevalence (43%) is higher than the 2021 BRFSS hypertension prevalence estimate (35%) due to differences in methodology and sample population.
- The MENDS estimated Indianapolis adult hypertension prevalence (47%) is higher than the CDC PLACES hypertension prevalence estimate (33%) due to differences in methodology and sample population.

## Diagnosed hypertension control:

- Sixty-four percent of Indiana adults (20-84 years of age) with diagnosed hypertension have their hypertension controlled.
- Sixty-one percent of Indianapolis adults (20-84 years of age) with diagnosed hypertension have their hypertension controlled.
- Hypertension control varies across the state by 22 percentage points (54% to 75%) and within Indianapolis by just 18 percentage points (54% to 72%).

# 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 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 state 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/high-blood-pressure/data-research/facts-stats/>

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>

Indiana State Health Assessment: <https://www.cdc.gov/nchs/pressroom/states/indiana/in.htm#lcod>

2021 Indiana Adjusted Estimates from Behavioral Risk Factor Surveillance System:

[https://nccd.cdc.gov/BRFSSPrevalence/rdPage.aspx?rdReport=DPH\\_BRFSS.ExploreByLocation&rdProcessAction=&SaveFileGenerated=1&irbLocationType=States&isLocation=18&isState=&isCounty=&isIClass=CLASS10&isTopic=TOPIC31&isYear=2021&hidLocationType=States&hidLocation=18&hidClass=CLASS10&hidTopic=TOPIC31&hidTopicName=High+Blood+Pressure&hidYear=2021&irbShowFootnotes=Show&rdICL-iclIndicators=\\_RFHYPE6&iclIndicators\\_rdExpandedCollapsedHistory=&iclIndicators=\\_RFHYPE6&hidPreviouslySelectedIndicators=&DashboardColumnCount=2&rdShowElementHistory=divTopicUpdating%3dHide%2cislTopic%3dShow%2cdivYearUpdating%3dHide%2cisYear%3dShow%2c&rdScrollX=0&rdScrollY=300&rdRnd=39869](https://nccd.cdc.gov/BRFSSPrevalence/rdPage.aspx?rdReport=DPH_BRFSS.ExploreByLocation&rdProcessAction=&SaveFileGenerated=1&irbLocationType=States&isLocation=18&isState=&isCounty=&isIClass=CLASS10&isTopic=TOPIC31&isYear=2021&hidLocationType=States&hidLocation=18&hidClass=CLASS10&hidTopic=TOPIC31&hidTopicName=High+Blood+Pressure&hidYear=2021&irbShowFootnotes=Show&rdICL-iclIndicators=_RFHYPE6&iclIndicators_rdExpandedCollapsedHistory=&iclIndicators=_RFHYPE6&hidPreviouslySelectedIndicators=&DashboardColumnCount=2&rdShowElementHistory=divTopicUpdating%3dHide%2cislTopic%3dShow%2cdivYearUpdating%3dHide%2cisYear%3dShow%2c&rdScrollX=0&rdScrollY=300&rdRnd=39869)

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

ReachNet: <https://reachnet.org/>

2021 American Community Survey Data: 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**

# Estimated Hypertension Prevalence in Indiana

## N, Estimates, Standard Errors, and Confidence Intervals

Patient group	Number of patients	Weighted (post-stratified) by sex, age group, race/ethnicity and county		
		Prevalence	SE	95% Confidence Interval
<b>Overall</b>	751,993	43%	0.2%	(43%, 44%)
<b>Sex</b>				
Male	322,074	46%	0.2%	(46%, 47%)
Female	429,919	40%	0.2%	(40%, 41%)
<b>Age group</b>				
20-44	281,950	25%	0.2%	(25%, 26%)
45-64	271,873	52%	0.3%	(51%, 52%)
65-84	198,170	67%	0.3%	(66%, 68%)
<b>Race</b>				
White	577,391	45%	0.2%	(44%, 45%)
Asian	15,505	26%	0.7%	(25%, 27%)
Black	93,350	52%	0.5%	(51%, 53%)
Hispanic	43,837	33%	1.0%	(31%, 35%)
Other	21,910	19%	0.6%	(18%, 21%)
<b>Primary payer</b>				
Unknown/other/self-pay	257,412	34%	0.3%	(33%, 34%)
Commercial or employer-based	245,496	42%	0.3%	(42%, 43%)
Medicaid	112,781	44%	0.5%	(43%, 45%)
Medicare	136,304	73%	0.4%	(72%, 74%)
<b>USDA County Rurality Level - 2010</b>				
Mostly urban (<50% rural)	619,852	42%	0.2%	(42%, 43%)
Mostly rural (50%-99% rural)	112,520	46%	0.3%	(45%, 47%)
Completely rural (100% rural)	19,621	50%	1.1%	(48%, 53%)

# Estimated Hypertension Control in Indiana

## N, Estimates, Standard Errors, and Confidence Intervals

Patient group	Number of patients	Weighted (post-stratified) by sex, age group, race/ethnicity and county		
		Prevalence	SE	95% Confidence Interval
Overall	224,451	64%	0.3%	(64%, 65%)
Sex				
Male	111,680	64%	0.4%	(63%, 65%)
Female	112,771	65%	0.5%	(64%, 66%)
Age group				
20-44	27,001	63%	0.8%	(61%, 64%)
45-64	92,489	64%	0.5%	(63%, 65%)
65-84	104,961	65%	0.5%	(64%, 66%)
Race				
White	170,755	66%	0.3%	(65%, 66%)
Asian	2,841	71%	2.0%	(67%, 75%)
Black	38,415	54%	0.8%	(53%, 56%)
Hispanic	9,806	64%	2.5%	(59%, 68%)
Other	2,634	59%	2.3%	(54%, 63%)
Primary payer				
Unknown/other/self-pay	51,781	60%	0.7%	(59%, 61%)
Commercial or employer-based	62,911	67%	0.5%	(66%, 68%)
Medicaid	31,044	64%	0.9%	(62%, 65%)
Medicare	78,715	67%	0.6%	(66%, 68%)
USDA County Rurality Level - 2010				
Mostly urban (<50% rural)	178,134	64%	0.4%	(63%, 65%)
Mostly rural (50%-99% rural)	38,591	65%	0.7%	(66%, 66%)
Completely rural (100% rural)	7,726	66%	1.8%	(63%, 70%)



# Estimated Hypertension Prevalence in Indianapolis

N, Estimates, Standard Errors, and Confidence Intervals

Patient group	Number of patients	Weighted (post-stratified) by sex, age group, race/ethnicity		
		Prevalence	SE	95% Confidence Interval
<b>Overall</b>	215,278	47%	0.1%	(46%, 47%)
<b>Sex</b>				
Male	87,217	49%	0.2%	(48%, 49%)
Female	128,061	45%	0.1%	(45%, 45%)
<b>Age group</b>				
20-44	97,314	27%	0.2%	(26%, 27%)
45-64	75,408	62%	0.2%	(62%, 63%)
65-84	42,556	81%	0.2%	(80%, 81%)
<b>Race/Ethnicity</b>				
White	104,996	47%	0.2%	(47%, 48%)
Asian	4,414	29%	0.8%	(28%, 31%)
Black	71,598	57%	0.2%	(56%, 57%)
Hispanic	28,228	32%	0.3%	(31%, 32%)
Other	6,042	26%	0.7%	(25%, 27%)

# Estimated Hypertension Control in Indianapolis

N, Estimates, Standard Errors, and Confidence Intervals

Patient group	Number of patients	Weighted (post-stratified) by sex, age group, race/ethnicity		
		Prevalence	SE	95% Confidence Interval
<b>Overall</b>	71,271	61%	0.2%	(61%, 62%)
<b>Sex</b>				
Male	32,667	60%	0.3%	(59%, 61%)
Female	38,594	62%	0.3%	(62%, 63%)
<b>Age group</b>				
20-44	11,788	58%	0.5%	(57%, 59%)
45-64	33,633	61%	0.3%	(60%, 62%)
65-84	25,850	64%	0.3%	(63%, 65%)
<b>Race/Ethnicity</b>				
White	30,578	65%	0.3%	(65%, 66%)
Asian	886	67%	2.0%	(63%, 71%)
Black	31,983	54%	0.3%	(54%, 55%)
Hispanic	6,833	63%	0.7%	(61%, 64%)
Other	991	58%	1.9%	(54%, 62%)



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