Hypertension in Michigan

A Status Update for Oral Health Providers

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Relevant Disclosures

- NIH/NHLBI: R01 HL153607; R01 HL163377; R01 HL146059; R01 HL127215; T32 HL120822
- NIH/NIMHD: P50 MD017351
- American Heart Association Health Equity Research Network
- MDHHS: Mobile Health Unit; Michigan Mobile Health Corps; CDC 1815, 1816 and 1817 programs
- Michigan Health Endowment Fund

Doctor Levy has received research grants from the organizations listed above. All of the relevant financial relationships listed above for Doctor Levy have been mitigated.

A call to action and a lifecourse strategy to address the global burden of raised blood pressure on current and future generations: the *Lancet* Commission on hypertension

Michael H Olsen, Sonia Y Angell, Samira Asma, Pierre Boutouyrie, Dylan Burger, Julio A Chirinos, Albertino Damasceno, Christian Delles, Anne-Paule Gimenez-Roqueplo, Dagmara Hering, Patricio López-Jaramillo, Fernando Martinez, Vlado Perkovic, Ernst R Rietzschel, Giuseppe Schillaci, Aletta E Schutte, Angelo Scuteri, James E Sharman, Kristian Wachtell, Ji Guang Wang*

Executive summary

Elevated blood pressure is the strongest modifiable risk factor for cardiovascular disease worldwide. Despite extensive knowledge about ways to prevent as well as to treat hypertension, the global incidence and prevalence of hypertension and, more importantly, its cardiovascular complications are not reduced—partly because of inadequacies in prevention, diagnosis, and control of the disorder in an ageing world.

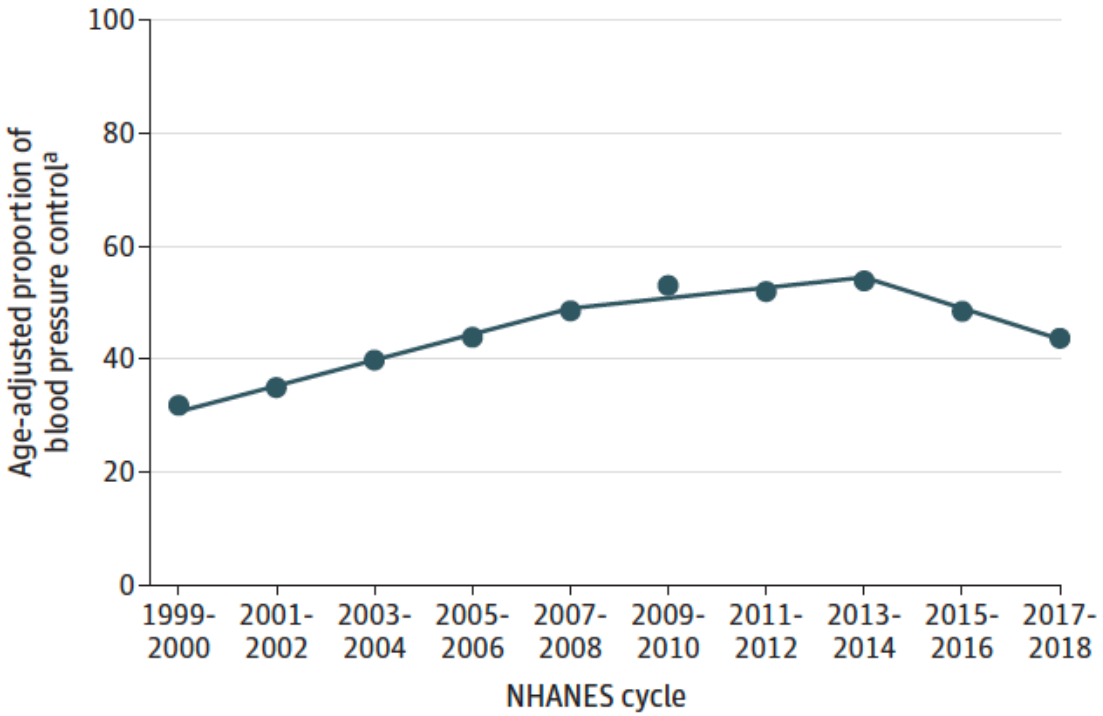
Olsen et al. Lancet 2016;388:2665-2712.

JAMA | Original Investigation

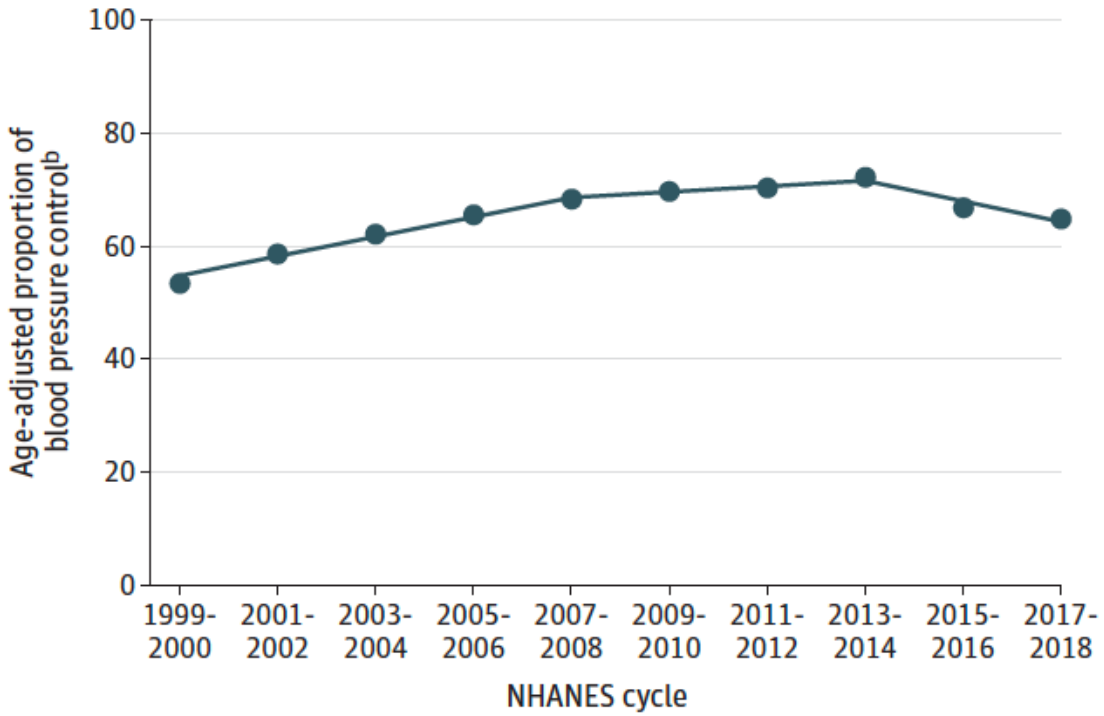
Trends in Blood Pressure Control Among US Adults With Hypertension, 1999-2000 to 2017-2018

Paul Muntner, PhD; Shakia T. Hardy, PhD; Lawrence J. Fine, MD; Byron C. Jaeger, PhD; Gregory Wozniak, PhD; Emily B. Levitan, ScD; Lisandro D. Colantonio, MD, PhD

A Blood pressure control among all adults with hypertension



B Blood pressure control among adults taking antihypertensive medication



Muntner et al. JAMA 2020;324:1-12.

The Surgeon General's Call to Action to

Control Hypertension

Foreword from the Surgeon General, U.S. Department of Health and Human Services

As a physician, I've seen firsthand the devastating effects of hypertension. Left uncontrolled, it leads to heart attacks, stroke, kidney disease, and cognitive decline in later life, and it can impact mother and baby during and after pregnancy. In addition, as evidenced from the global COVID-19 outbreak earlier in the year, we've seen the broad impact of preventable health conditions on worse outcomes.

Hypertension is unfortunately common, but there are interventions and programs that have been successful in improving control. Our country has many hypertension control champions—doctors, practices, communities, and health systems that have excelled at achieving high rates of hypertension control among their patients. We need to learn from their many years of "blood, sweat, and tears" and apply their principles in new settings.

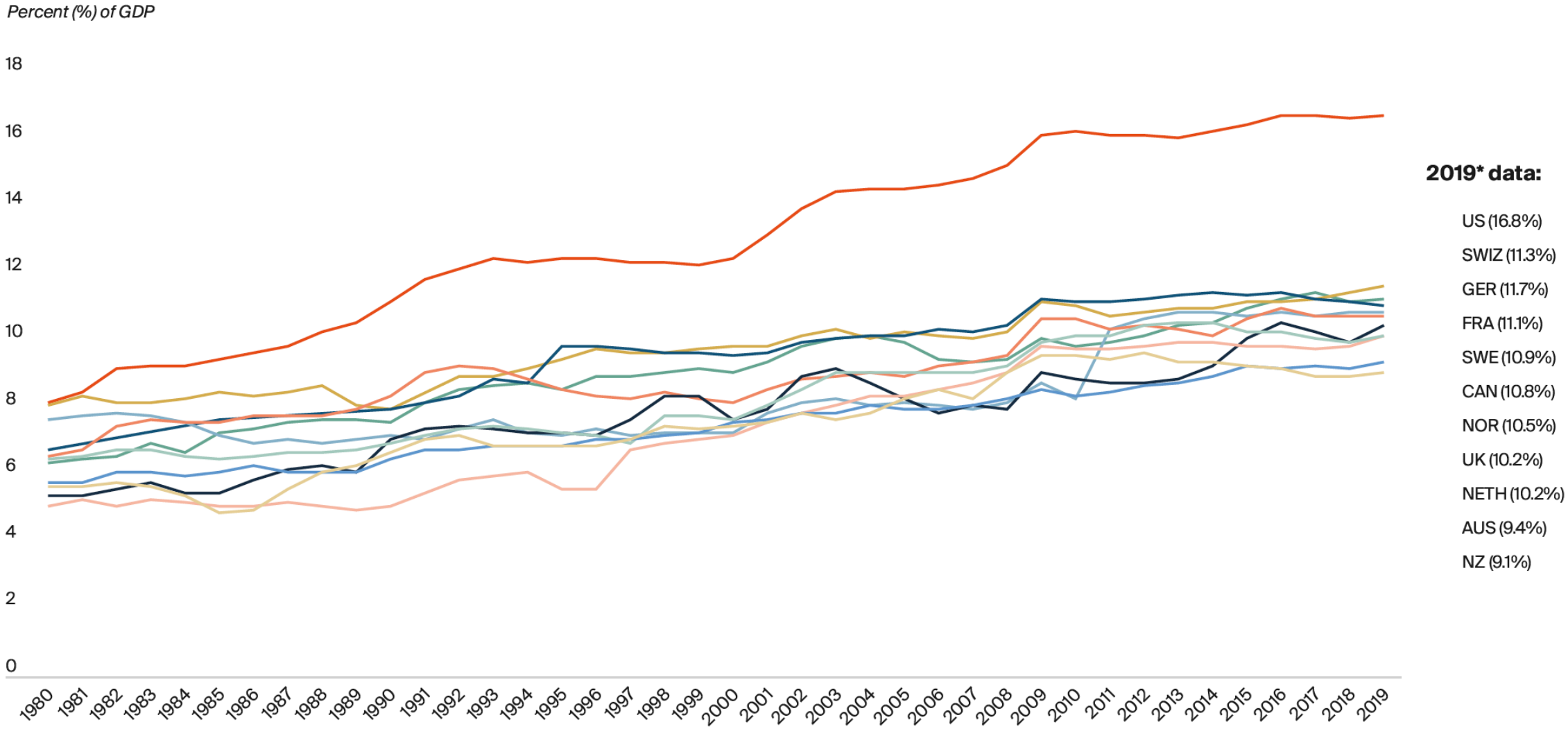
While hypertension is more prominent among older adults, it is not simply a condition of the elderly. All ages are impacted, and early identification and long-term control can preserve cardiovascular health now and into the future. We know that lifestyle changes, such as being physically active and adopting a healthy diet, can promote hypertension control, yet many communities have significant barriers that prevent people from making these changes. We also know that many people with hypertension require medications to achieve control. Access to high-quality health care, prescription of appropriate medications, and clinical and community support are needed to prevent and treat hypertension, publicize local resources, and establish a plan for care supportive of long-term control.

The Surgeon General's Call to Action to Control Hypertension summarizes recent data on hypertension control, identifies select goals and strategies, and provides recommendations for areas of focus when resources are limited. While the recent trends don't look good—we've hit a plateau in hypertension control—I believe that with focus and collaboration, we can improve our trajectory.

Join me in taking control of hypertension across our nation. Together, we've got this!

Jerome M. Adams, MD, MPH
Vice Admiral, U.S. Public Health Service
Surgeon General
U.S. Department of Health and Human Services

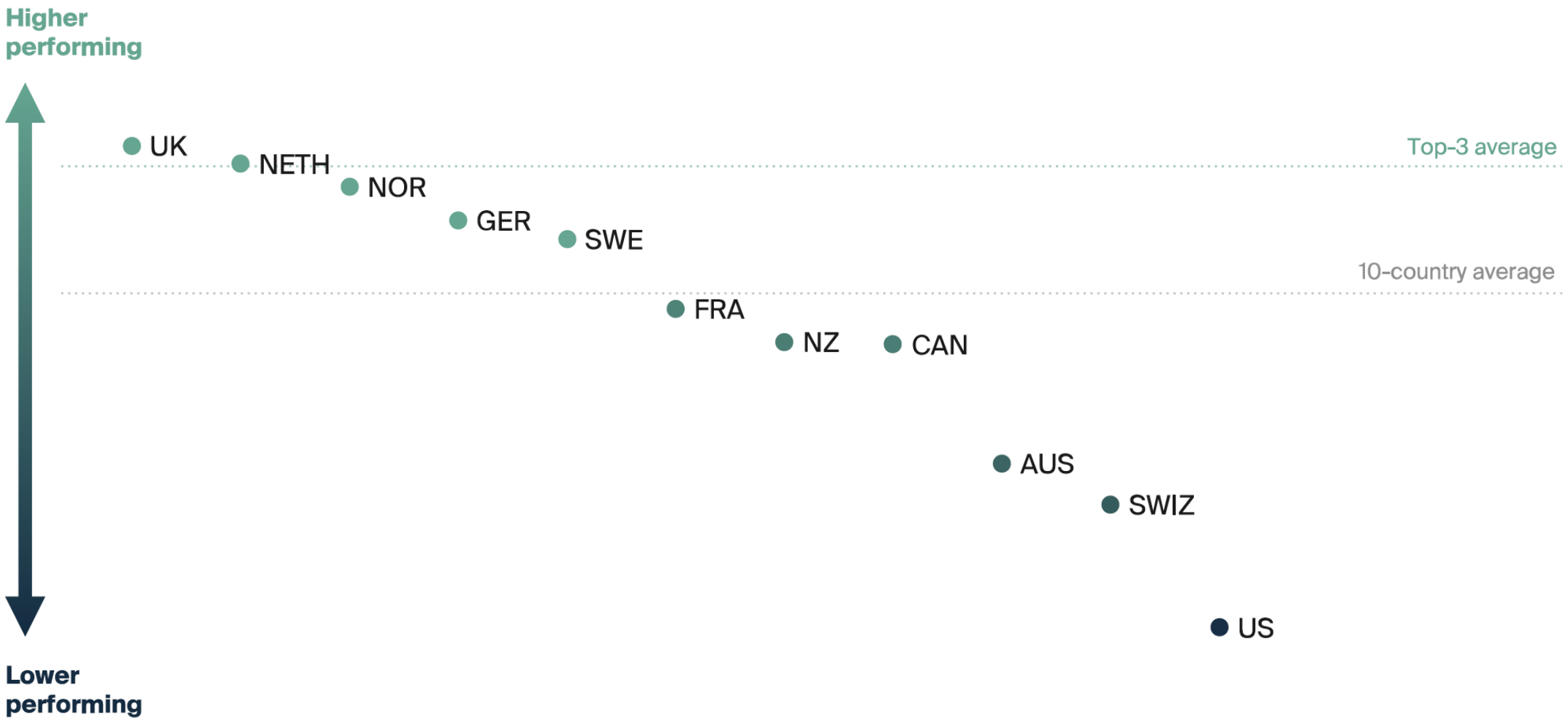
Health Care Spending as a Percentage of GDP, 1980–2019



Notes: Current expenditures on health. Based on System of Health Accounts methodology, with some differences between country methodologies. GDP refers to gross domestic product.
* 2019 data are provisional or estimated for Australia, Canada, and New Zealand.

https://www.commonwealthfund.org/publications/fund-reports/2021/aug/mirror-mirror-2021-reflecting-poorly

Health Care System Performance Scores: Affordability

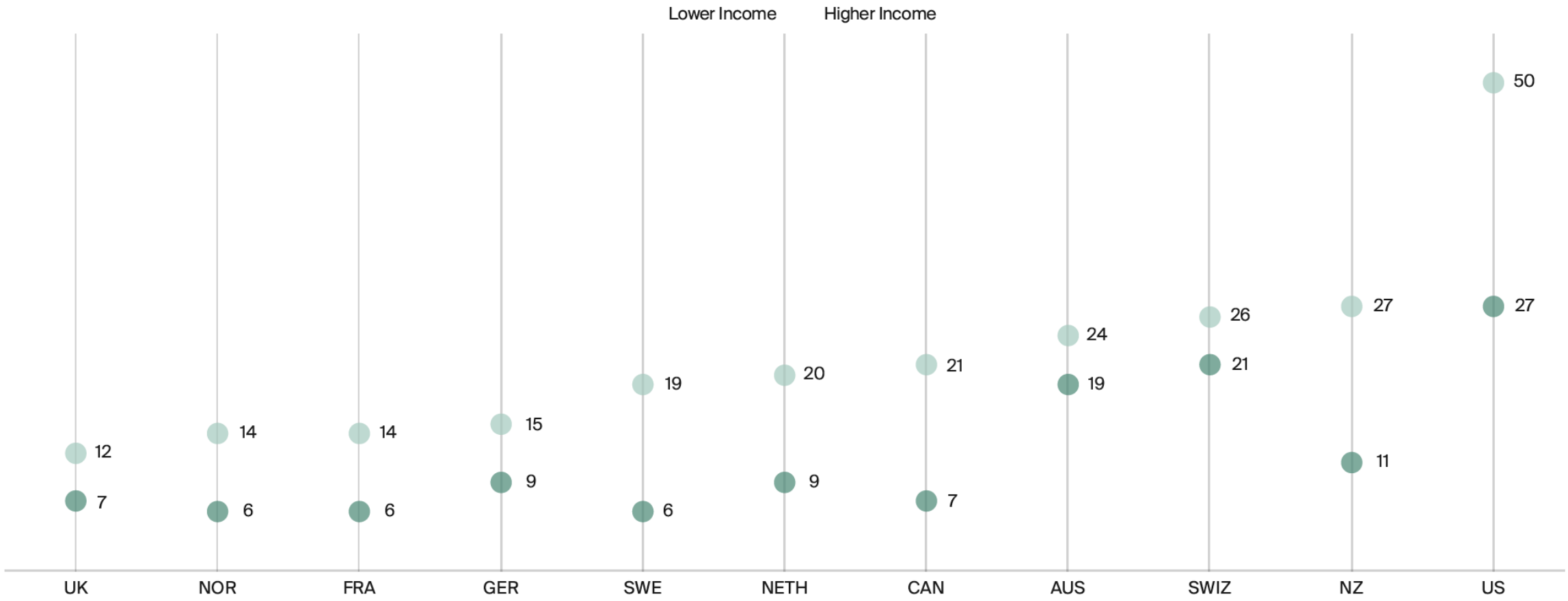


Note: To normalize performance scores across countries, each score is the calculated standard deviation from a 10-country average that excludes the US. See How We Conducted This Study for more detail.

https://www.commonwealthfund.org/publications/fund-reports/2021/aug/mirror-mirror-2021-reflecting-poorly

Cost-Related Access Problems Affect Low Income Populations, Especially in the U.S.

Percent who reported any cost-related access problem to medical care in past year, 2020



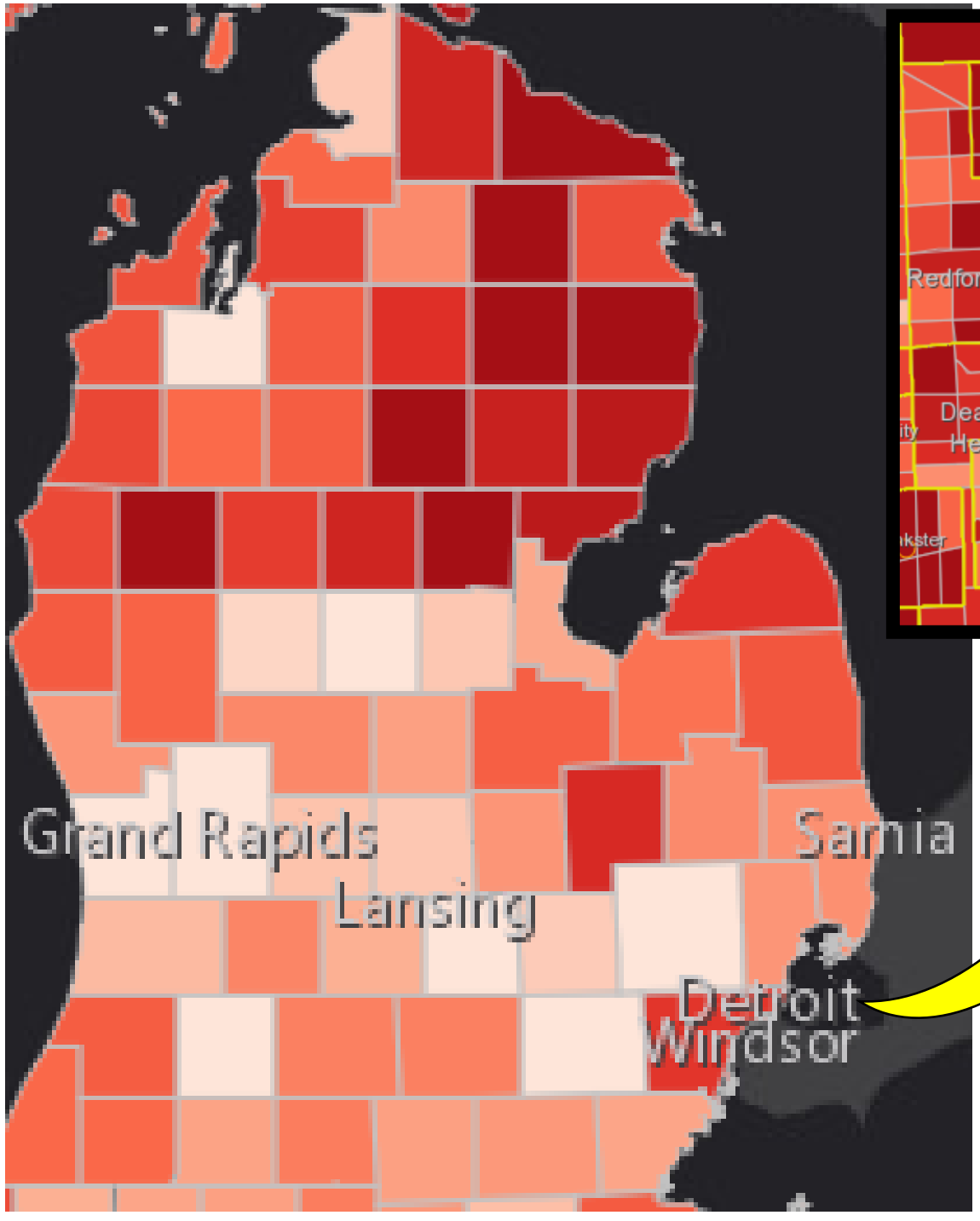
Definition of cost-related access problem: Skipped needed doctor visits, tests, treatments, follow-up, or prescription medicines because of cost in the past year.

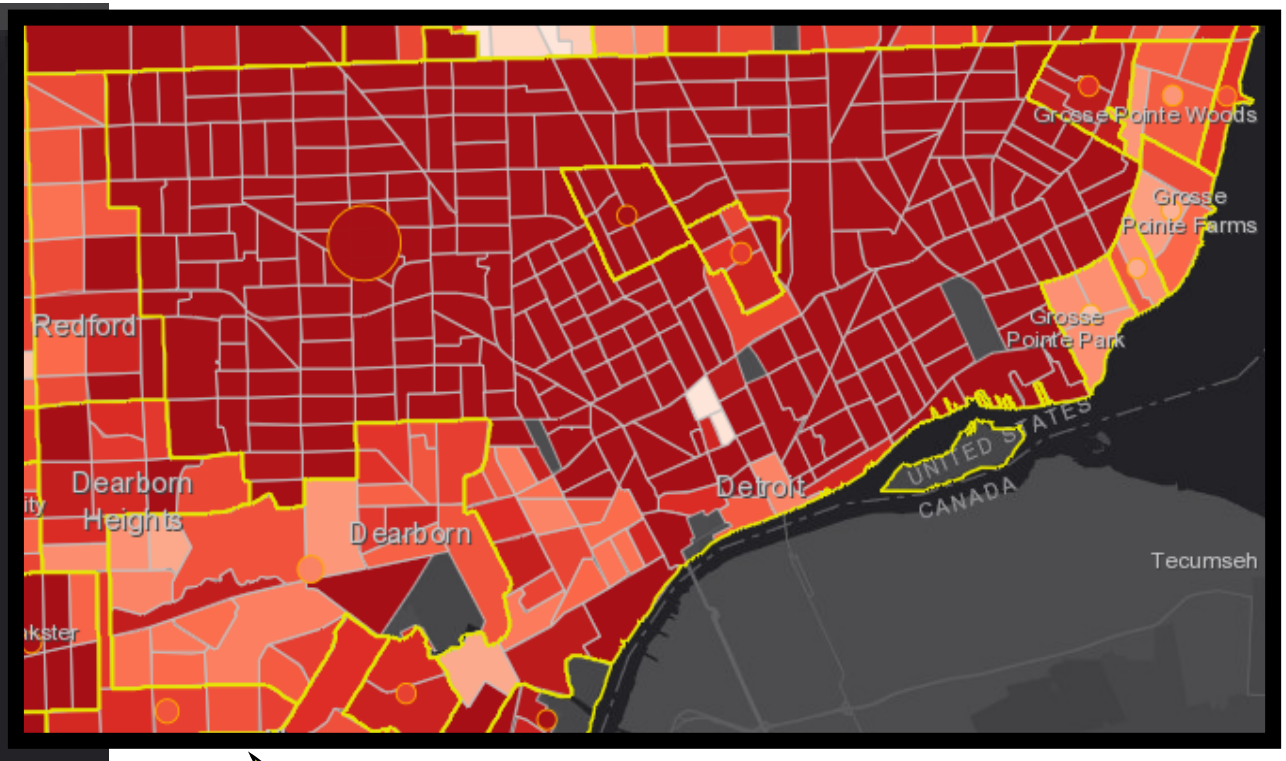
https://www.commonwealthfund.org/publications/fund-reports/2021/aug/mirror-mirror-2021-reflecting-poorly

Avoidable Deaths and 10-Year Reduction in Avoidable Mortality Across Countries

Notes: Health status: avoidable mortality. Data years are: 2009 and 2019 (Germany); * 2008 and 2018 (Australia, the Netherlands, Sweden); † 2007 and 2017 (Canada, Switzerland, US); and ‡ 2006 and 2016 (France, New Zealand, Norway, UK).

https://www.commonwealthfund.org/publications/fund-reports/2021/aug/mirror-mirror-2021-reflecting-poorly





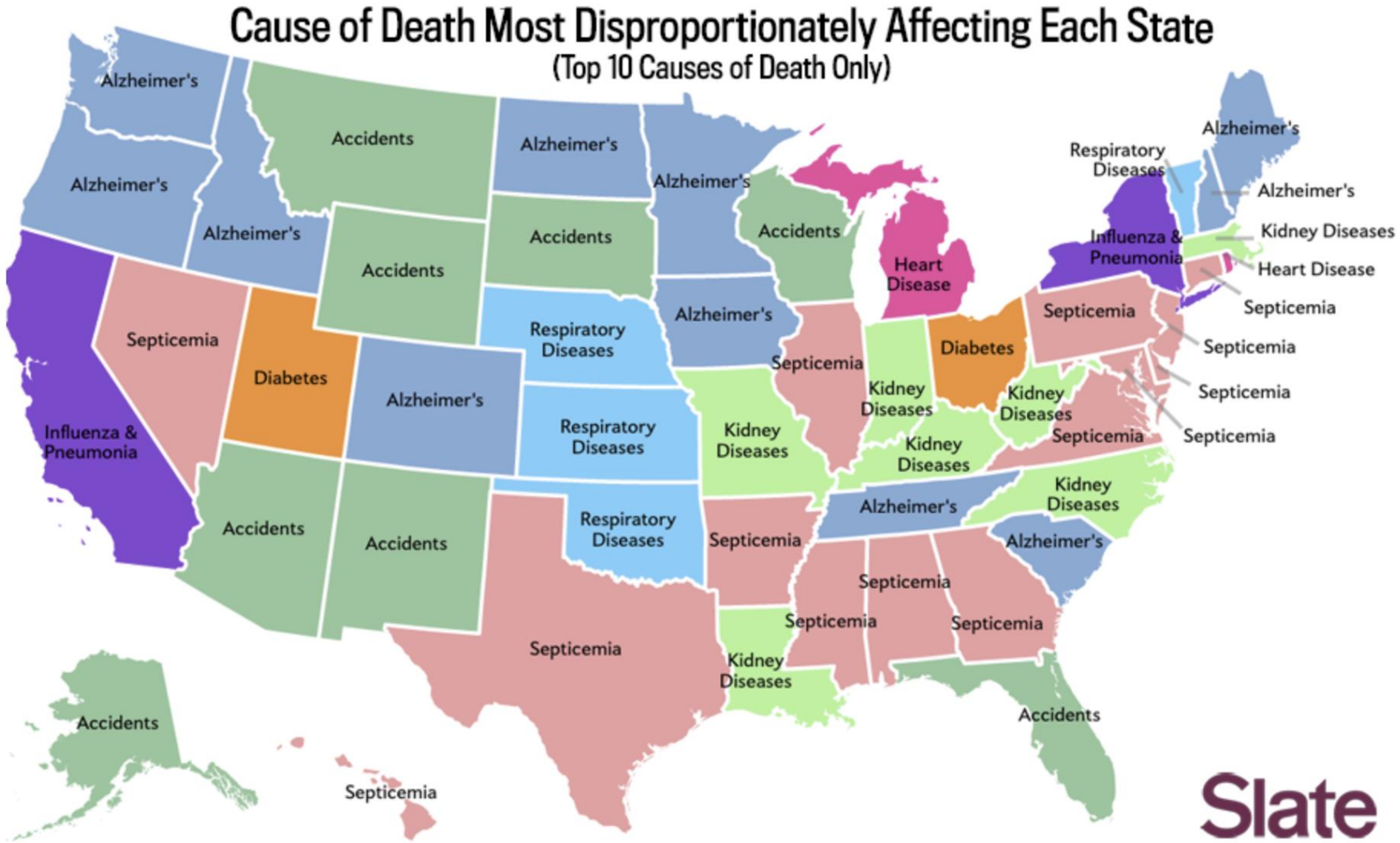
High blood pressure crude prevalence (%)

> 40.7

34.4

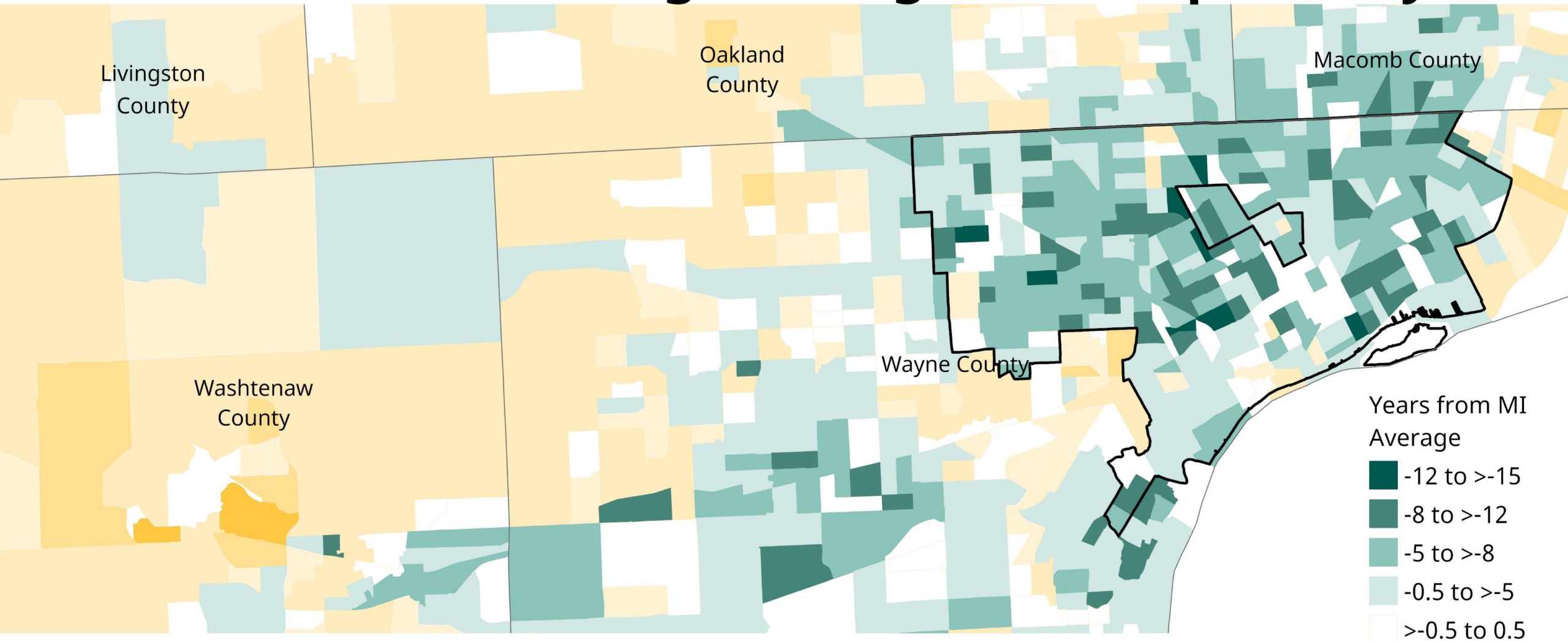
< 28.1

PLACES
LOCAL DATA FOR BETTER HEALTH



Data source: Centers for Disease Control and Prevention. Map by Ben Blatt/*Slate*.

Years from Average Michigan Life Expectancy

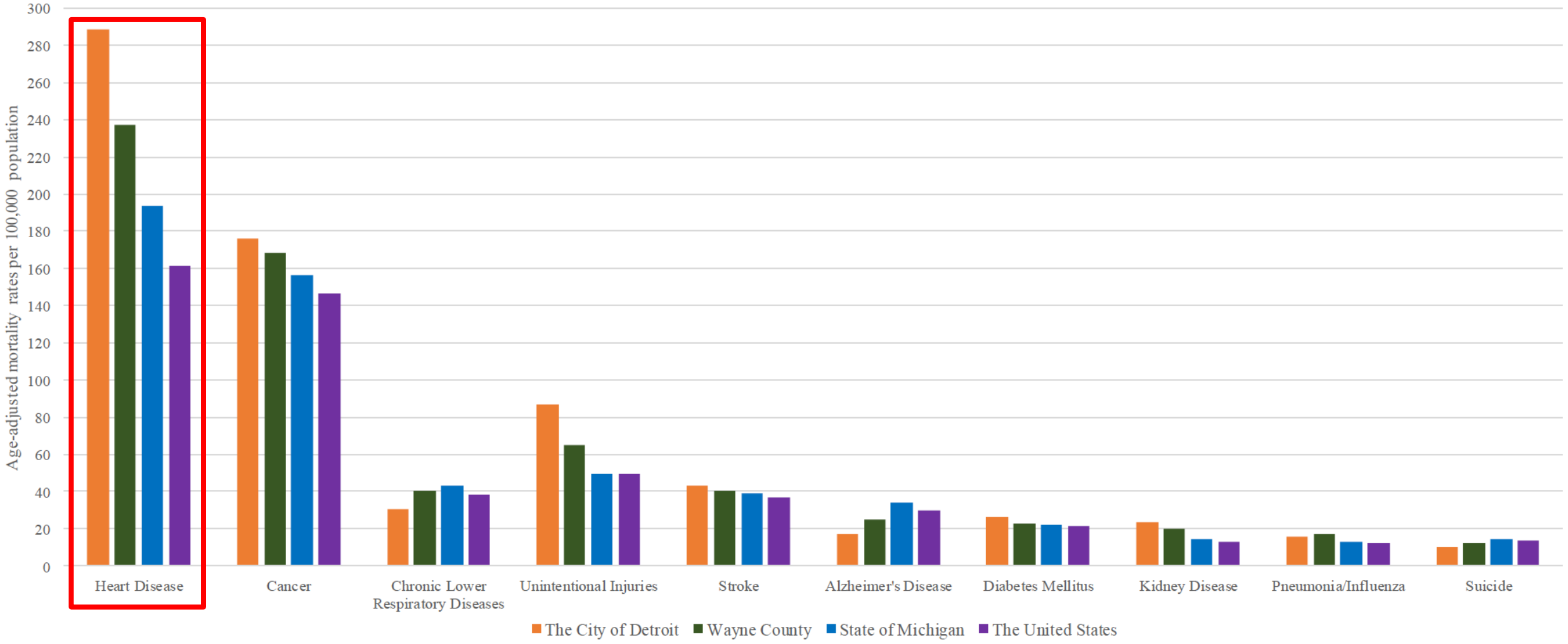


PHOENIX

Average Michigan life expectancy is 77.7 years (at birth).

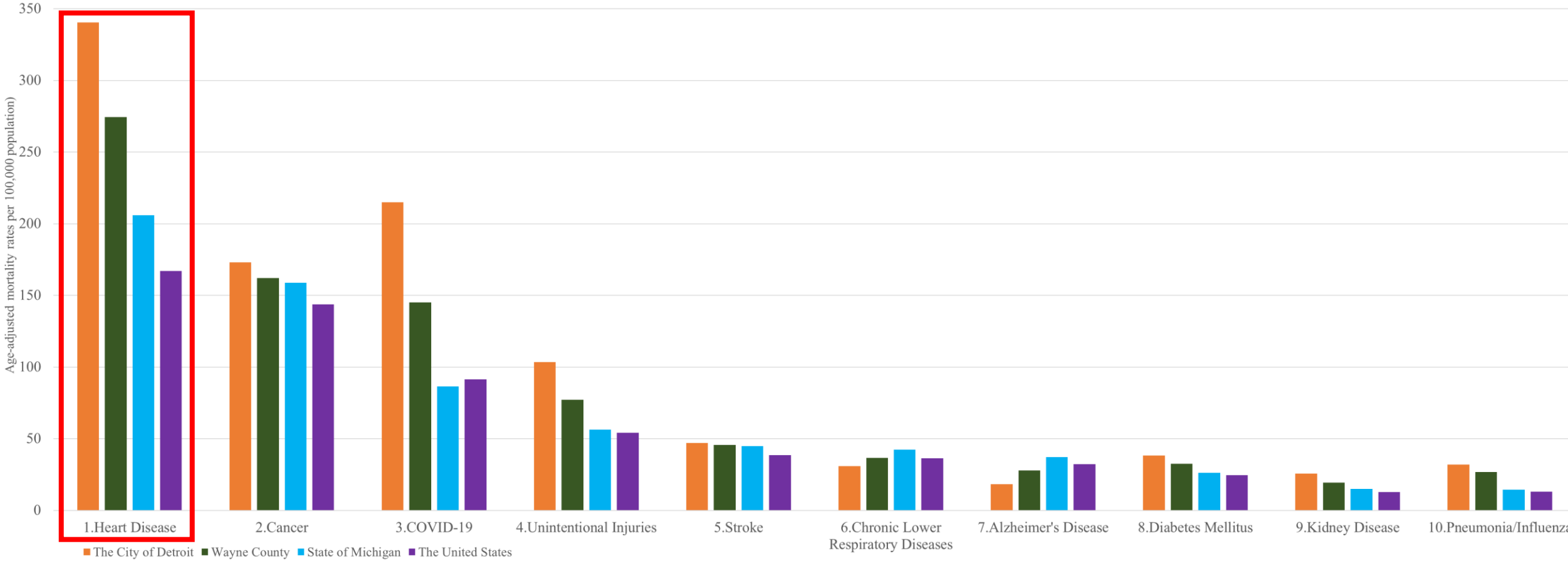
Data from National Center for Health Statistics. U.S. Small-Area Life Expectancy Estimates Project (USALEEP): Michigan [2010-2015]. Methodology by Escobedo et al., 2018.

Age-adjusted Mortality Rates per 100,000 Population for the Ten Leading Causes of Death in the City of Detroit, Wayne County, State of Michigan, and the United States, 2019

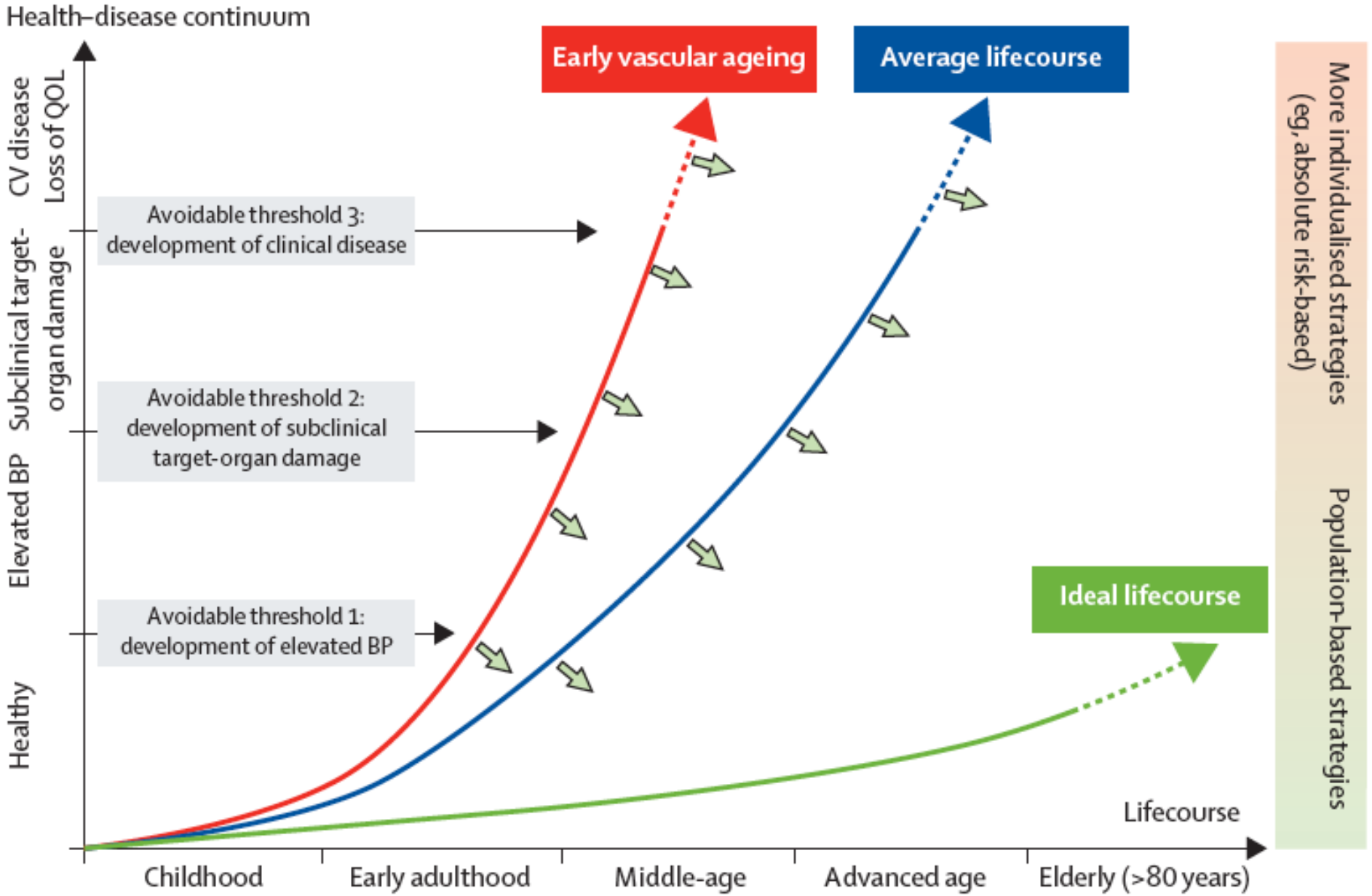


Source: 2019 Geocoded Michigan Death Certificate Registry. Division for Vital Records & Health Statistics, Michigan Department of Health & Human Services.
National Center for Health Statistics.

Age-adjusted Mortality Rates per 100,000 Population for the Ten Leading Causes of Death in the City of Detroit, Wayne Count, Status of Michigan, and the United States, 2020



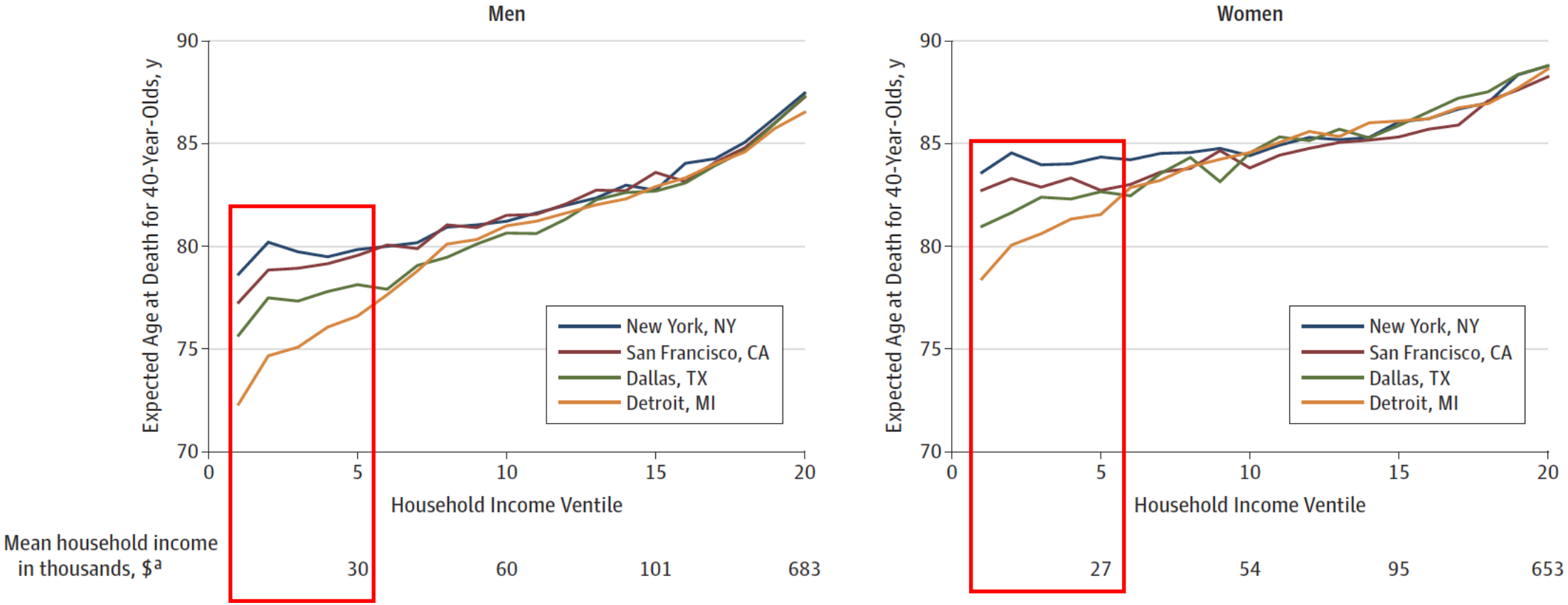
Source: Michigan Department of Health & Human Services. Ahmad FB, et al. Provisional Mortality Data United States 2020. MMWR. 2021;70(14):519-522. Ahmad FB, Anderson RN. The leading causes of death in the US for 2020. JAMA. 2021; 325(18):1829-1830.



Olsen et al. Lancet 2016;388:2665-2712.

The Association Between Income and Life Expectancy in the United States, 2001-2014

Raj Chetty, PhD; Michael Stepner, BA; Sarah Abraham, BA; Shelby Lin, MPhil; Benjamin Scuderi, BA; Nicholas Turner, PhD; Augustin Bergeron, MA; David Cutler, PhD



Chetty et al. JAMA. 2016;315:1750-66.

Three Public Health Interventions Could Save 94 Million Lives in 25 Years

Global Impact Assessment Analysis

Effect of Hypertension Treatment on Systolic Blood Pressure	Percent of Patients With Hypertension Treated, %*	Sodium Intake Reduction, %†	Number (Millions) of Deaths That Could Be Delayed (95% Uncertainty Interval)		
			Women	Men	Total
10 mm Hg	50	10	11.3 (10.1–12.5)	17.0 (15.1–18.8)	28.2 (25.2–31.3)
10 mm Hg	50	30	23.5 (20.7–26.2)	32.1 (27.8–36.0)	55.6 (48.5–62.2)
10 mm Hg	70	10	17.8 (16.0–19.5)	23.5 (21.3–25.7)	41.2 (37.3–45.2)
10 mm Hg	70	30	29.6 (26.4–32.8)	38.2 (33.5–42.4)	67.8 (59.9–75.2)
15 mm Hg	50	10	13.5 (12.1–14.9)	21.0 (19.0–23.1)	34.5 (31.1–38.0)
15 mm Hg	50	30	25.6 (22.6–28.4)	35.9 (31.4–40.1)	61.5 (54.0–68.5)
15 mm Hg	70	10	23.0 (20.8–25.2)	30.5 (27.8–33.3)	53.5 (48.6–58.5)
15 mm Hg	70	30	34.6 (31.1–38.2)	44.8 (39.9–49.5)	79.5 (71.0–87.7)

*Increasing hypertension coverage alone to 50% could delay 13.4 million (12.2–14.6) deaths if assuming a 10-mm Hg decline and 19.8 million (18.1–21.7) deaths if assuming a 15-mm Hg decline. With 70% coverage, the deaths delayed could be 26.7 million (24.3–29.2) with a 10-mm Hg decline and 39.4 million (35.9–43.0) with a 15-mm Hg decline.

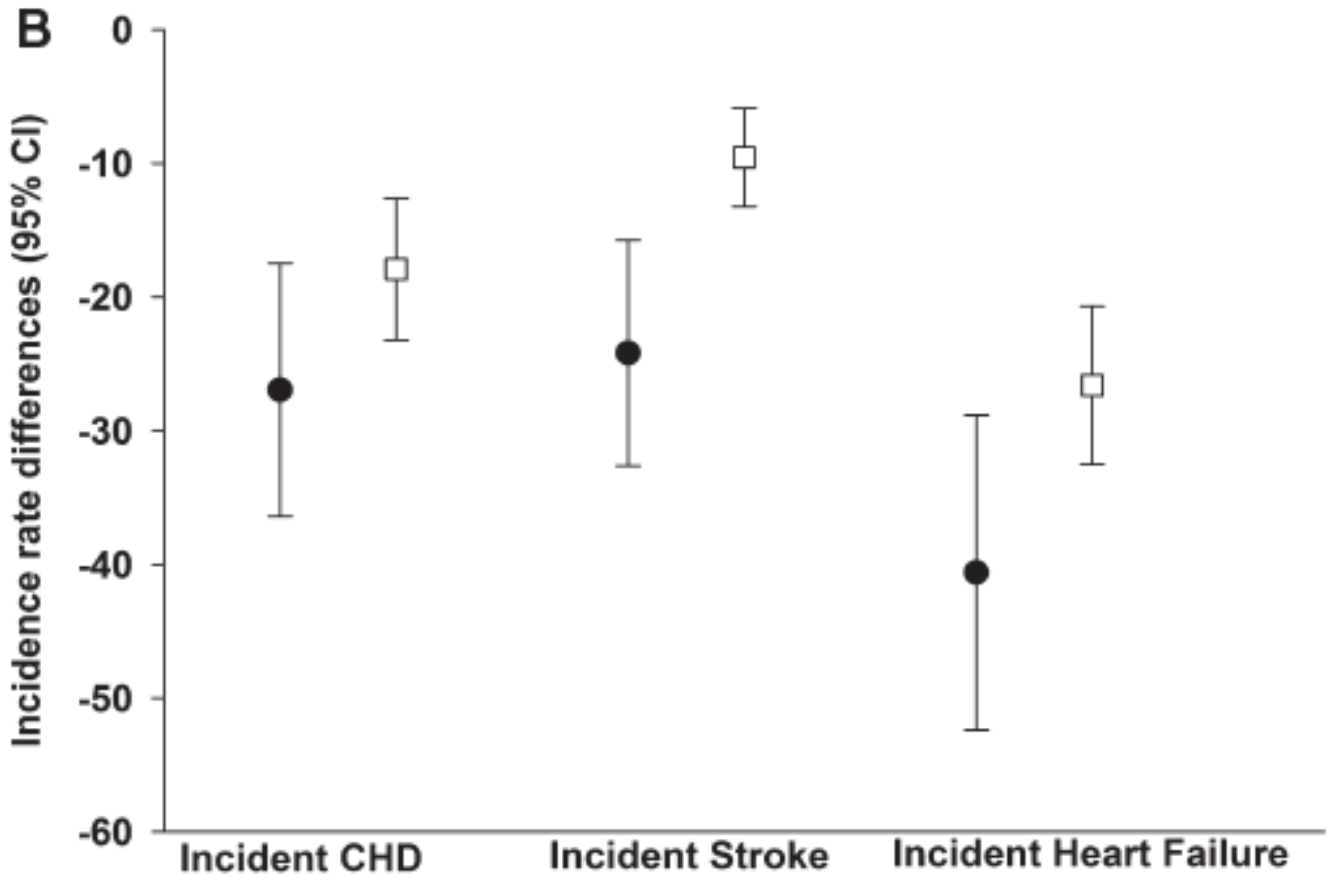
†Reducing salt intake by 10% could delay 15.3 million (12.9–17.7) deaths, and reducing salt intake by 30% could delay 43.4 million (36.9–49.5) deaths globally.

Kontis et al. Circulation 2019;140:715-25.

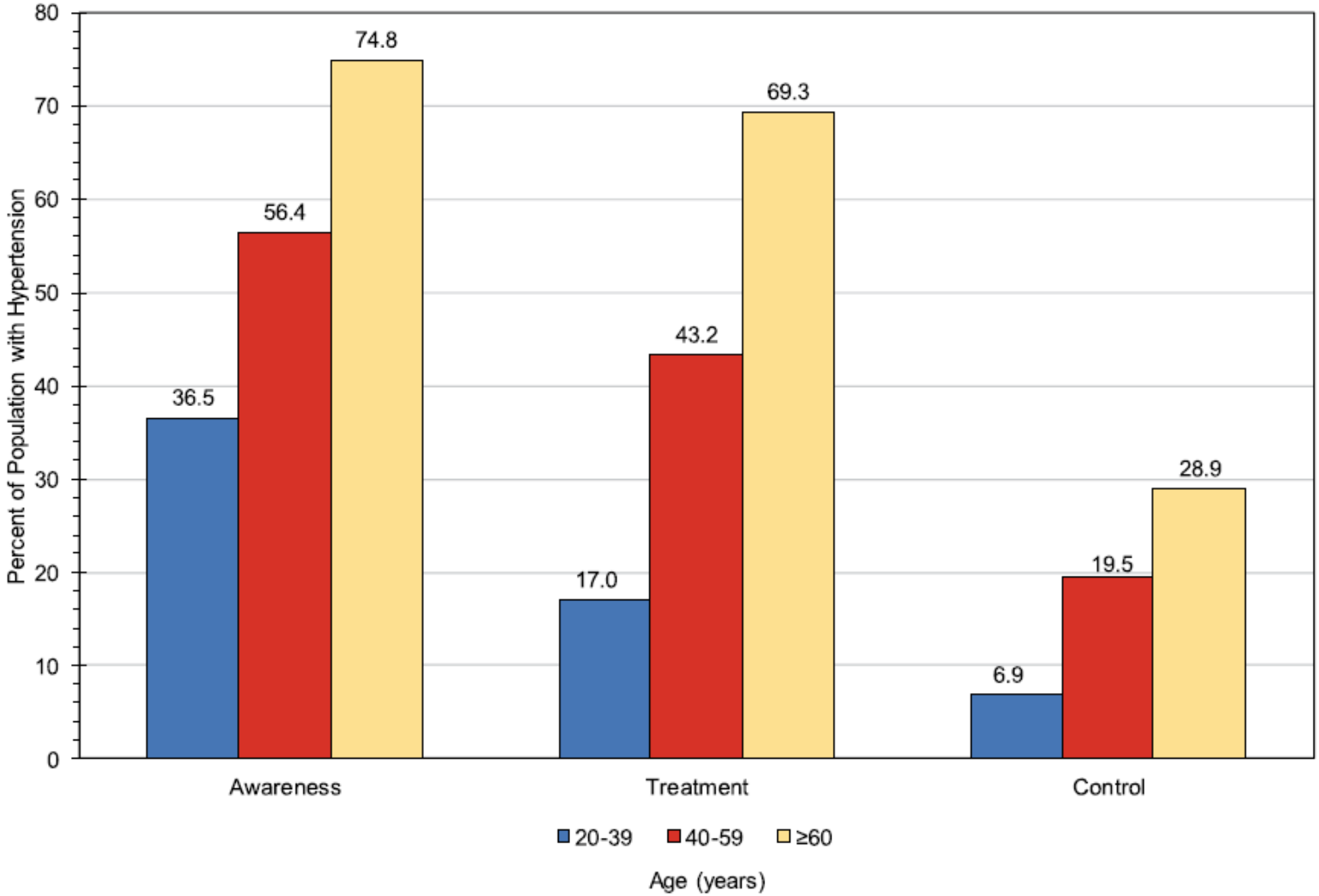
Reducing the Blood Pressure–Related Burden of Cardiovascular Disease: Impact of Achievable Improvements in Blood Pressure Prevention and Control

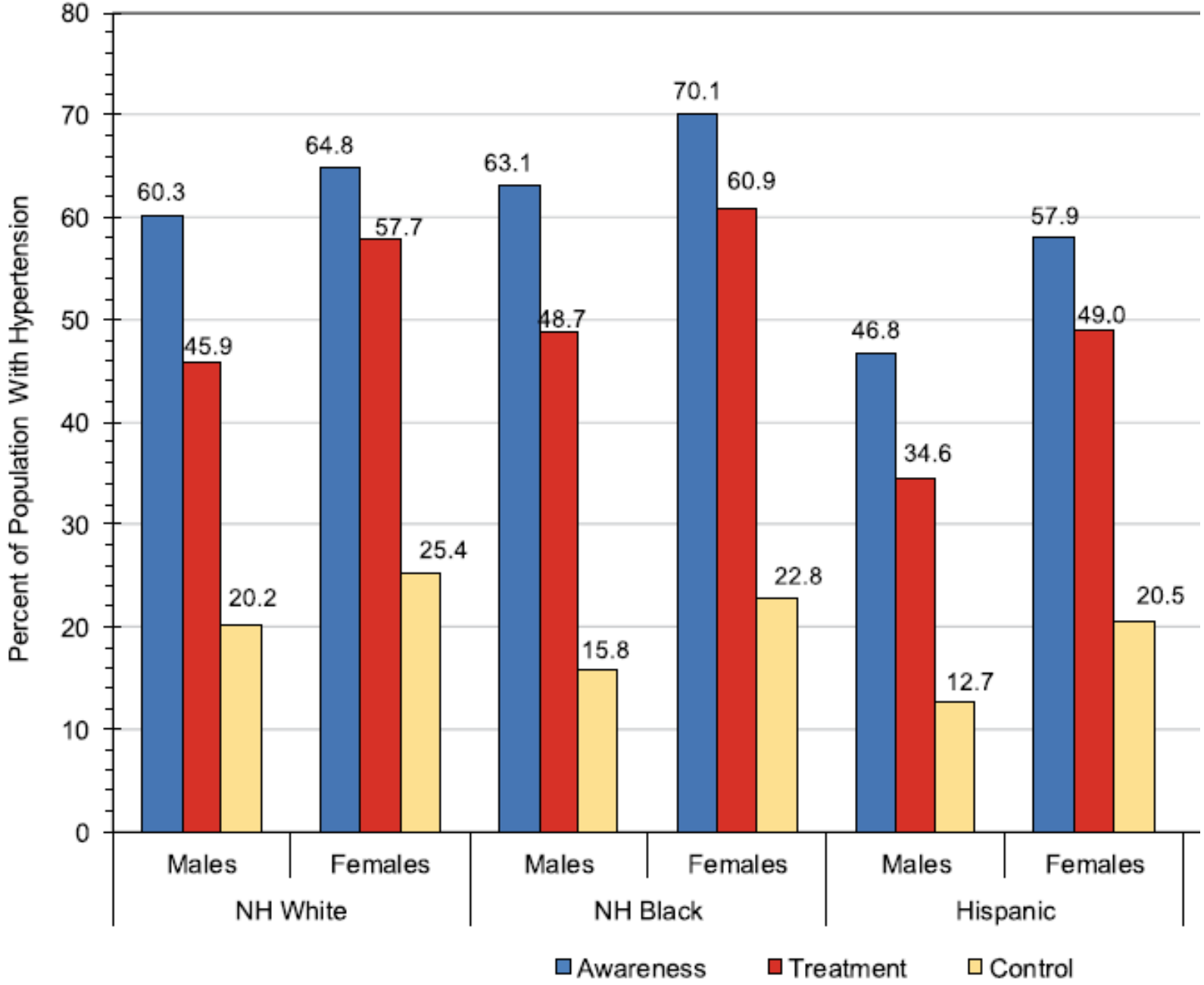
Shakia T. Hardy, MPH; Laura R. Loehr, MD, PhD; Kenneth R. Butler, PhD; Sujatro Chakladar, MS; Patricia P. Chang, MD, MHS; Aaron R. Folsom, MD, MPH; Gerardo Heiss, MD, PhD; Richard F. MacLehose, PhD; Kunihiro Matsushita, MD, PhD; Christy L. Avery, PhD

Population Level BP Reduction of 2 mm Hg



Hardy et al. J Am Heart Assoc. 2015;4:e002276 doi: 10.1161/JAHA.115.002276.


80
70
60
50
40
30
20
10
0
Percent of Population with Hypertension
74.8
56.4
36.5
69.3
43.2
17.0
28.9
19.5
6.9
Awareness
Treatment
Control
20-39
40-59
≥60
Age (years)


Percent of Population With Hypertension
80
70
60
50
40
30
20
10
0
60.3
45.9
20.2
64.8
57.7
25.4
63.1
48.7
15.8
70.1
60.9
22.8
46.8
34.6
12.7
57.9
49.0
20.5
Males
Females
Males
Females
Males
Females
NH White
NH Black
Hispanic
Awareness
Treatment
Control

A Cluster-Randomized Trial of Blood-Pressure Reduction in Black Barbershops

Ronald G. Victor, M.D., Kathleen Lynch, Pharm.D., Ning Li, Ph.D., Ciantel Blyler, Pharm.D., Eric Muhammad, B.A., Joel Handler, M.D., Jeffrey Brettler, M.D., Mohamad Rashid, M.B., Ch.B., Brent Hsu, B.S., Davontae Foxx-Drew, B.A., Norma Moy, B.A., Anthony E. Reid, M.D.,* and Robert M. Elashoff, Ph.D.

ABSTRACT

BACKGROUND

Uncontrolled hypertension is a major problem among non-Hispanic black men, who are underrepresented in pharmacist intervention trials in traditional health care settings.

METHODS

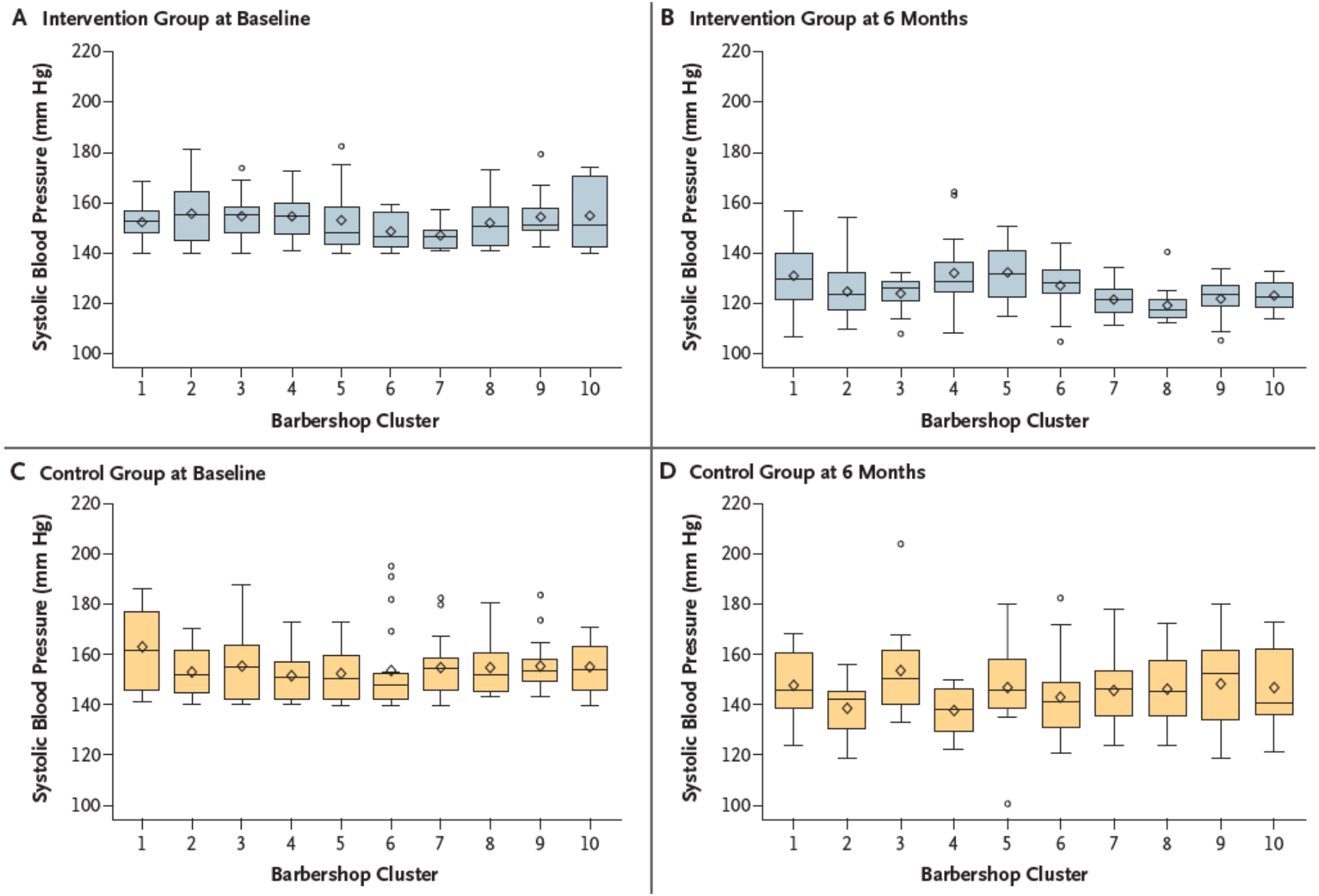
We enrolled a cohort of 319 black male patrons with systolic blood pressure of 140 mm Hg or more from 52 black-owned barbershops (nontraditional health care setting) in a cluster-randomized trial in which barbershops were assigned to a pharmacist-led intervention (in which barbers encouraged meetings in barbershops with specialty-trained pharmacists who prescribed drug therapy under a collaborative practice agreement with the participants' doctors) or to an active control approach (in which barbers encouraged lifestyle modification and doctor appointments). The primary outcome was reduction in systolic blood pressure at 6 months.

From the Smidt Heart Institute at Cedars–Sinai Medical Center (R.G.V., K.L., C.B., E.M., M.R., B.H., D.F.-D., N.M., A.E.R.), the Department of Biomathematics, David Geffen School of Medicine, University of California, Los Angeles (N.L., R.M.E.), and Kaiser Permanente (J.H., J.B.) — all in Los Angeles. Address reprint requests to Dr. Victor at ronald.victor@cshs.org.

*Deceased.

This article was published on March 12, 2018, at NEJM.org.

DOI: 10.1056/NEJMoa1717250



Victor et al. N Engl J Med. 2018;378:1291-1301.

2020

Hypertension Screening Guidance for Michigan Oral Health Professionals

ORAL HEALTH UNIT
MICHIGAN DEPARTMENT OF HEALTH AND HUMAN SERVICES

Screening for Hypertension in Adults
US Preventive Services Task Force Reaffirmation Recommendation Statement

US Preventive Services Task Force

IMPORTANCE Hypertension is a prevalent condition that affects approximately 45% of the adult US population and is the most commonly diagnosed condition at outpatient office visits. Hypertension is a major contributing risk factor for heart failure, myocardial infarction, stroke, and chronic kidney disease.

OBJECTIVE To reaffirm its 2015 recommendation, the US Preventive Services Task Force (USPSTF) commissioned a systematic review to evaluate the benefits and harms of screening for hypertension in adults, the accuracy of office blood pressure measurement for initial screening, and the accuracy of various confirmatory blood pressure measurement methods.

POPULATION Adults 18 years or older without known hypertension.

EVIDENCE ASSESSMENT Using a reaffirmation deliberation process, the USPSTF concludes with high certainty that screening for hypertension in adults has substantial net benefit.

RECOMMENDATION The USPSTF recommends screening for hypertension in adults 18 years or older with office blood pressure measurement. The USPSTF recommends obtaining blood pressure measurements outside of the clinical setting for diagnostic confirmation before starting treatment. (A recommendation)

JAMA. 2021;325(16):1650-1656. doi:10.1001/jama.2021.4987

Editorial page 1618

Multimedia

Related article page 1657 and **JAMA Patient Page** page 1688

Supplemental content

CME Quiz at jamacmelookup.com and **CME Questions** page 1672

Related articles at jamanetworkopen.com jamacardiology.com

Corresponding Author: Alex H. Krist, MD, MPH, Virginia Commonwealth University, One Capitol Square, 830 E Main St, Sixth Floor, Richmond, VA 23219 (chair@uspstf.net).

Open Access Full Text Article

ORIGINAL RESEARCH

Screening for High Blood Pressure at the Dentist's Office

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Background: High blood pressure is a worldwide issue that can go undetected. Many are unaware of such a problem due to the lack of symptoms in early stages. Visiting the dentist can be a good place to screen for such health issues. Screening dental patients at every dental visit can be of great benefit. The aim of this study was to determine if screening for blood pressure at the dental office is efficient and beneficial for patients.

Methods: The HEYER VizOR Digital Blood Pressure Monitor was used to measure the blood pressure of all the patients visiting the dental clinic, ranging in age from 18 to 85. The study was comprised of patients who had never been diagnosed as hypertensive by a physician or if they had been diagnosed before.

Results: A total of 273 participants met the inclusion criteria. One hundred and thirty-seven (50.1%) patients had high blood pressure readings compared to 136 (49.8%) patients with normal blood pressure readings. It also showed that 54 (38%) of patients with high blood pressure readings had never been diagnosed by a physician with hypertension and were unaware of their blood pressure status. In addition, 83 (63.3%) of patients who had been diagnosed with hypertension by a physician had high blood pressure readings. The data also showed that 5.3% of patients diagnosed by their physician do not take their prescribed medication.

Conclusion: In this study, we showed that screening blood pressure at the dental office can detect high blood pressure readings in dental patients. It is also a useful screening tool for blood pressure for diagnosed and undiagnosed patients. Screening dental patients at the dental office is a useful tool that can help in the screening for blood pressure and should be implemented at every visit.

Patients' attitudes toward screening for medical conditions in a dental setting

Barbara L. Greenberg, PhD[1]; Mel L. Kantor, DDS, PhD[1]; Shuying S. Jiang, MSc[1]; Michael Glick, DMD[2]

1 University of Medicine and Dentistry of New Jersey, New Jersey Dental School, Newark, NJ
2 University at Buffalo, School of Dental Medicine, Buffalo, NY

Keywords
medical screening; chairside; patient attitudes; dental offices.

Correspondence
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Received: 4/28/2011; accepted: 8/5/2011.

doi: 10.1111/j.1752-7325.2011.00280.x

Abstract

Objectives: Previous studies demonstrated the efficacy of chairside medical screening by dentists to identify patients who are at increased risk for developing cardiovascular-associated events and the favorable attitude of dentists toward chairside medical screening. This study assessed patient attitudes toward chairside medical screening in a dental setting.

Methods: A self-administered questionnaire of eight five-point response scale questions was given to a convenience sample of adult patients attending an inner-city dental school clinic and two private practice settings. Wilcoxon–Mann–Whitney tests and *t*-tests were used to compare responses between study groups. Friedman nonparametric analysis of variance was used to compare response items within each question.

Results: Regardless of setting, the majority of respondents was willing to have a dentist conduct screening for heart disease, high blood pressure, diabetes, human immunodeficiency virus infection, and hepatitis infection (55-90 percent); discuss results immediately (79 percent and 89 percent); provide oral fluids, finger-stick blood, blood pressure measurements, and height and weight (60-94 percent); and pay up to $20 (50-67 percent). Respondents reported that their opinion of the dentist would improve regarding the dentist's professionalism, knowledge, competence, and compassion (48-77 percent). The fact that the test was not done by a physician was ranked as the least important potential barrier. While all respondents expressed a favorable attitude toward chairside screening, the mean score was significantly lower among clinic patients across most questions/items. The priority rankings within an item were similar for both groups.

Conclusions: Acceptance by patients of chairside medical screening in a dental setting is a critical element for successful implementation of this strategy.

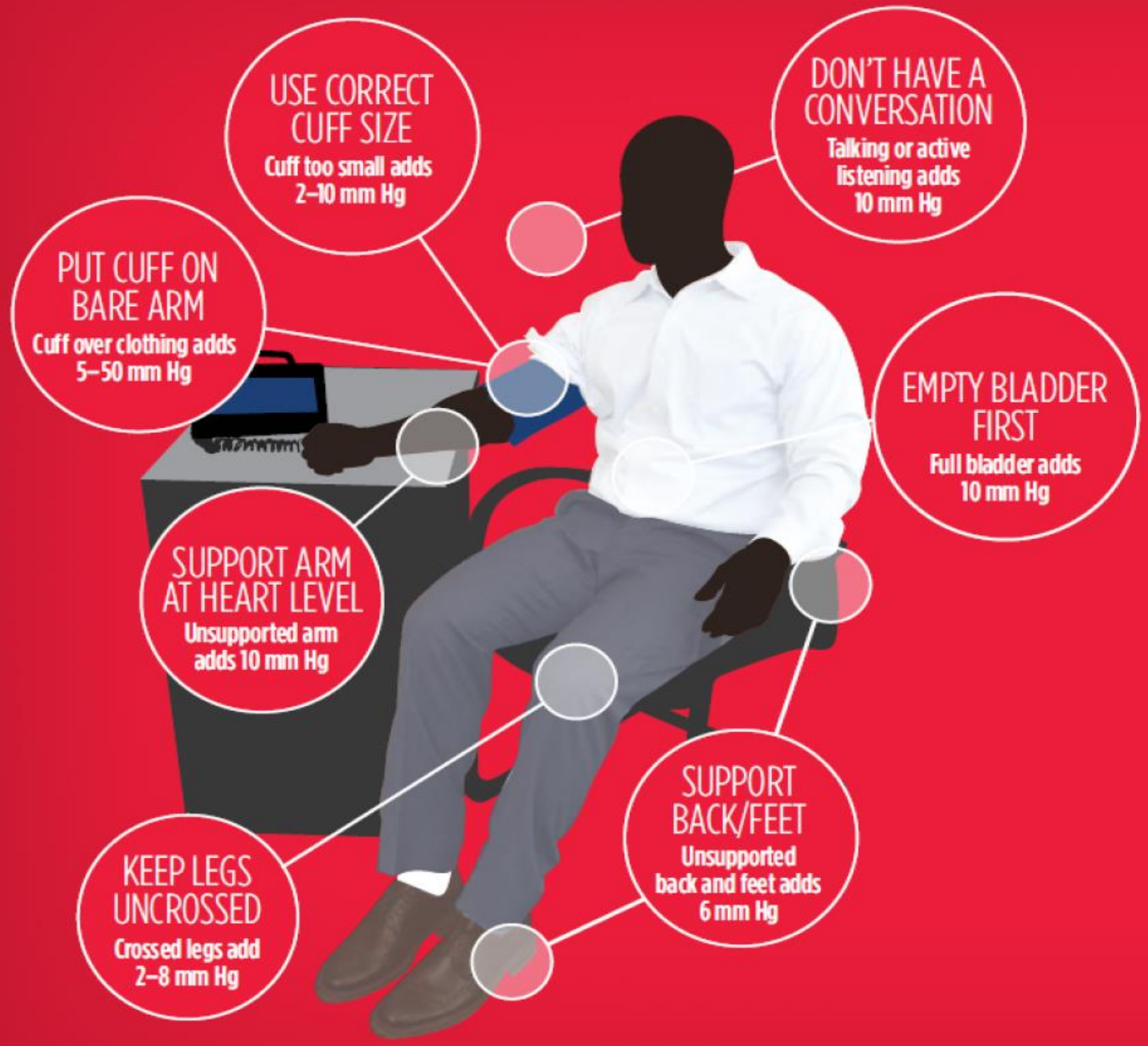
The Need for Accurate Data on Blood Pressure Measurement in the Dental Office

Merrill F. Elias[1,2] and Amanda L. Goodell[1]

In this paper we argue that we have a paucity of data about how blood pressure (BP) measurement is performed in the dentist's office. We argue that these data are needed soon, preferably, but in the interim, the following common sense approach to BP measurement will take us a long way toward accurate measurement in the dental office: (i) using automated BP assessment and following the instructions provided by the manufacturers and (ii) using the general BP assessment guidelines provided by the American Heart Association,[1,2] among other sources.

Both elements of this common sense approach are necessary as simply following the use instructions provided by the manual cuff manufacturer will often be insufficient to measure BP properly. Articles on measuring BP manually involve rules for traditional methods of measurement using the stethoscope and pressure cuff method. These rules require more training and practice and generally do not apply to automated BP assessment. Thus, we will focus on automated BP assessments which are perfectly acceptable for the dental office.[1]

Elias and Goodell. Am J Hypertens 2020;33:297-300.



7 SIMPLE TIPS TO GET AN ACCURATE BLOOD PRESSURE READING

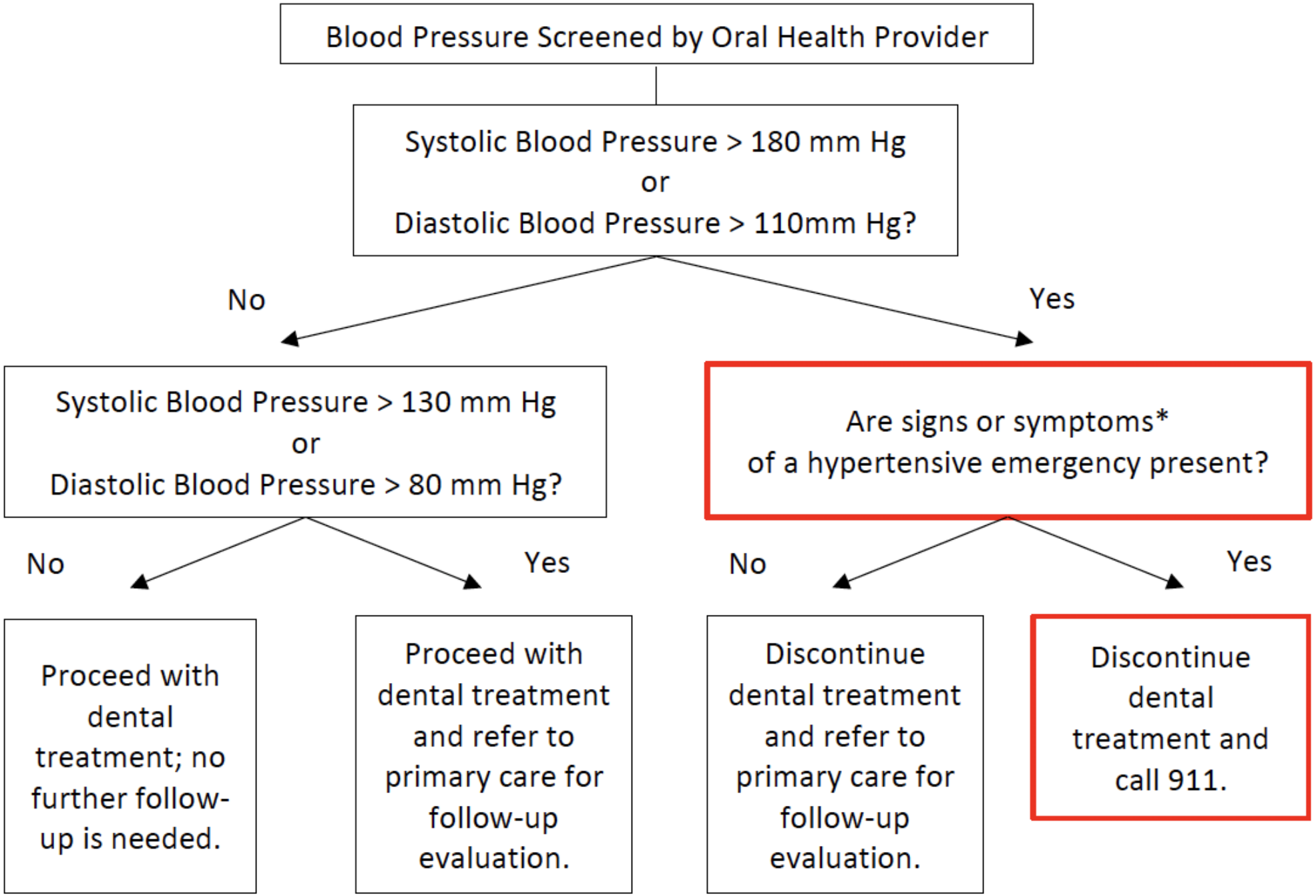
The common positioning errors can result in inaccurate blood pressure measurement. Figures shown are estimates of how improper positioning can potentially impact blood pressure readings.

Sources:

1. *Pickering, et al.* Recommendations for Blood Pressure Measurement in Humans and Experimental Animals Part 1: Blood Pressure Measurement in Humans. *Circulation*. 2005;111: 697-716.
2. *Handler J.* The importance of accurate blood pressure measurement. *The Permanente Journal*/Summer 2009/Volume 13 No. 3 51

Updated December 2016

TARGET:BP | American Heart Association. AMA


Blood Pressure Screened by Oral Health Provider
Systolic Blood Pressure > 180 mm Hg
or
Diastolic Blood Pressure > 110mm Hg?
No
Yes
Systolic Blood Pressure > 130 mm Hg
or
Diastolic Blood Pressure > 80 mm Hg?
Are signs or symptoms*
of a hypertensive emergency present?
No
Yes
No
Yes
Proceed with dental treatment; no further follow-up is needed.
Proceed with dental treatment and refer to primary care for follow-up evaluation.
Discontinue dental treatment and refer to primary care for follow-up evaluation.
Discontinue dental treatment and call 911.

*Signs and symptoms of a hypertensive emergency include:

- Chest pain
- Dizziness
- Shortness of breath
- Numbness or weakness
- Confusion
- Lethargy
- Difficulty with vision or speech

Canceling dental procedures due to elevated blood pressure

Is it appropriate?

Steven A. Yarows, MD; Olga Vornovitsky, MD; Robert M. Eber, DDS, MS;
John D. Bisognano, MD, PhD; Jan Basile, MD

ABSTRACT

Background. In 1974, the American Dental Association first considered recommending that dental offices measure blood pressure (BP) routinely, and it has been further encouraged since 2006. Investigators in several dental publications have recommended cancellation of dental procedures based solely on BP greater than 180/110 millimeters of mercury for urgent oral health care and greater than 160/100 mm Hg for elective oral health care, in the absence of prior medical consultation.

Methods. The authors reviewed the evidence for cancellation of any dental or surgical procedures by using an Ovid MEDLINE search for the terms *dental*, *elevated blood pressure*, and *hypertension*. In addition, the authors searched resources at ebd.ada.org using the same criteria. The authors collaborated to develop recommendations in view of 2017 guidelines on this subject.

Results. To the authors' knowledge, there are no professionally accepted criteria or study evidence indicating a specific BP elevation at which to prohibit oral health care. Researchers of a 2015 review on management of comorbidities in ambulatory anesthesia failed to find increased morbidity from hypertension in the outpatient setting.

Conclusions. To the authors' knowledge, there are no prospective study investigators that have addressed whether or when to cancel dental procedures due to office-measured elevated BP. The authors recommend using current anesthesiology guidelines based on functional status and past BP measurements to prevent unnecessary cancellations.

Practical Implications. It is seldom necessary to cancel dental procedures on the basis of BP measured before a planned procedure for patients under a physician's care.

Box 2. Risk stratification for patients whose correctly measured blood pressure is greater than 180/110 millimeters of mercury.*

RISK STRATIFICATION CATEGORY

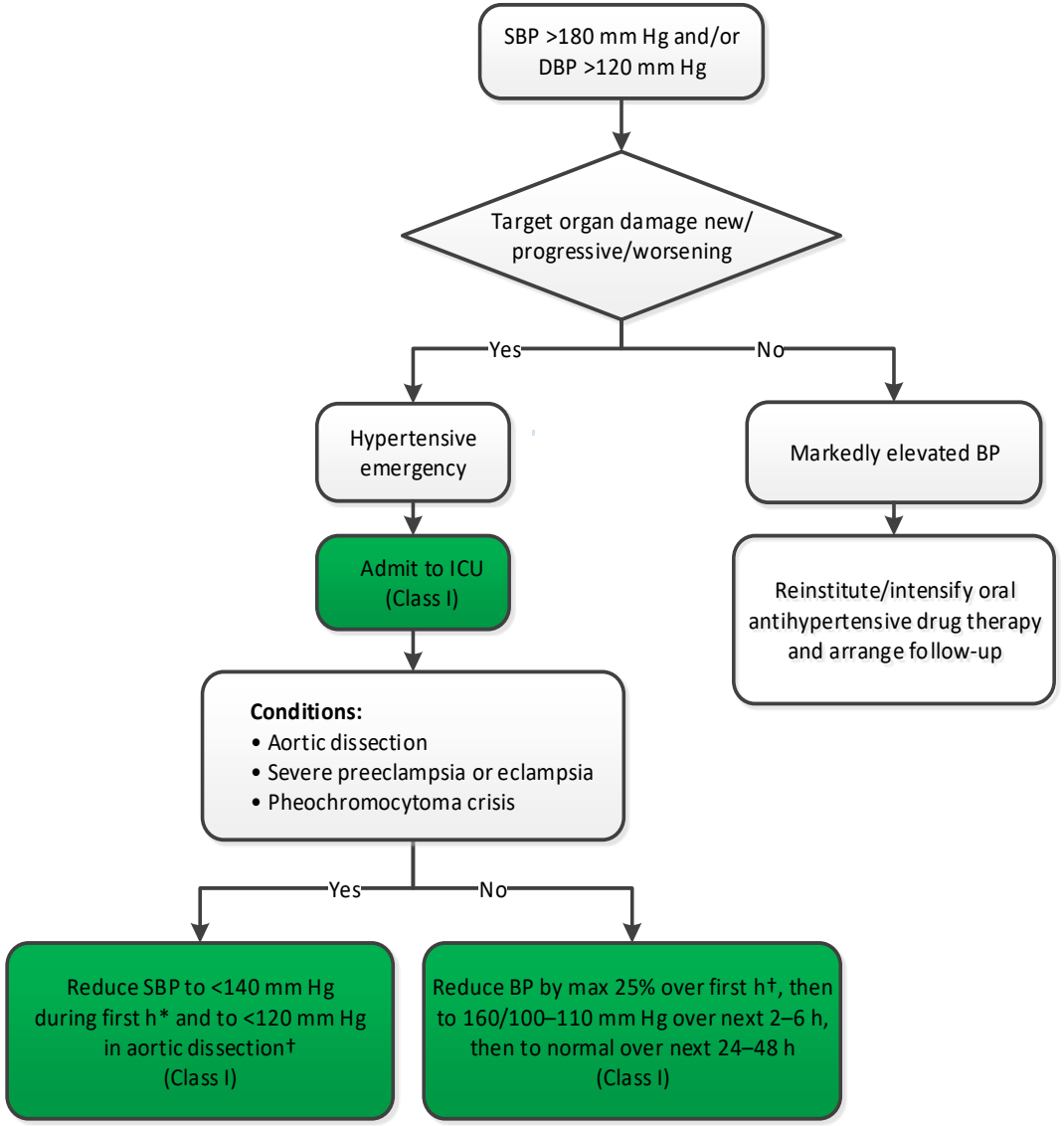
Category A

- Is the patient taking antihypertensive medication, and did he or she take it this day?
- Does the patient have a health care provider managing his or her hypertension and has he or she been seen in the past 6 months?
- Does the patient appear anxious, acknowledge anxiety about the procedure, or have a heart rate $>$ 100 beats per minute?

Category B

- Did the patient take public transportation or drive and walk in for the procedure?
- Does the patient take care of his or her own house or apartment?
- Does the patient state he or she can walk up a flight of stairs?

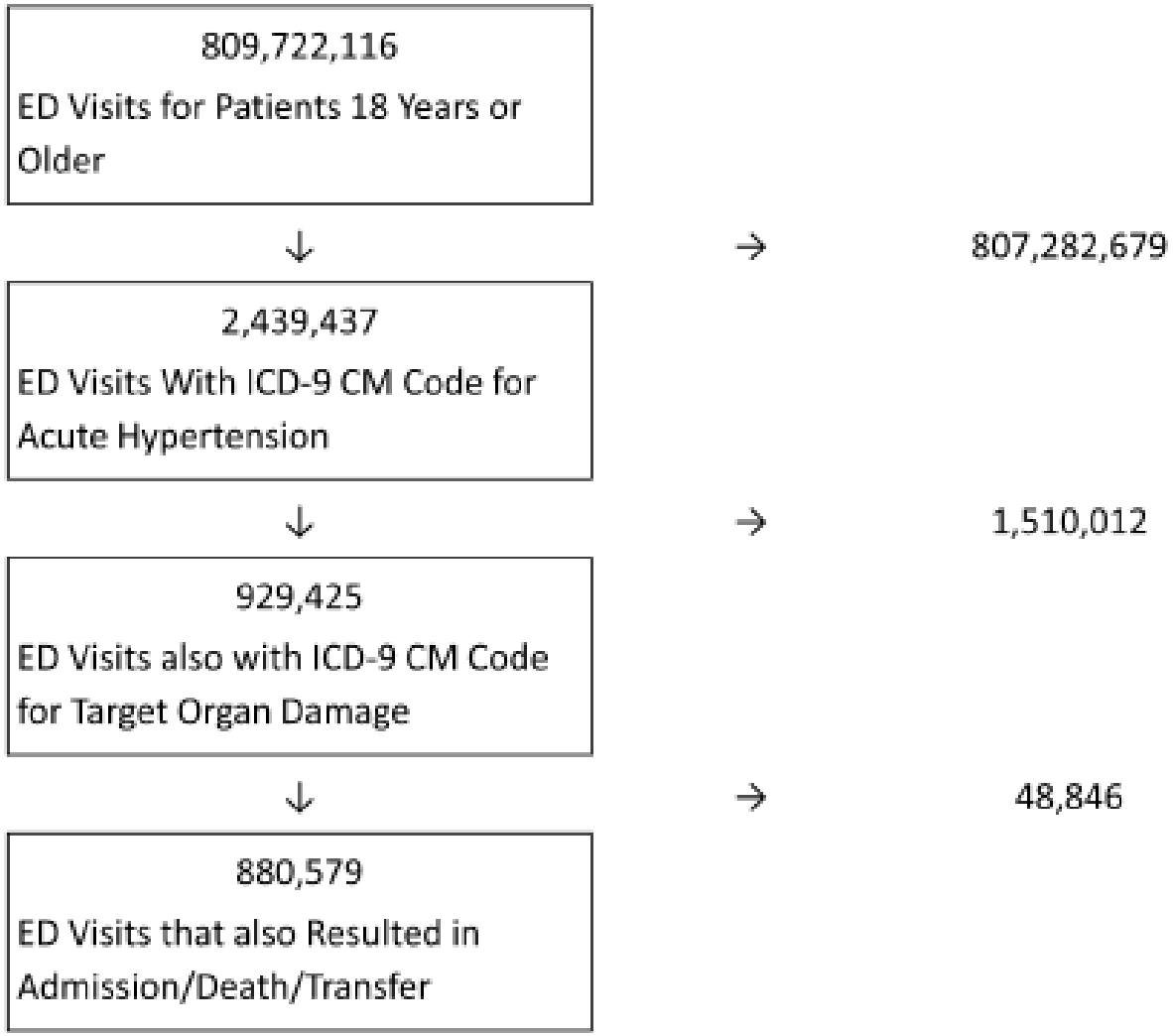
2017 ACC/AHA/AAPA/ABC/ACPM/AGS/APhA/ASH/ASPC/NMA/PCNA Guideline for the Prevention, Detection, Evaluation, and Management of High Blood Pressure in Adults



Whelton et al. J Am Coll Cardiol. 2018;71:e127-e248.

Trends in the Incidence of Hypertensive Emergencies in US Emergency Departments From 2006 to 2013

Alexander T. Janke, BS; Candace D. McNaughton, MD, MPH, PhD; Aaron M. Brody, MD, MPH; Robert D. Welch, MD, MSc; Phillip D. Levy, MD, MPH



Janke et al. J Am Heart Assoc. 2016;5:e004511 doi/10.1161/JAHA.116.004511

Trends in the Incidence of Hypertensive Emergencies in US Emergency Departments From 2006 to 2013

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Table: End Organ Damage Among ED Visits for Hypertensive Emergency

	#	% (95% CI)
Papilledema/Retinal Hemorrhage	189	0.13% (0.09% to 0.18%)
Heart Failure	84,244	59.02% (57.74% to 60.31%)
Myocardial Infarction	15,737	11.03% (10.29% to 11.76%)
Dissection of Major Vessel	20,936	14.67% (14.05% to 15.29%)
Intracranial Hemorrhage	8,624	6.04% (5.36% to 6.73%)
Other Cerebrovascular Disease	39,642	27.77% (26.80% to 28.75%)
Ruptured Aneurysm	4,744	3.32% (3.03% to 3.62%)
Total Hypertensive Emergencies	142,731	

Janke et al. J Am Heart Assoc. 2016;5:e004511 doi/10.1161/JAHA.116.004511

Trends in the Incidence of Hypertensive Emergencies in US Emergency Departments From 2006 to 2013

Alexander T. Janke, BS; Candace D. McNaughton, MD, MPH, PhD; Aaron M. Brody, MD, MPH; Robert D. Welch, MD, MSc; Phillip D. Levy, MD, MPH

Conclusions

Based on data from a valid, nationwide, representative sample, the estimated number of visits for hypertensive emergency and the rate per million adult ED visits has more than doubled from 2006 to 2013. However, hypertensive emergencies are rare, occurring in about 2 of every 1000 adult ED visits in the United States, and 6 in 1000 adult ED visits carrying any diagnosis of hypertension. This figure is far lower than what has been sometimes cited in previous literature.

Janke et al. J Am Heart Assoc. 2016;5:e004511 doi/10.1161/JAHA.116.004511

Clinical Policy: Critical Issues in the Evaluation and Management of Adult Patients in the Emergency Department With Asymptomatic Elevated Blood Pressure

2. In patients with asymptomatic markedly elevated blood pressure, does ED medical intervention reduce rates of adverse outcomes?

Patient Management Recommendations

Level A recommendations. None specified.

Level B recommendations. None specified.

Level C recommendations. (1) In patients with asymptomatic markedly elevated blood pressure, routine ED medical intervention is not required.

Wolf et al. Ann Emerg Med. 2013;62:59-68.

Blood Pressure Treatment and Outcomes in Hypertensive Patients without Acute Target Organ Damage: A Retrospective Cohort

Phillip D. Levy, MD, MPH [1, 2], James J. Mahn, MD [3], Joseph Miller, MD,[4] Alicia Shelby, MD [5], Aaron Brody, MD [1], Russell Davidson, MD [6], Michael J. Burla, DO [7], Alexander Marinica, BS [8], Justin Carroll, BS [1,9], John Purakal, MD [1,3], John M. Flack, MD, MPH [2,11], Robert D. Welch, MD, MS [1]

Outcome Measure	**Not Treated** **n = 581**	**Treated** **n = 435**	**Diff (95% CI)**
ED Visit 24 Hrs, n (%)	14 (2.4)	19 (4.4)	-2.0 (-4.5, 0.3)
Hospital Admission 24 Hrs, n (%)	0 (0.0)	3 (0.7)	-0.7 (-2.0, 0.1)
HTN Related Complication at 24 Hrs, n (%)	0 (0.0)	1 (0.2)	-0.2 (-1.3, 0.5)
ED Visit within 30 d, n (%)	88 (15.2)	82 (18.9)	-3.7 (-8.5, 0.9)
Hospital Admission within 30 d, n (%)	15 (2.6)	13 (3.0)	-0.4 (-2.7, 1.6)
HTN Related Complication within 30 d, n (%)	6 (1.0)	11 (2.5)	-1.5 (-3.5, 0.1)
Death within 30 d, n (%)	1 (0.2)	1 (0.2)	0.0 (-1.1,0.7)
Death within 1 year, n (%)	9 (1.6)	9 (2.1)	-0.5 (-2.5, 1.2)

Levy et al. Am J Emerg Med 2015;33:1219-24.

Characteristics and Outcomes of Patients Presenting With Hypertensive Urgency in the Office Setting

Krishna K. Patel, MD; Laura Young, MD; Erik H. Howell, MD; Bo Hu, PhD; Gregory Rutecki, MD; George Thomas, MD; Michael B. Rothberg, MD, MPH

Outcome	No. (%) of Patients		*P* Value[c]
	Referred to Hospital (n = 426)[a]	Sent Home (n = 852)[b]	
MACE[d]			
7 d	2 (0.5)	0	.11[e]
8-30 d	2 (0.5)	0	.11[e]
1-6 mo	4 (0.9)	8 (0.9)	>.99
Uncontrolled hypertension			
1 mo[f]	349 (81.9)	735 (86.3)	.04
6 mo[g,h]	213 (66.6)	393 (64.6)	.56
All-cause hospital admission			
7 d	35 (8.2)	40 (4.7)	.01
8-30 d	48 (11.3)	59 (6.9)	.009

Patel et al. JAMA Intern Med. 2016; 176::981-8.

MI Department of Health and Human Services- Oral Health Unit
Policy/Protocols for Dental Screening for Hypertension

Hypertension screening guidelines and treatment protocol:

1. Blood pressure will be checked on every patient over 18 years of age at every visit as well as on any children with a medical history of hypertension. Blood pressure will be taken for all pregnant patients, regardless of age.
2. The initial blood pressure must be taken after the patient has been seated quietly for at least 5 minutes, using an appropriate size cuff, according to the proper protocol for taking blood pressure, and documented in the patient's record.
3. If the initial reading is above normal (greater than 120/80 mm Hg), retake it in 1 to 2 minutes.
4. If the second reading is above normal, refer to the algorithm on the next page for guidance and notify the supervising dentist.
5. Inform the patient of all readings both verbally and in writing. Use the office referral form to communicate elevated blood pressure readings to the patient's primary care provider.
6. Schedule a follow up visit or phone contact with the patient at 1 week, 3 weeks, and 6 weeks after elevated blood pressure readings.

Search by Country, Territory, or Area

Overview | Measures | Table View | Data | More Resources

WHO Coronavirus (COVID-19) Dashboard

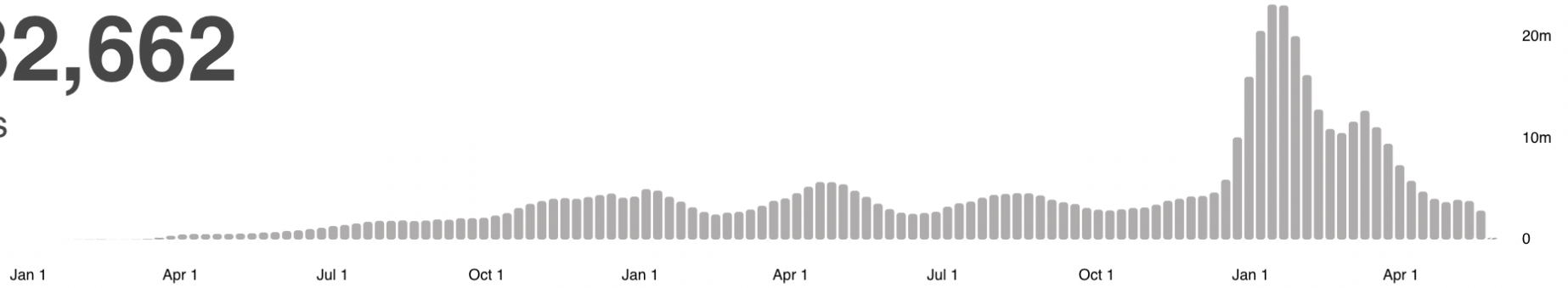
Back to top

Globally, as of **5:16pm CEST, 30 May 2022**, there have been **526,182,662 confirmed cases** of COVID-19, including **6,286,057 deaths**, reported to WHO. As of **24 May 2022**, a total of **11,811,627,599 vaccine doses** have been administered.

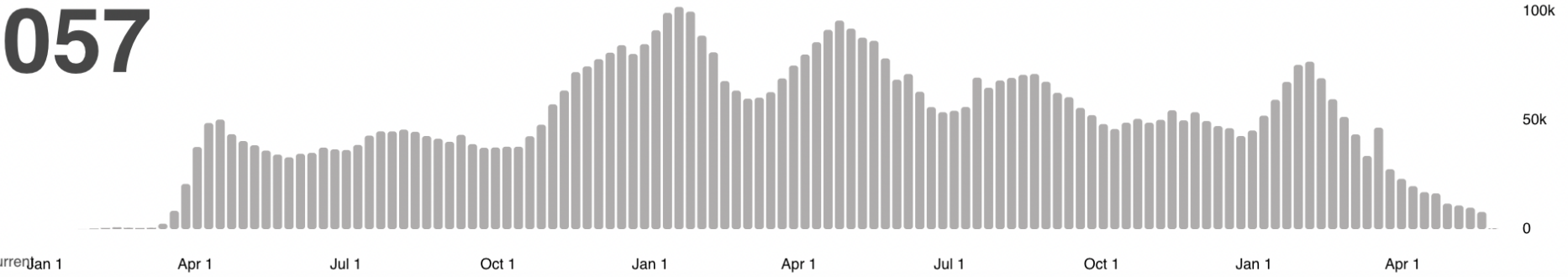
Global Situation

Daily | Weekly

526,182,662
confirmed cases



6,286,057
deaths



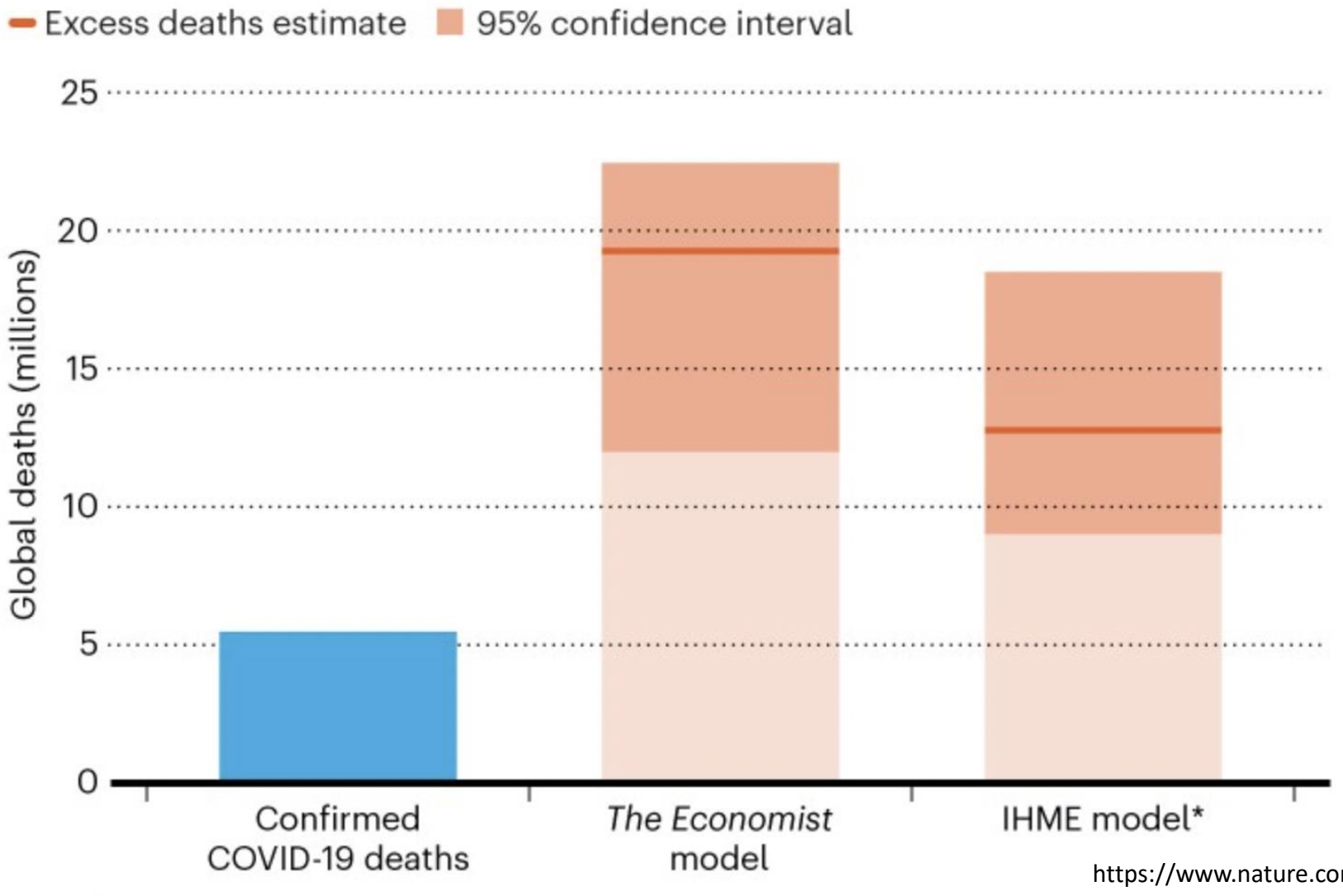
Source: World Health Organization

Data may be incomplete for the current day or week.

https://covid19.who.int/

GLOBAL TOLL

By January 2022, there had been 5.5 million official COVID-19 deaths worldwide in the pandemic. But models estimate that there have been between two and four times that number of excess deaths — that is, mortality above what was expected — since the start of 2020.



https://www.nature.com/articles/d41586-022-00104-8

EDITORIAL

Nine Lessons Learned From the COVID-19 Pandemic for Improving Hospital Care and Health Care Delivery

Eric K. Wei, MD, MBA; Theodore Long, MD, MHS; Mitchell H. Katz, MD

- Prepare for Unexpected Increases in Demand for Services
- Maintain Line of Sight
- Mind the Air
- Emotionally Support Health Care Workers
- Masks Forever (at Least for Some)
- Use Technology to Connect Families Near and Far
- Maintain Caches of Supplies and Diversify Supply Chains
- Reduce the Burden of Unnecessary Documentation
- **Address Persistent Racial and Ethnic Disparities in Health**

Wei EK, et al. JAMA Intern Med. 2021.

Contents lists available at ScienceDirect

EClinicalMedicine

journal homepage: https://www.journals.elsevier.com/eclinicalmedicine

Research Paper

Elevated COVID19 mortality risk in detroit area hospitals among patients from census tracts with extreme socioeconomic vulnerability

Avnish Sandhu[a], Steven J. Korzeniewski[b,*], Jordan Polistico[a], Harshita Pinnamaneni[c], Sushmitha Nanja Reddy[c], Ahmed Oudeif[c], Jessica Meyers[c], Nikki Sidhu[c], Phillip Levy[d], Lobelia Samavati[e], M.Safwan Badr[e], Jack D. Sobel[a], Robert Sherwin[d], Teena Chopra[a,*]

[a] Department of Internal Medicine, Division of Infectious Diseases, Detroit Medical Center, Wayne State University School of Medicine, Detroit, MI, United States
[b] Department of Family Medicine and Public Health Sciences, Wayne State University School of Medicine, Detroit, MI, United States
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ARTICLE INFO

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ABSTRACT

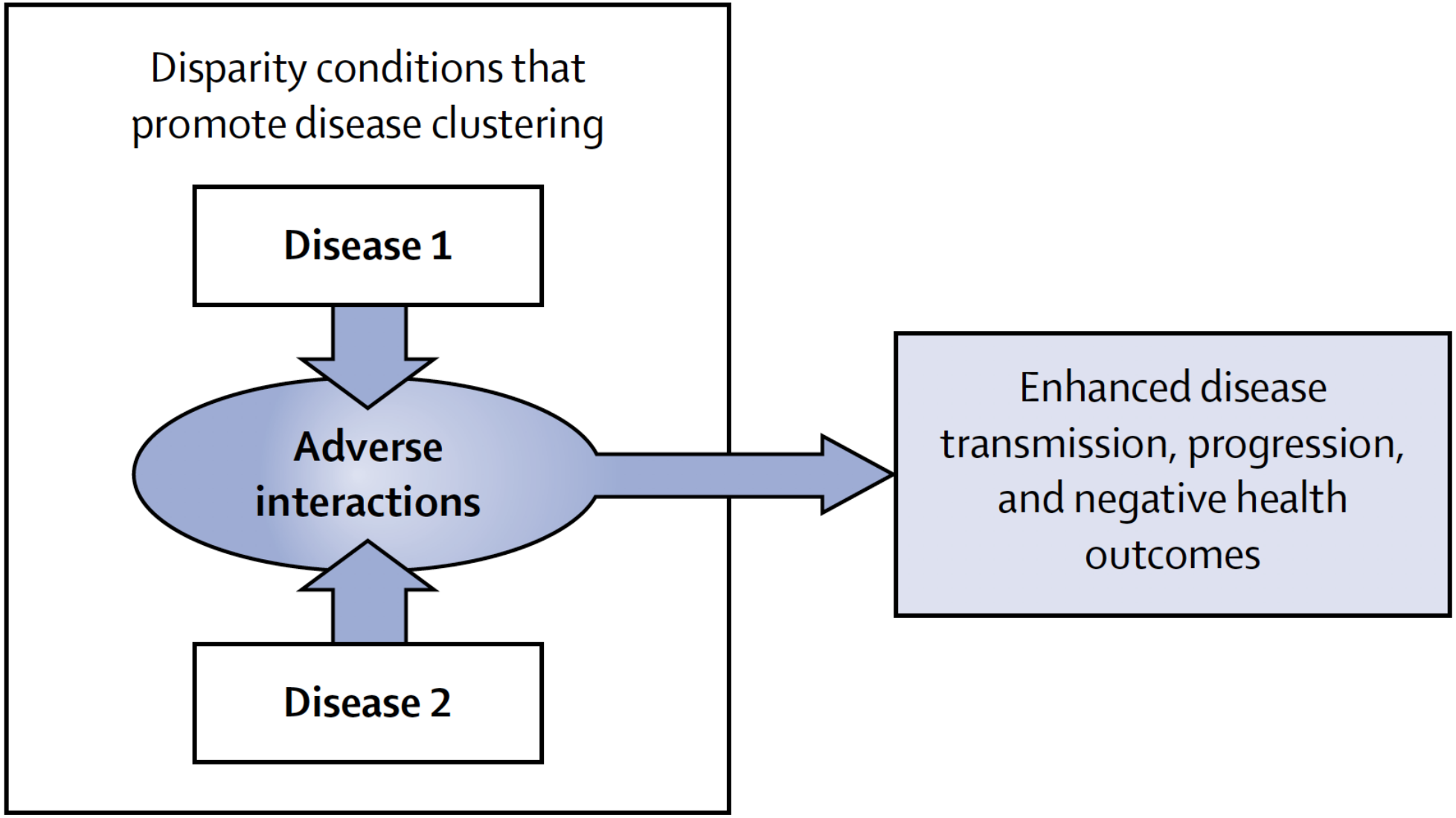
Background: the incidence of novel coronavirus disease (COVID19) is elevated in areas with heightened socioeconomic vulnerability. Early reports from US hospitals also implicated social disadvantage and chronic disease history as COVID19 mortality risk factors. However, the relationship between race and COVID19 mortality remains unclear.

Methods: we examined in-hospital COVID19 mortality risk factors in a multi-hospital tertiary health care system that serves greater Detroit, Michigan, a predominantly African American city with high rates of poverty and chronic disease. Consecutive adult patients who presented to emergency departments and tested positive for COVID19 from 3/11/2020 through 4/18/2020 were included. Using log-binomial regression, we assessed the relationship between in-hospital mortality and residence in census tracts that were flagged for extreme socioeconomic vulnerability, patient-level demographics, and clinical comorbidities.

Findings: a total of 1,015 adults tested positive for COVID19 during the study period; 80% identified as Black people, 52% were male and 53% were $\geq$ 65 years of age. The median body mass index was 30•4 and the median Charlson Comorbidity Index score was 4. Patients from census tracts that were flagged for vulnerability related to socioeconomic status had a higher mortality rate than their peers who resided in less vulnerable census tracts (β 0.26, standard error (SE) 0.11, degrees of freedom (df) 378, *t*-value (*t*) 2.27, exp(β) 1.29, *p*-value 0.02). Adjustment for age category, Black race, sex and/or the Charlson Comorbidity Index score category reduced the magnitude of association by less than 10% [exp(β) 1.29 vs. 1.21]. Black race [$p = 0.38$] and sex [$p = 0.62$] were not associated with mortality in this sample.

Interpretation: people who lived in areas flagged for extreme socioeconomic vulnerability had elevated mortality risk in our predominantly African-American cohort of COVID19 patients who were able to seek hospital care during the so-called 'first wave' of the pandemic. By contrast, Black race was not associated with mortality in our sample.

Syndemics



Singer et al. Lancet 2017; 389: 941–50.

Journal of the American Heart Association

SPECIAL REPORT

Inequities in Hypertension Control in the United States Exposed and Exacerbated by COVID-19 and the Role of Home Blood Pressure and Virtual Health Care During and After the COVID-19 Pandemic

Adam P. Bress, PharmD, MS; Jordana B. Cohen, MD, MSCE; David Edmund Anstey, MD, MPH; Molly B. Conroy, MD, MPH; Keith C. Ferdinand, MD; Valy Fontil, MD, MAS; Karen L. Margolis, MD, MPH; Paul Muntner, PhD; Morgan M. Millar, MA, PhD; Kolawole S. Okuyemi, MD, MPH; Michael K. Rakotz, MD; Kristi Reynolds, PhD; Monika M. Safford, MD; Daichi Shimbo, MD; John Stuligross, BS; Beverly B. Green, MD, MPH; April F. Mohanty, MPH, PhD

ABSTRACT: The COVID-19 pandemic is a public health crisis, having killed more than 514 000 US adults as of March 2, 2021. COVID-19 mitigation strategies have unintended consequences on managing chronic conditions such as hypertension, a leading cause of cardiovascular disease and health disparities in the United States. During the first wave of the pandemic in the United States, the combination of observed racial/ethnic inequities in COVID-19 deaths and social unrest reinvigorated a national conversation about systemic racism in health care and society. The 4th Annual University of Utah Translational Hypertension Symposium gathered frontline clinicians, researchers, and leaders from diverse backgrounds to discuss the intersection of these 2 critical social and public health phenomena and to highlight preexisting disparities in hypertension treatment and control exacerbated by COVID-19. The discussion underscored environmental and socioeconomic factors that are deeply embedded in US health care and research that impact inequities in hypertension. Structural racism plays a central role at both the health system and individual levels. At the same time, virtual healthcare platforms are being accelerated into widespread use by COVID-19, which may widen the divide in healthcare access across levels of wealth, geography, and education. Blood pressure control rates are declining, especially among communities of color and those without health insurance or access to health care. Hypertension awareness, therapeutic lifestyle changes, and evidence-based pharmacotherapy are essential. There is a need to improve the implementation of community-based interventions and blood pressure self-monitoring, which can help build patient trust and increase healthcare engagement.

JAMA Network Open™

Original Investigation | Health Policy

Use and Content of Primary Care Office-Based vs Telemedicine Care Visits During the COVID-19 Pandemic in the US

G. Caleb Alexander, MD, MS; Matthew Tajanlangit; James Heyward, MPH; Omar Mansour, MHS; Dima M. Qato, PharmD, MPH, PhD; Randall S. Stafford, MD, PhD

Table 4. Content of Primary Care Office-Based and Telemedicine Visits, 2018-2020[a]

Variable	No., in thousands (%)			% Change (2020 Q2 vs 2018-2019 Q2)[b]
	2018-2019 (Q2)	2020 (Q1)	2020 (Q2)	
Total visits, No. (95% CI)	119 199 (114 038-124 360)	110 705 (105 734-115 676)	93 712 (89 270-98 154)	−21.4
Blood pressure recorded	88 675 (74.4)	75 852 (68.5)	44 229 (47.2)	−50.1
Cholesterol assessed	27 617 (23.2)	22 803 (20.6)	17 413 (18.5)	−36.9
New medicines initiated	54 142 (45.4)	51 773 (46.8)	40 079 (42.8)	−26.0
Medicines continued	38 024 (31.9)	35 541 (32.1)	34 621 (36.9)	−8.9
New treatment visits				
Hypertension	3414 (2.9)	2714 (2.5)	2078 (2.2)	−39.1
Diabetes	1408 (1.2)	1226 (1.1)	1177 (1.3)	−16.4
High cholesterol	1274 (1.1)	1326 (1.2)	926 (1.0)	−27.3
Asthma	1266 (1.1)	1146 (1.0)	635 (0.7)	−49.8
Depression	193 (0.2)	157 (0.1)	149 (0.2)	−22.8
Insomnia	396 (0.3)	437 (0.4)	299 (0.3)	−24.5

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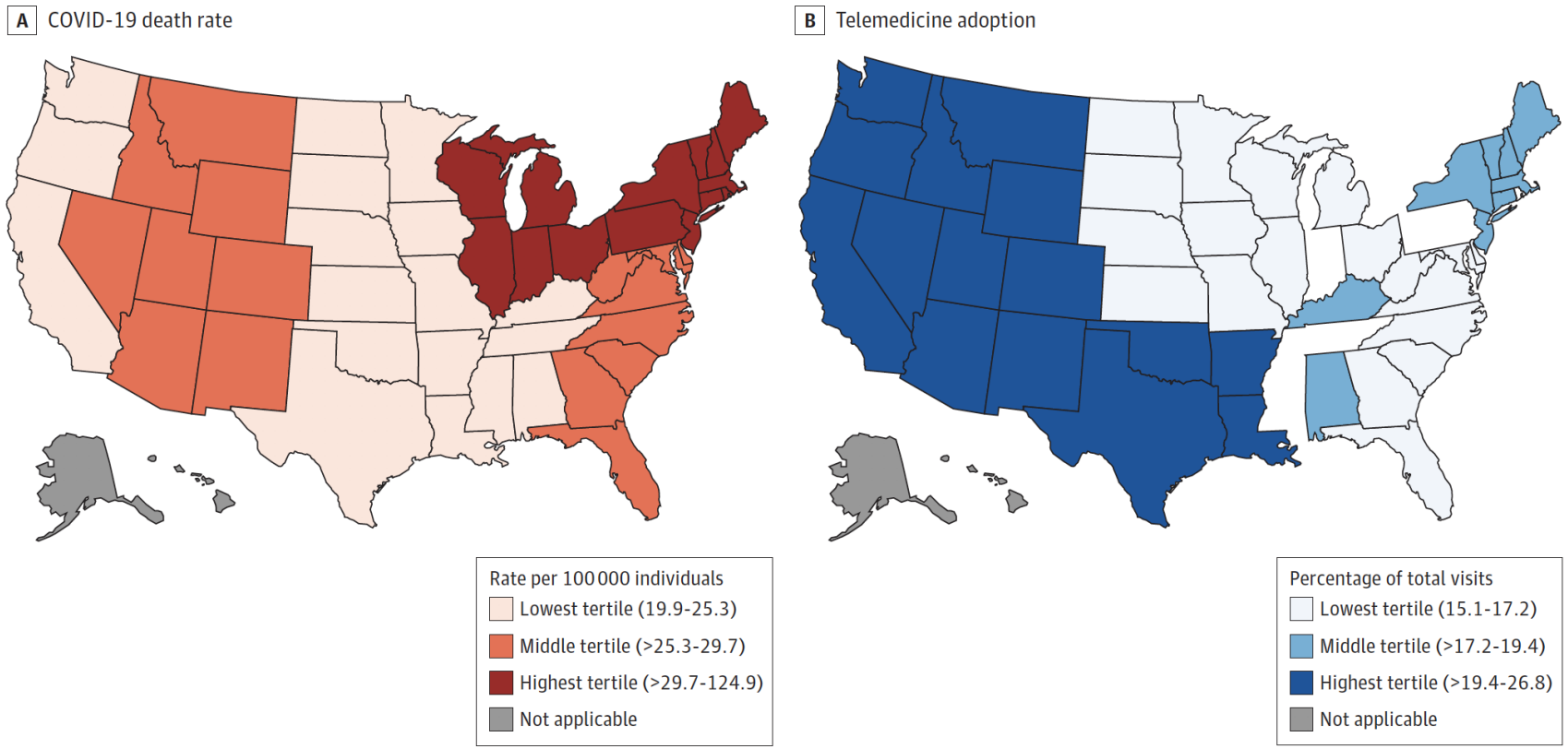
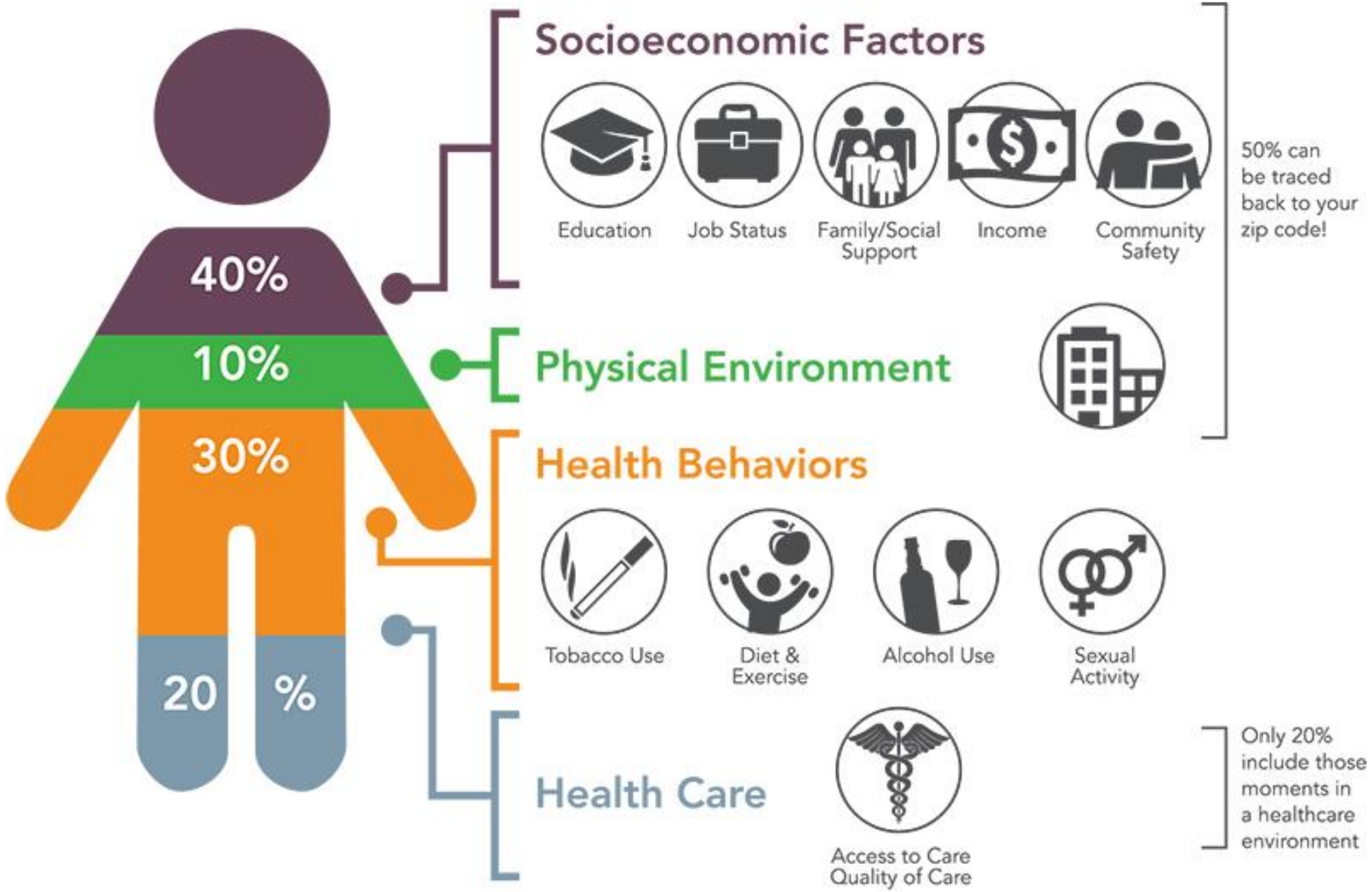
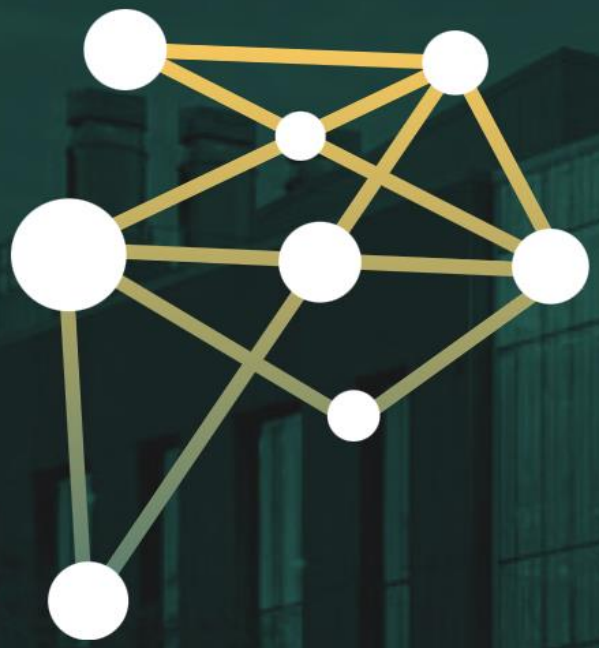
Figure. Geographic Variation in COVID-19 Burden and Telemedicine Adoption in the First 2 Quarters of 2020





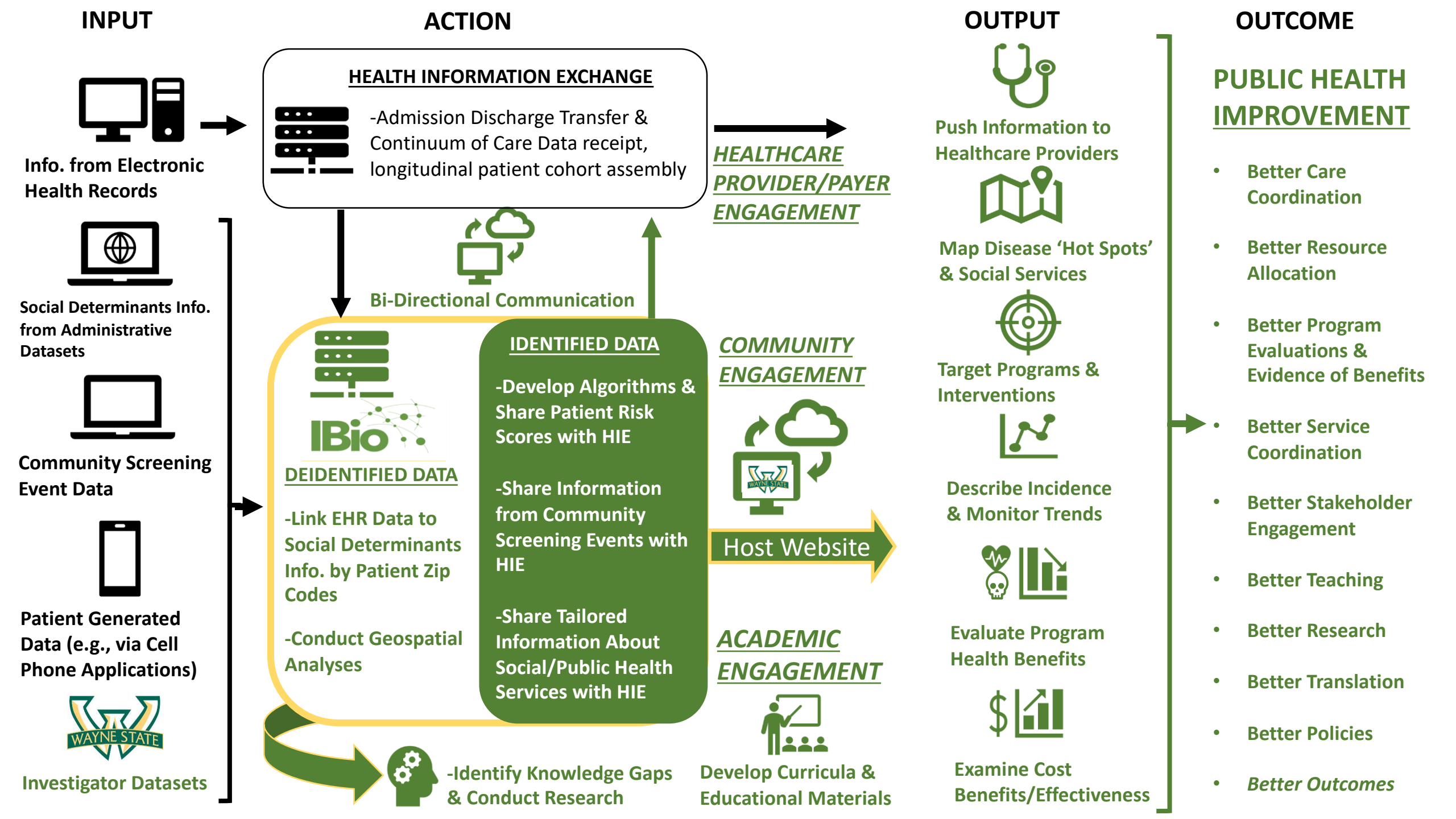
Source: Institute for Clinical Systems Improvement, Going Beyond Clinical Walls: Solving Complex Problems (October 2014)



PHOENIX

Connecting Data for Michigan Healthcare

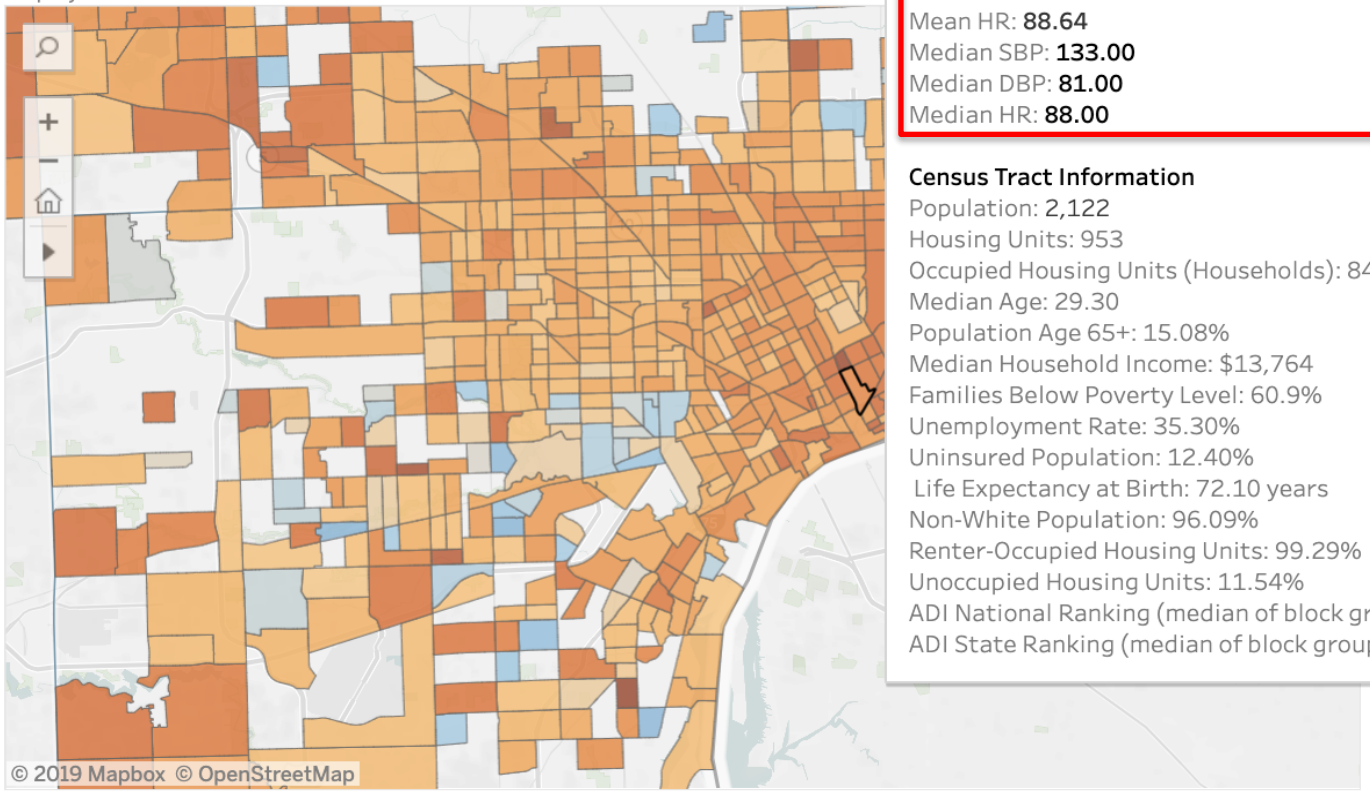
VISIT THE DASHBOARD


INPUT
ACTION
OUTPUT
OUTCOME
Info. from Electronic Health Records
Social Determinants Info. from Administrative Datasets
Community Screening Event Data
Patient Generated Data (e.g., via Cell Phone Applications)
Investigator Datasets
HEALTH INFORMATION EXCHANGE
-Admission Discharge Transfer & Continuum of Care Data receipt, longitudinal patient cohort assembly
Bi-Directional Communication
IBio
DEIDENTIFIED DATA
-Link EHR Data to Social Determinants Info. by Patient Zip Codes
-Conduct Geospatial Analyses
IDENTIFIED DATA
-Develop Algorithms & Share Patient Risk Scores with HIE
-Share Information from Community Screening Events with HIE
-Share Tailored Information About Social/Public Health Services with HIE
Host Website
-Identify Knowledge Gaps & Conduct Research
HEALTHCARE PROVIDER/PAYER ENGAGEMENT
COMMUNITY ENGAGEMENT
ACADEMIC ENGAGEMENT
Develop Curricula & Educational Materials
Push Information to Healthcare Providers
Map Disease 'Hot Spots' & Social Services
Target Programs & Interventions
Describe Incidence & Monitor Trends
Evaluate Program Health Benefits
Examine Cost Benefits/Effectiveness
PUBLIC HEALTH IMPROVEMENT
Better Care Coordination
Better Resource Allocation
Better Program Evaluations & Evidence of Benefits
Better Service Coordination
Better Stakeholder Engagement
Better Teaching
Better Research
Better Translation
Better Policies
Better Outcomes

Hypertension Dashboard Metro-Detroit (Wayn

Select a Vital Category to Explore: Systolic Blood Pressure (Mean)

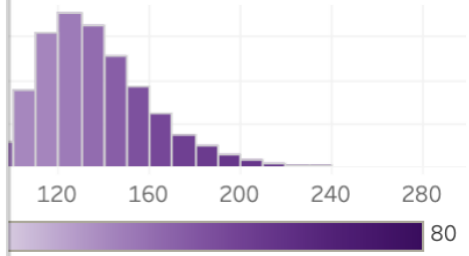
Map by Census Tract

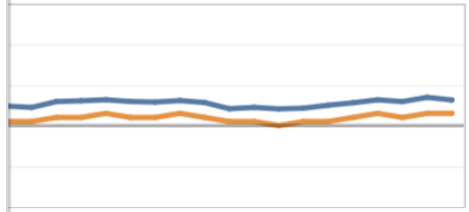


Tract ID: **26163518900**

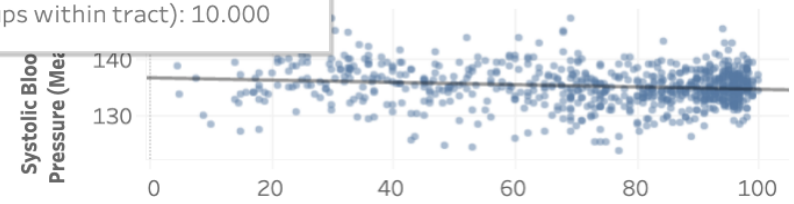
Number of Patient Records: **4,493**
Mean SBP: **137.22**
Mean DBP: **83.01**
Mean HR: **88.64**
Median SBP: **133.00**
Median DBP: **81.00**
Median HR: **88.00**

Census Tract Information
Population: 2,122
Housing Units: 953
Occupied Housing Units (Households): 843
Median Age: 29.30
Population Age 65+: 15.08%
Median Household Income: $13,764
Families Below Poverty Level: 60.9%
Unemployment Rate: 35.30%
Uninsured Population: 12.40%
Life Expectancy at Birth: 72.10 years
Non-White Population: 96.09%
Renter-Occupied Housing Units: 99.29%
Unoccupied Housing Units: 11.54%
ADI National Ranking (median of block groups within tract): 100.00
ADI State Ranking (median of block groups within tract): 10.000





Median Mean



Compare to: ADI National Ranking (Median rank of block gr...

Set map legend midpoint as: AHA Guideline (Midpoint: 130)

123 147

Filter Data:

Select County: ALL COUNTIES

Select City: ALL CITIES

Date of Arrival
Dec 2016-Feb 2019
(All)

Gender: (All)

Age at Time of Visit
0 118

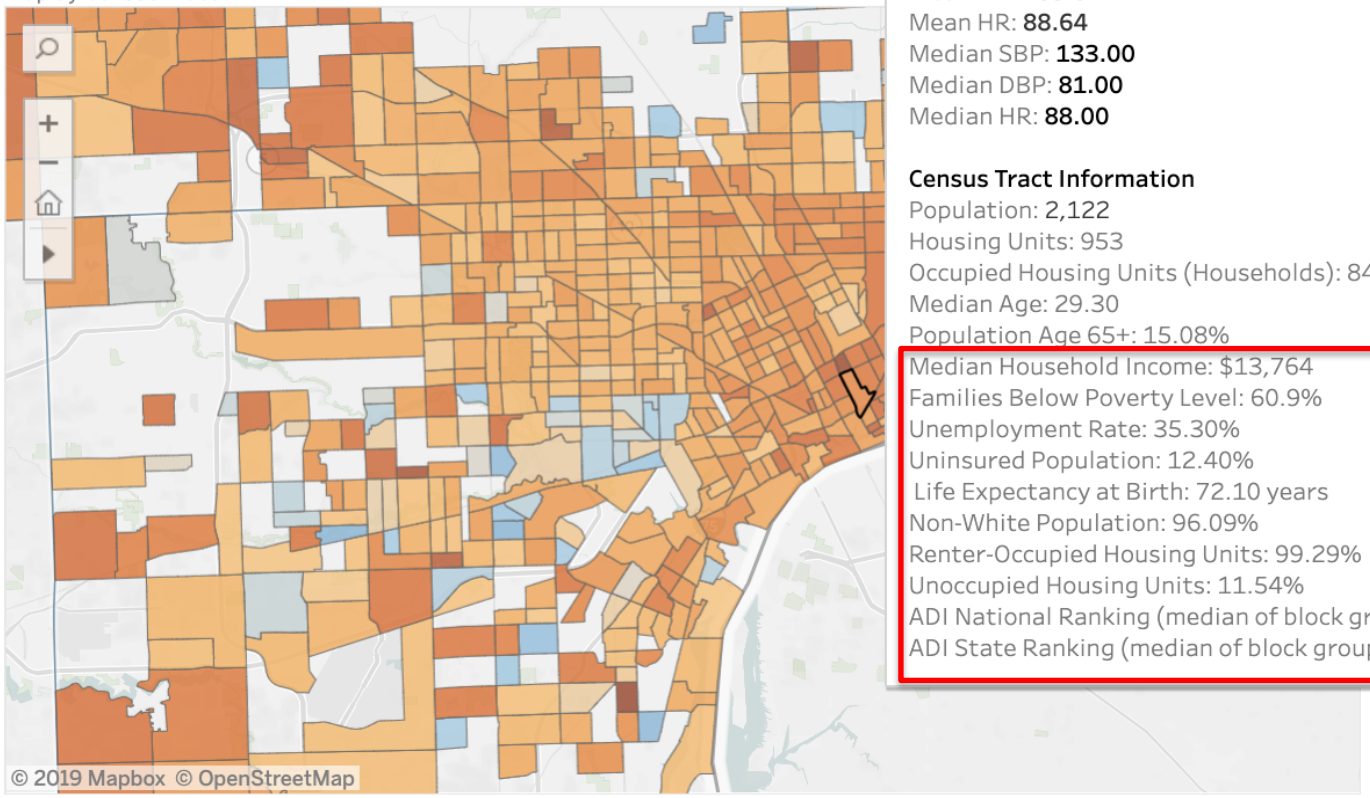
Race/Ethnicity
- [x] (All)
- [x] Black/African American
- [x] Other Race or More tha...
- [x] Spanish/Hispanic
- [x] Unknown
- [x] White

Race/Ethnicity	Number of Records	Mean SBP	Mean DBP	Mean HR	Mean Age	Mean Temp	% of Total
Black/African American	422,654	135.20	81.98	89.00	42	36.76	76.61%
White	82,775	135.72	80.33	90.02	46	36.72	15.00%
Other Race or More than On..	31,395	136.51	81.22	87.79	48	36.73	5.69%
Unknown	8,950	134.57	80.85	90.05	42	36.77	1.62%
Spanish/Hispanic	5,916	134.17	81.47	89.49	42	36.72	1.07%
Grand Total	**551,690**	**135.33**	**81.67**	**89.11**	**43**	**36.75**	**100.00%**

Hypertension Dashboard Metro-Detroit (Wayn

Select a Vital Category to Explore: Systolic Blood Pressure (Mean)

Map by Census Tract



Tract ID: **26163518900**

Number of Patient Records: **4,493**
Mean SBP: **137.22**
Mean DBP: **83.01**
Mean HR: **88.64**
Median SBP: **133.00**
Median DBP: **81.00**
Median HR: **88.00**

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Housing Units: 953
Occupied Housing Units (Households): 843
Median Age: 29.30
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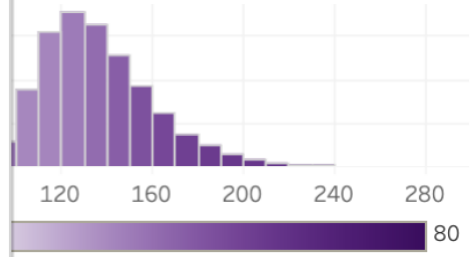
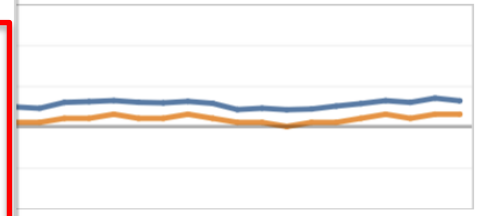
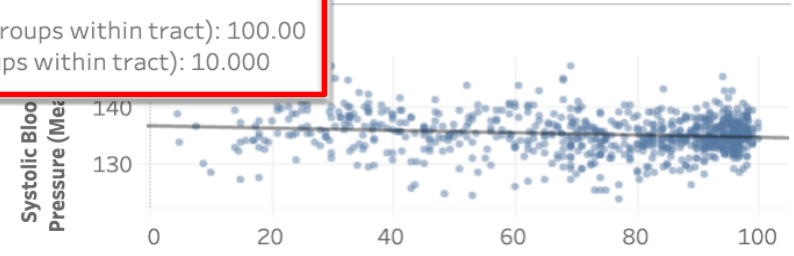




Median Mean



Compare to: ADI National Ranking (Median rank of block gr...

Set map legend midpoint as: AHA Guideline (Midpoint: 130)

123 147

Filter Data:

Select County: ALL COUNTIES

Select City: ALL CITIES

Date of Arrival
Dec 2016-Feb 2019
(All)

Gender: (All)

Age at Time of Visit
0 118

Race/Ethnicity
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- [x] Black/African American
- [x] Other Race or More tha...
- [x] Spanish/Hispanic
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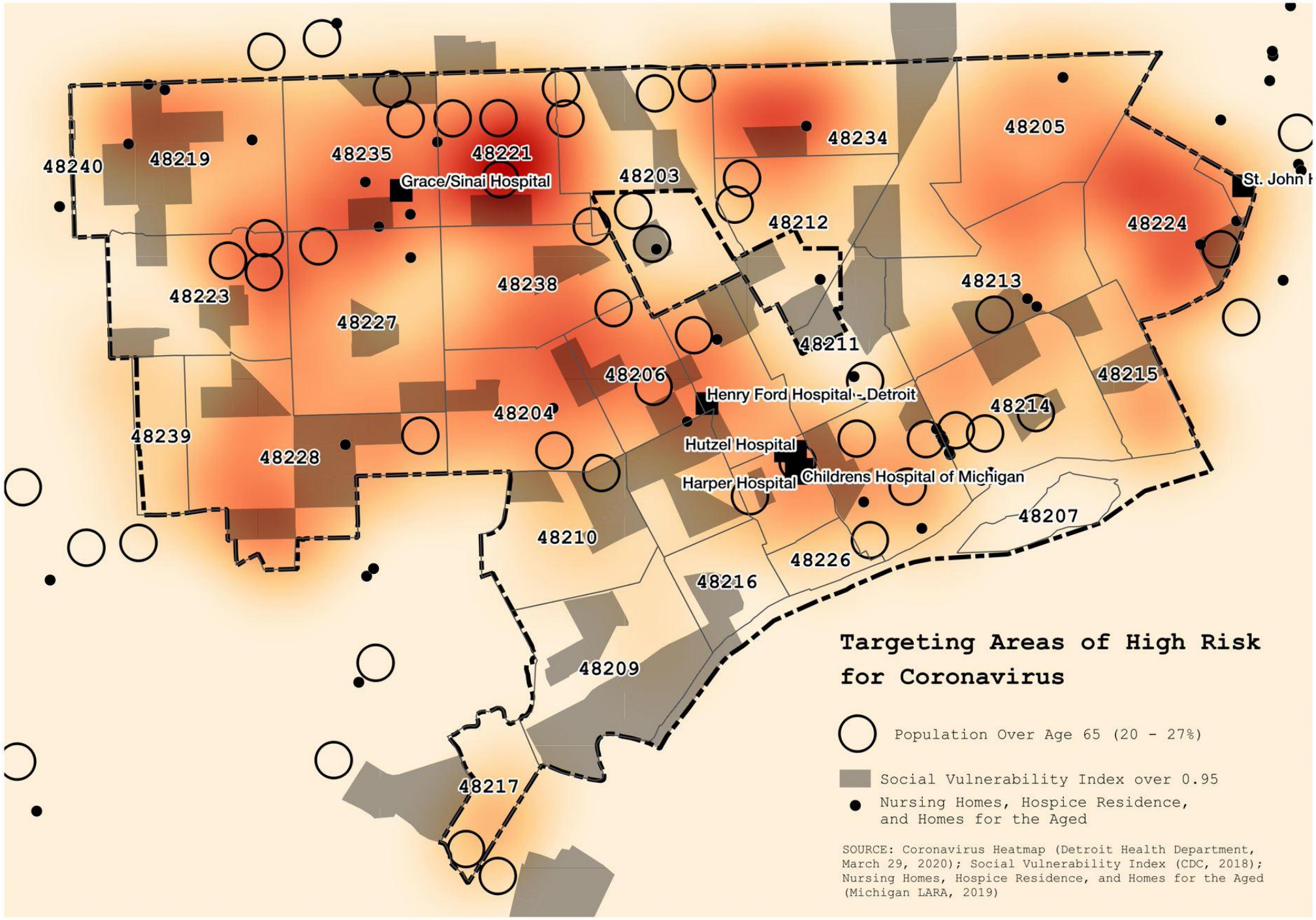
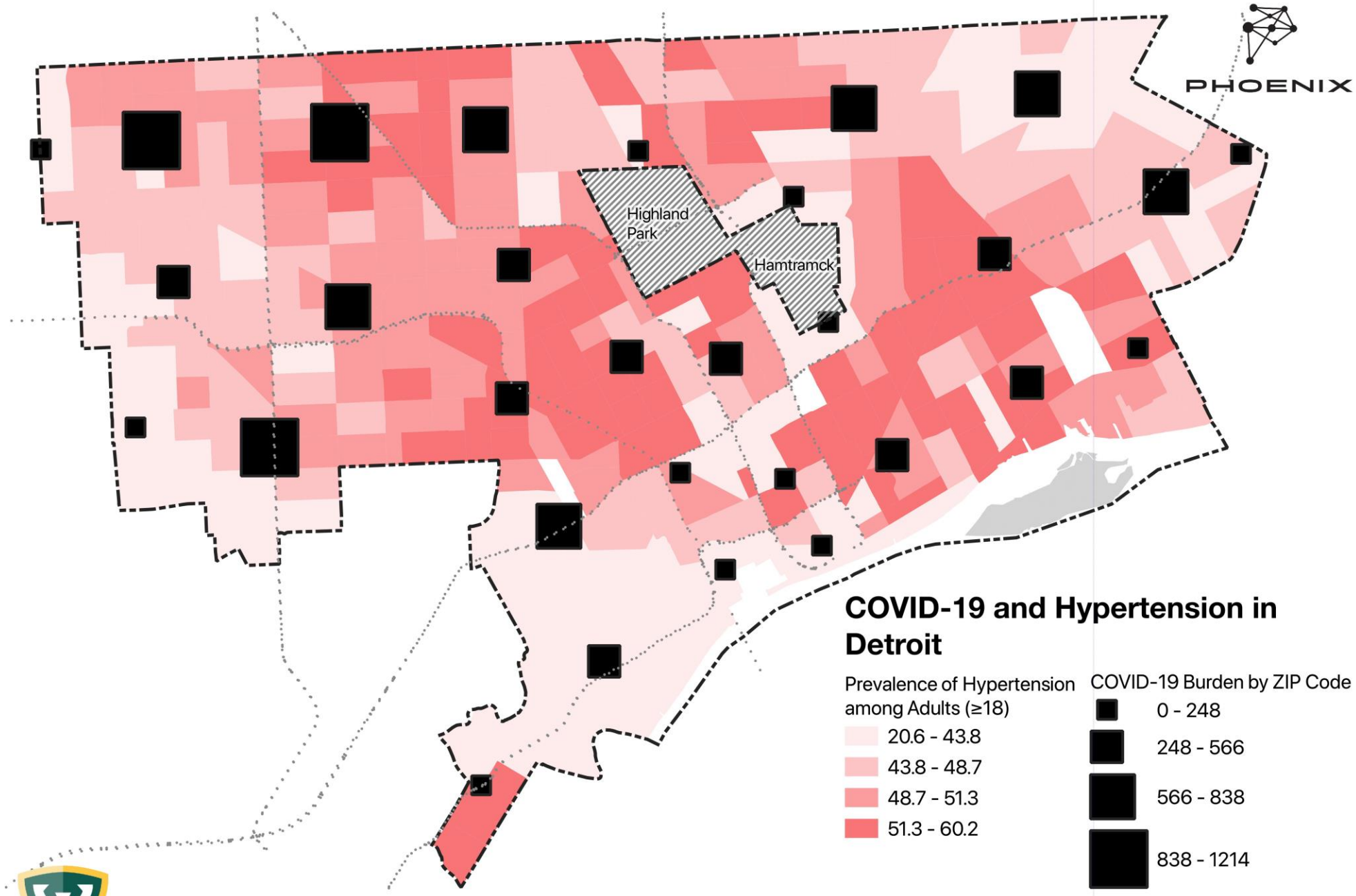

48240
48219
48235
48221
Grace/Sinai Hospital
48203
48234
48205
St. John H
48212
48224
48223
48238
48213
48227
48211
48206
48215
Henry Ford Hospital - Detroit
48204
48214
48239
Hutzel Hospital
48228
Childrens Hospital of Michigan
Harper Hospital
48207
48210
48226
48216
48209
48217
Targeting Areas of High Risk for Coronavirus
Population Over Age 65 (20 - 27%)
Social Vulnerability Index over 0.95
Nursing Homes, Hospice Residence, and Homes for the Aged
SOURCE: Coronavirus Heatmap (Detroit Health Department, March 29, 2020); Social Vulnerability Index (CDC, 2018); Nursing Homes, Hospice Residence, and Homes for the Aged (Michigan LARA, 2019)


ACCESS
University Physician Group
Mobile Covid Testing Unit
WAYNE STATE UNIVERSITY
COUNTY



SOURCE: CDC 500 Cities - BPHIGH (2019); Detroit Health Department (COVID19 data as of 09/28/20)

PLOS ONE

Funding: Funding was supplied by donors and non-profit organizations including United Way for Southeastern Michigan, the Community Foundation of Southeast Michigan/Detroit Medical Center Foundation, the Ralph C. Wilson Foundation, Community Organized Relief Effort (CORE), DTE Energy Foundation, Blue Cross Blue Shield of Michigan, and the Cielo Foundation. Michigan Department of Health and Human Services (MDHHS) also collaborated and contributed funding to support further growth and extension of services. A CDC funded program (1817) with the MDHHS Heart Disease and Stroke Prevention Unit allowed for cardiometabolic risk factor screening. In addition, funding for the PHOENIX program was provided by the Michigan Health Endowment Fund and Delta Dental Michigan.

RESEARCH ARTICLE

From pandemic response to portable population health: A formative evaluation of the Detroit mobile health unit program

Phillip Levy[1], Erin McGlynn[1]*, Alex B. Hill[1], Liying Zhang[2], Steven J. Korzeniewski[2], Bethany Foster[1], Jasmine Criswell[3], Caitlin O'Brien[3], Katee Dawood[3], Lauren Baird[3], Charles J. Shanley[4]

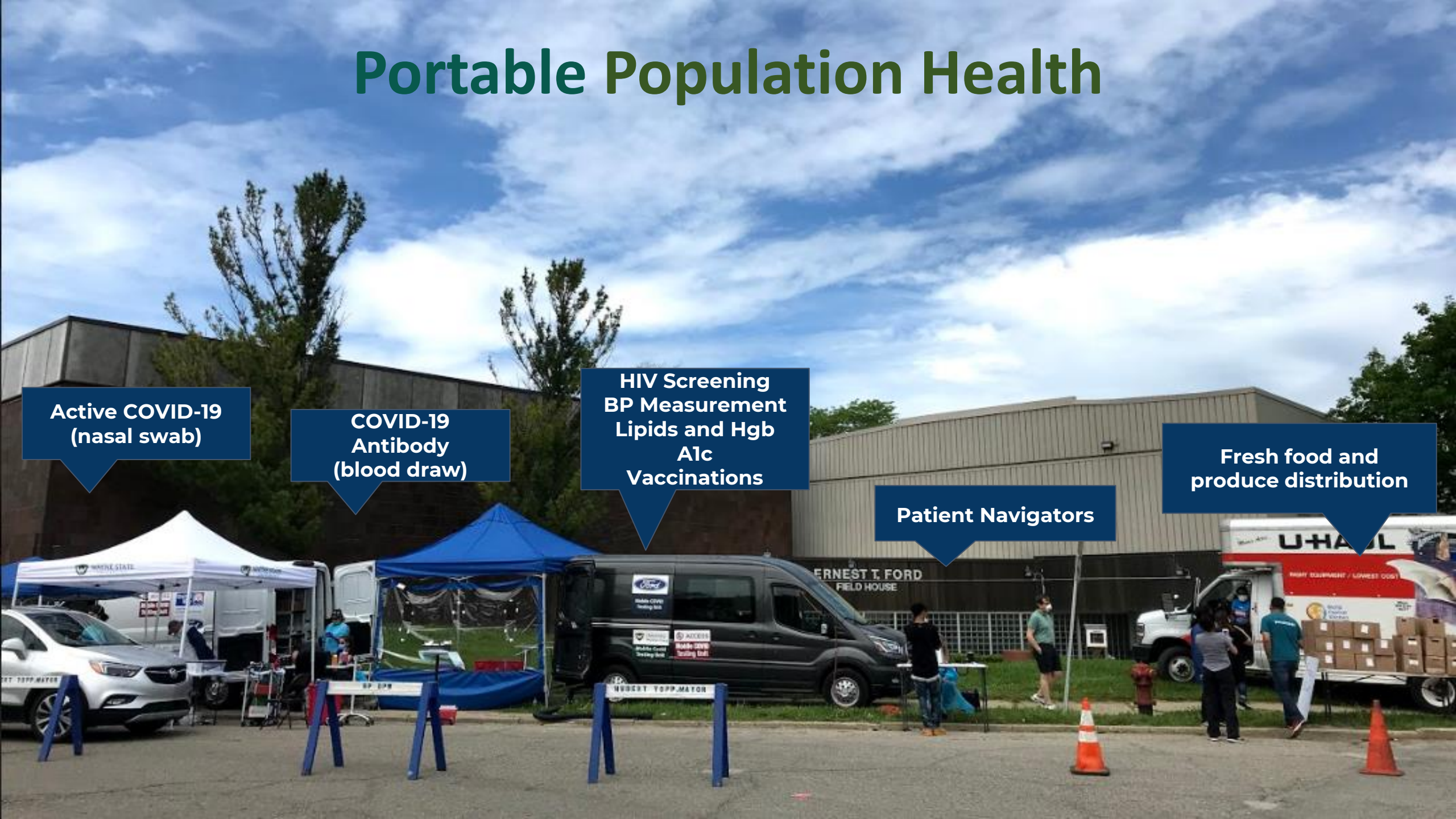
1 Department of Emergency Medicine, Wayne State University School of Medicine, Detroit, Michigan, United States of America, **2** Department of Family Medicine and Public Health Sciences, Wayne State University School of Medicine, Detroit, Michigan, United States of America, **3** Wayne Health, Wayne State University, Detroit, Michigan, United States of America, **4** Department of Surgery, Wayne State University School of Medicine, Detroit, Michigan, United States of America

* ekmcglynn@wayne.edu

Service	Start Date
SARS-CoV-2 Nasal Swab Diagnostic Testing	3/20/2020
SARS-CoV-2 IGG Antibody Testing	4/28/2020
HIV Testing	5/19/2020
Hypertension Screening	6/6/2020
Other Serology Testing (A1c and lipid panel)	9/26/2020
Linkage to Care for Social and Medical Services	10/1/2020
COVID-19 Vaccinations	3/15/2021

Levy et al. PLoS ONE 16(11): e0256908.

Portable Population Health




UMC

Hypertension

RESEARCH LETTER

Utilizing Mobile Health Units for Mass Hypertension Screening in Socially Vulnerable Communities Across Detroit

Robert D. Brook, Katee Dawood, Bethany Foster, Randi M. Foust, Catherine Gaughan, Paul Kurian, Brian Reed, Andrea L. Jones, Barbara Vernon, Phillip D. Levy

Nearly half of all adults in the United States have hypertension, defined as a blood pressure (BP) ≥130/80 mm Hg. However, both the prevalence (56%) and control rates (18%) are worse in Black patients.[1] Numerous social determinants of health in socially vulnerable populations further exacerbate these disparities while reducing hypertension awareness and access to health care.[2] Few places exemplify this crisis like the city of Detroit (78% Black race) where hypertension rates are the highest in Michigan (https://www.cdc.gov/places) and all census tracks are in health professional shortage areas (https://data.hrsa.gov/tools/shortage-area/). As such, the public health importance of large-scale screening efforts to identify the enormous number of individuals with hypertension cannot be overstated.[3] We here describe the first-year results using our novel Wayne Health Mobile Unit program developed in collaboration with Wayne State University to address health disparities in Detroit.[4]

Given the large population serviced (while also ensuring resiliency of the program during cold weather and COVID restrictions), we developed a high-throughput method to offer screening for high BP (defined as ≥120/80 mm Hg) beginning in November 2020. Those driving to a site (≈90%) rested inside their parked car for ≥5 minutes. BP was then measured using an Omron 907XL monitor following a guideline-consistent protocol—up to an average of triplicate upper arm readings (1-minute intervals) using a correct cuff size with the arm supported at heart level (door armrest) and feet resting on the car floor. A minority (<10%) of walk-up patients had seated BP measured in MHU canopy rooms. As privacy was limited, BP measurements were attended and cuffs were placed over long-sleeves when relevant.

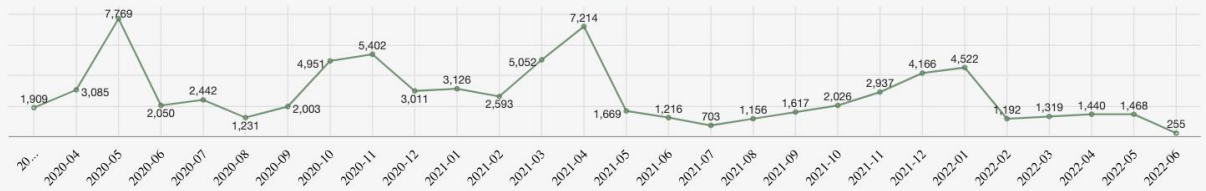
All patients are provided follow-up care in the Wayne Health system per individual needs/wishes. Health information, including prior hypertension status, is collected but not currently available for the entire cohort. Individuals with a screening systolic BP ≥130 mm Hg requiring primary care or social services were invited to enroll into an associated, CDC-supported quality improvement program (Bring-it-Down) capturing health information.

Categories	**Number (%)**	**BP*** (mm Hg)
All patients	3,039	126.9 ± 23.1 / 76.8 ± 14.7
Normal BP Systolic BP <120 and diastolic BP <80 mm Hg	1136 (37%)	105.5 ± 9.28 / 65.0 ± 8.34
High BP Categories**		
Elevated BP Systolic BP 120-129 and diastolic BP <80 mm Hg	306 (10%)	124.2 ± 2.8 / 70.1 ± 6.44
Hypertension categories*** Systolic BP ≥130 and/or diastolic BP ≥80 mm Hg	1597 (53%)	142.7 ± 19.39 / 86.4 ± 12.43
Stage I Systolic BP 130-139 and/or diastolic BP 80-89 mm Hg	629 (21%)	127.7 ± 8.73 / 80.3 ± 6.84
Stage II Systolic BP ≥140 and/or diastolic BP ≥90 mm Hg	968 (32%)	152.4 ± 18.15 / 90.4 ± 13.6

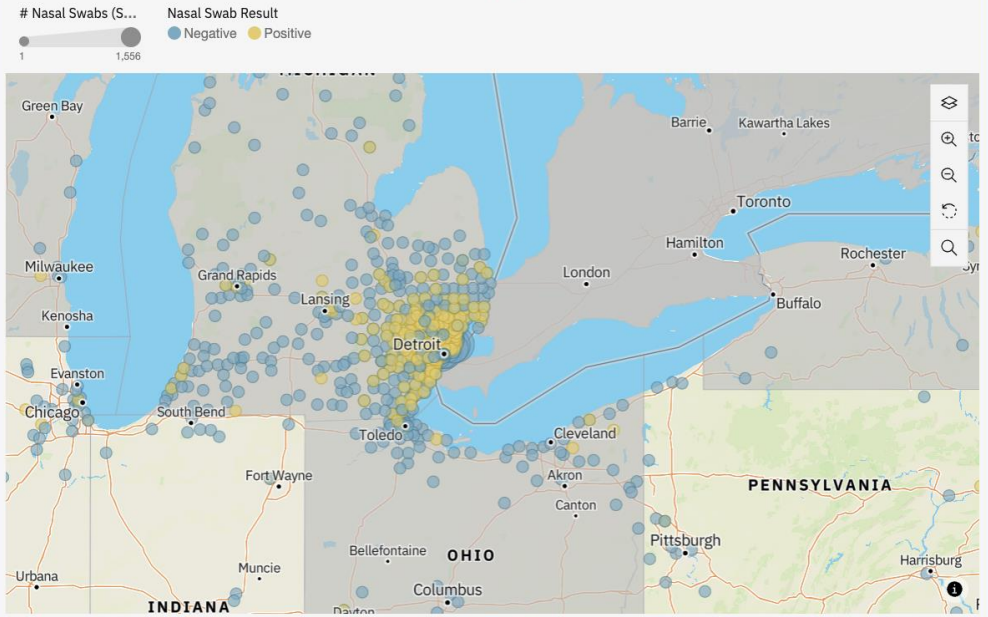
Wayne Health Mobile Unit

# Patient Visits	77,524
# Unique Patients	53,284
# Covid Tests	50,336
# Negative Results	46,051
# Positive Results	4,285
# Covid Vaccines	14,709
# First Dose	6,966
# Second Dose	5,340
# Third Dose/Booster	2,297

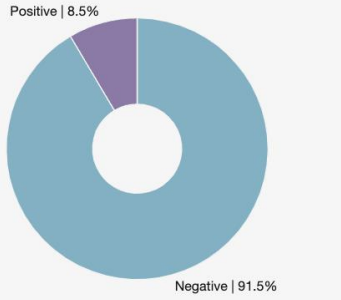
Patients Seen by Month



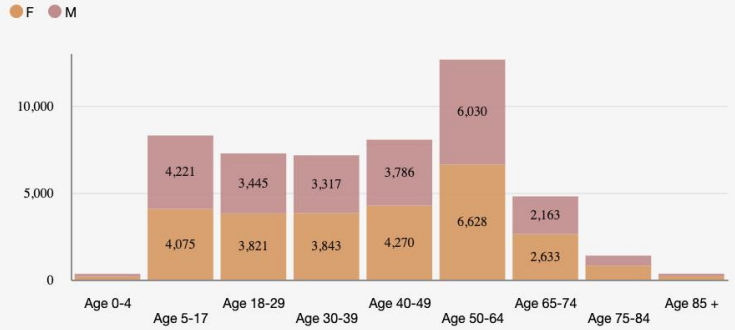
Covid Tests by Zip Code



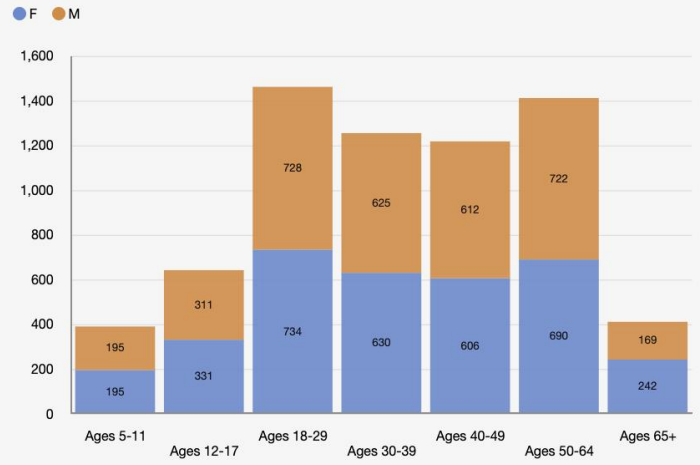
Covid Test Results %



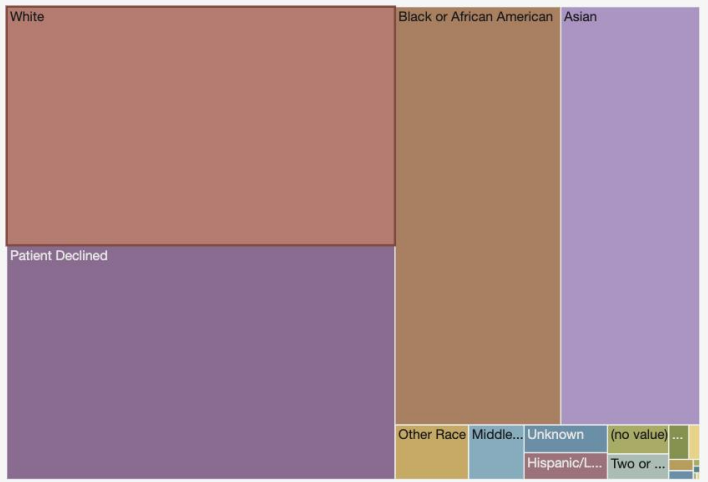
Covid Tests by Age and Sex



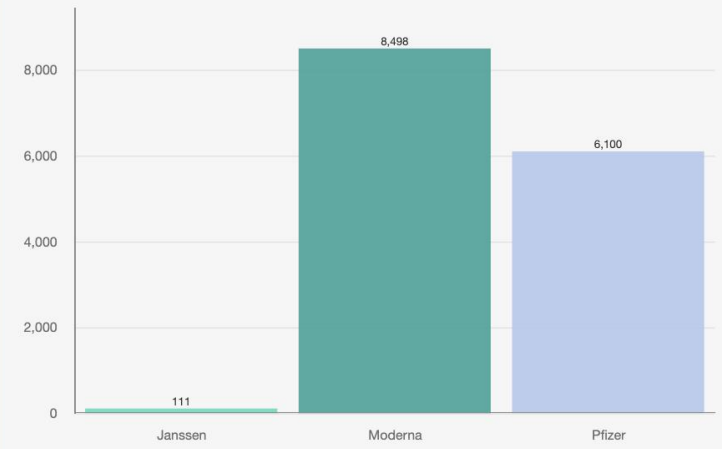
Covid Vaccines by Age and Sex



Covid Vaccines by Race



Covid Vaccines by Manufacturer



Wayne Health Mobile Unit

 # BP Screenings

1,303

 # Screening Labs

5,182

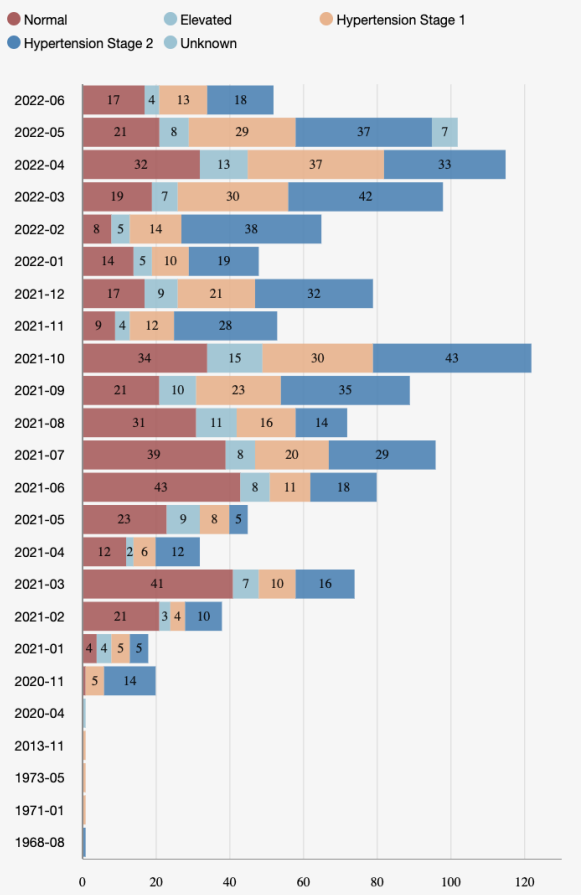
 # Referred to PCP

20

 # Referred to Specialist

5

Blood Pressures Measured



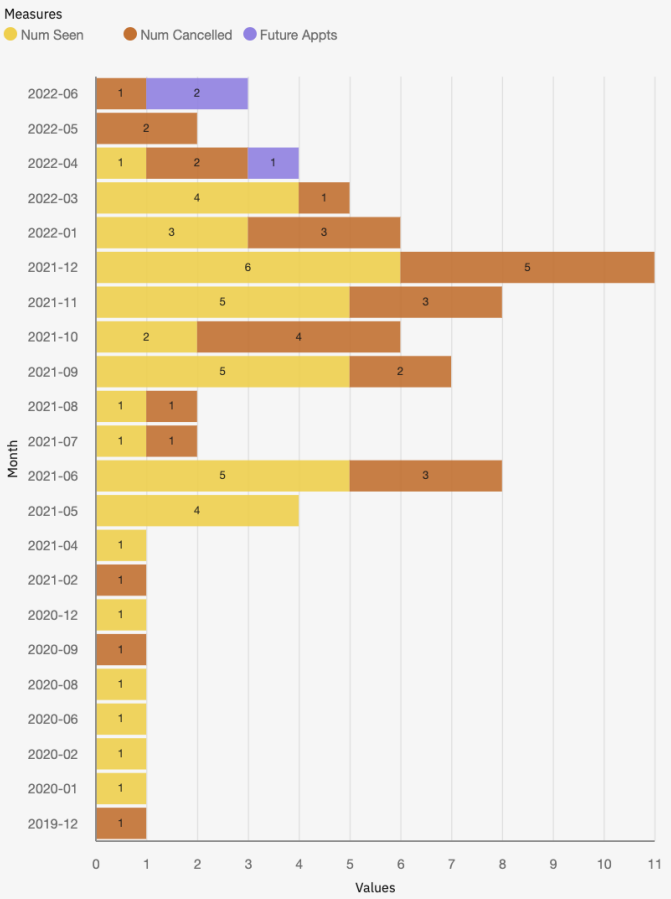
Screening Labs Ordered

Num_Labs_Ordered	021-10	2021-09	2021-08	2021-07	2021-06	2021-05	Summary
BMP, SERUM OR PLASMA	0	0	0	0	0	13	**13**
CBC W/ AUTO DIFF	0	1	0	1	22	82	**106**
CMP, SERUM OR PLASMA	128	239	271	157	38	71	**1,475**
GLUCOSE, SERUM OR PLASMA	0	0	1	0	2	84	**87**
HBA1C (HEMOGLOBIN A1C), BLOOD	128	240	273	157	38	84	**1,491**
HEMOGLOBIN (HB), BLOOD	1	39	24	3	0	7	**98**
LEAD, BLOOD	40	40	42	3	24	68	**422**
LIPID PANEL, SERUM	128	239	272	155	0	18	**1,383**
UNLISTED LAB	0	0	0	2	38	66	**107**
Summary	**425**	**798**	**883**	**478**	**162**	**493**	**5,182**

Lab Results

	2021-06		2021-05			Summary		
	al	% Abnormal	Num Results	Num Abnormal	% Abnormal	Num Results	Num Abnormal	% Abnormal
CHOLESTEROL, TOTAL	0	0%	69	3	4%	**1,391**	**493**	**35%**
CREATININE	1	5%	69	6	9%	**1,371**	**110**	**8%**
EGFR AFRICAN AMERICAN	10	50%	69	35	51%	**1,359**	**729**	**54%**
EGFR NON-AFR. AMERICAN	5	25%	69	21	30%	**1,359**	**431**	**32%**
HEMOGLOBIN A1C	1	5%	70	7	10%	**1,397**	**146**	**10%**
Summary	**17**	**17%**	**346**	**72**	**21%**	**6,877**	**1,909**	**28%**

Referred to PCP, Appointment Statuses



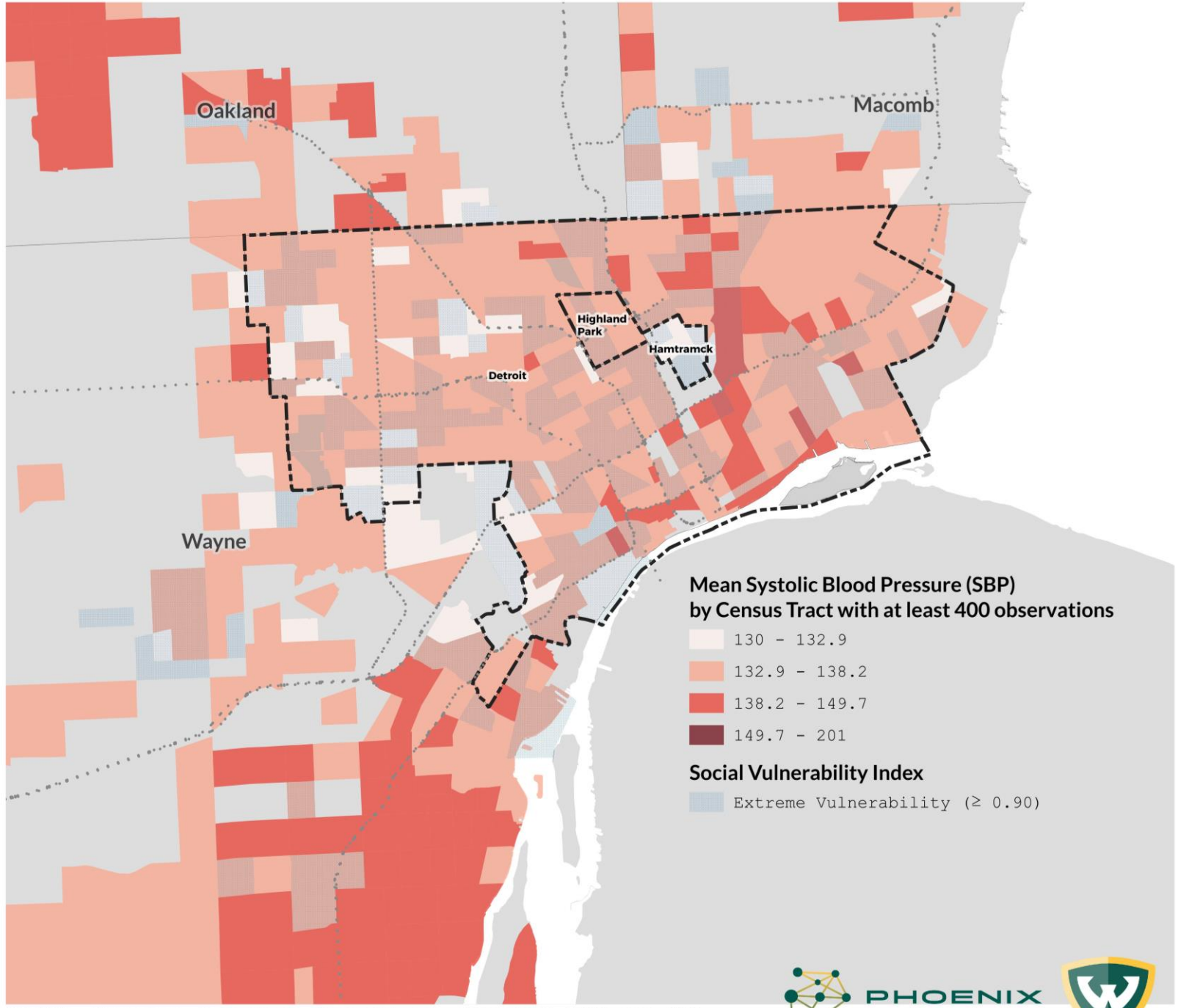
Circulation: Cardiovascular Quality and Outcomes

CARDIOVASCULAR PERSPECTIVE

Cardiometabolic Risk Factor Control During Times of Crises and Beyond

Robert D. Brook, MD
Phillip Levy, MD, MPH
Sanjay Rajagopalan, MD

The world is currently suffering through one the greatest crises of the last century. The coronavirus disease 2019 (COVID-19) pandemic is taking an enormous toll on public health and stretching medical resources in an unprecedented fashion. Our priorities are rightly focusing on meeting this existential threat. Nonetheless, we wish to call to attention that during major catastrophes the health consequences of chronic diseases, in particular cardiometabolic risk factors (CMRFs), continue unabated. In fact, new and serious problems arise part-and-parcel with the catastrophe and conspire to hamper our already imperfect ability to control CMRFs.[1,2] Our objective is to raise awareness that we need to anticipate (and not just be reactive to) the possible coming of a second crisis we term disastrous CMRFs. This refers to the worsening of CMRFs and their control rates during and following a major disaster.[1,2] Health care providers, in particular cardiologists, need to recognize the potential for this serious problem as it could promote a burgeoning of cardiovascular morbidity and mortality if not addressed. The COVID-19 pandemic should also serve as a wake-up call to the antiquated flaws in our healthcare model that collude to undermine the successful management of CMRFs in general.[3] This current crisis can be a catalyst for optimizing practices and creating critical new capacities that will be beneficial moving forward and serve as a bulwark against future crises.



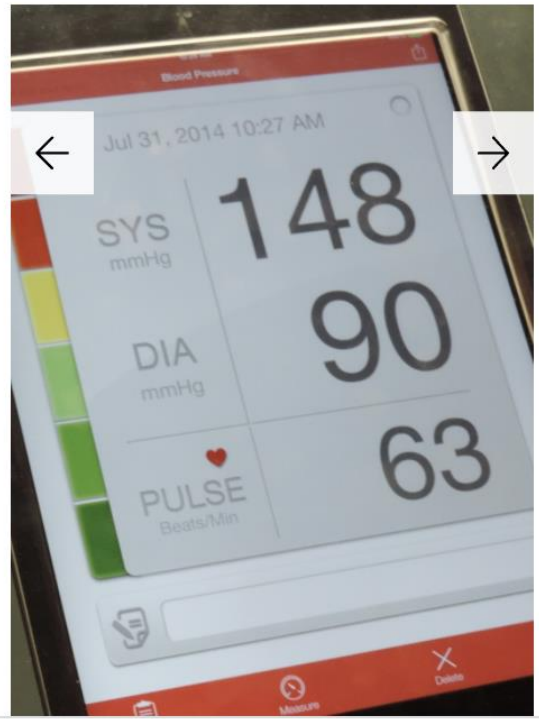
SOURCE: Emergency Department Surveillance data from HFHS and DMC (n=979,965); CDC Social Vulnerability Index (SVI), 2018

Categories: Program News | **Published: July 29, 2021**

$20M awarded for scientific research to ensure health equity in preventing hypertension

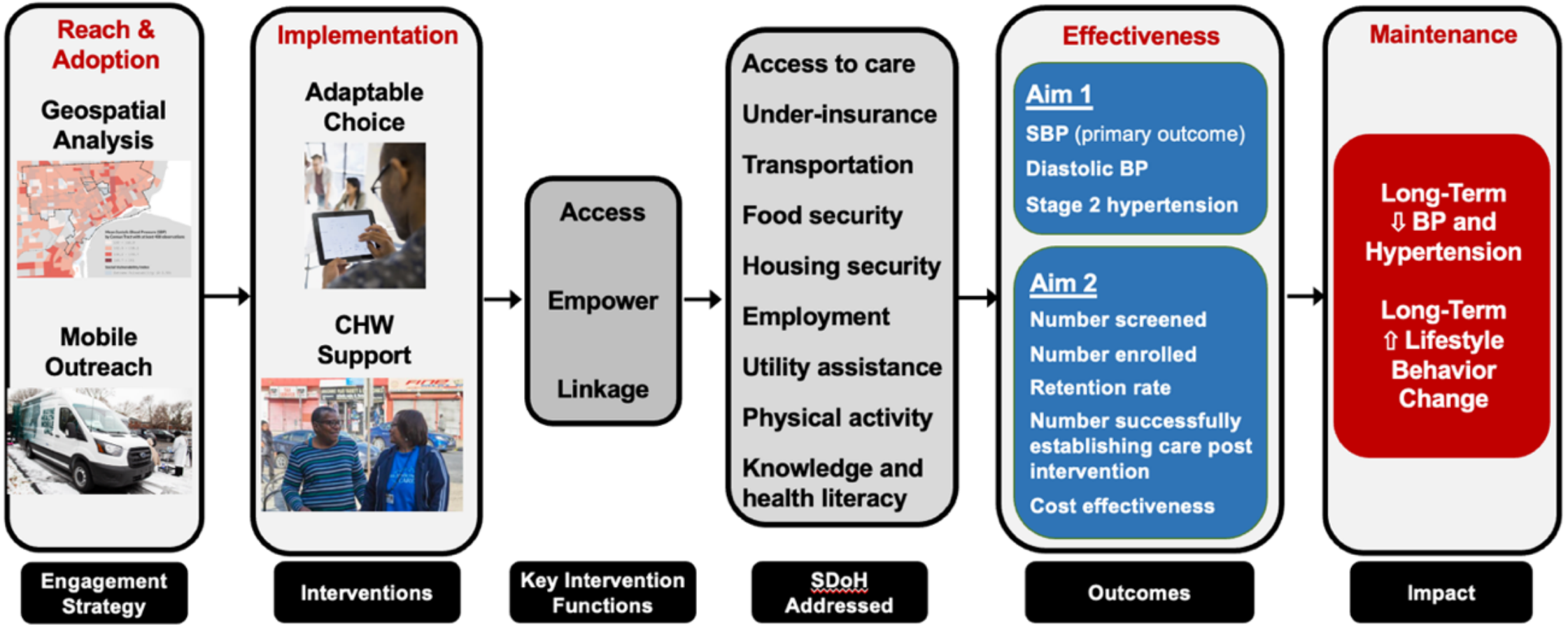
Teams from Beth Israel Deaconess Medical Center, Johns Hopkins University School of Nursing, NYU Grossman School of Medicine, University of Alabama at Birmingham and Wayne State University receive American Heart Association research grants to study high blood pressure prevention in underrepresented populations

Related Images



LEAP-HTN

Linkage, Empowerment, and Access to Prevent Hypertension



BP: Blood Pressure; CHW: Community Health Worker; SBP, systolic BP, SDoH, Social determinants of health

October 6, 2021

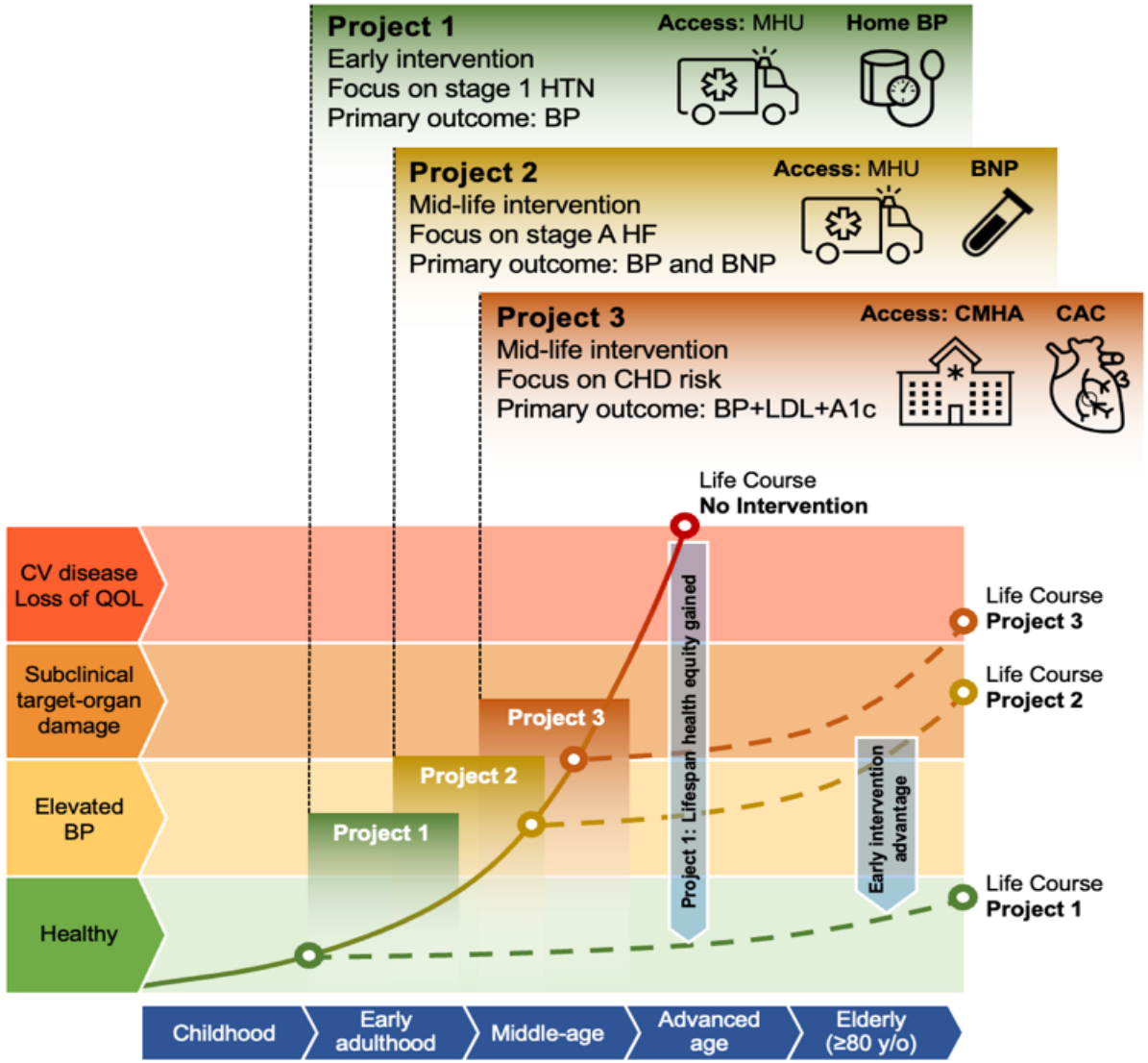
Wayne State wins $18 million from National Institutes of Health to intercept chronic disease in Black communities

ACHIEVE GREATER

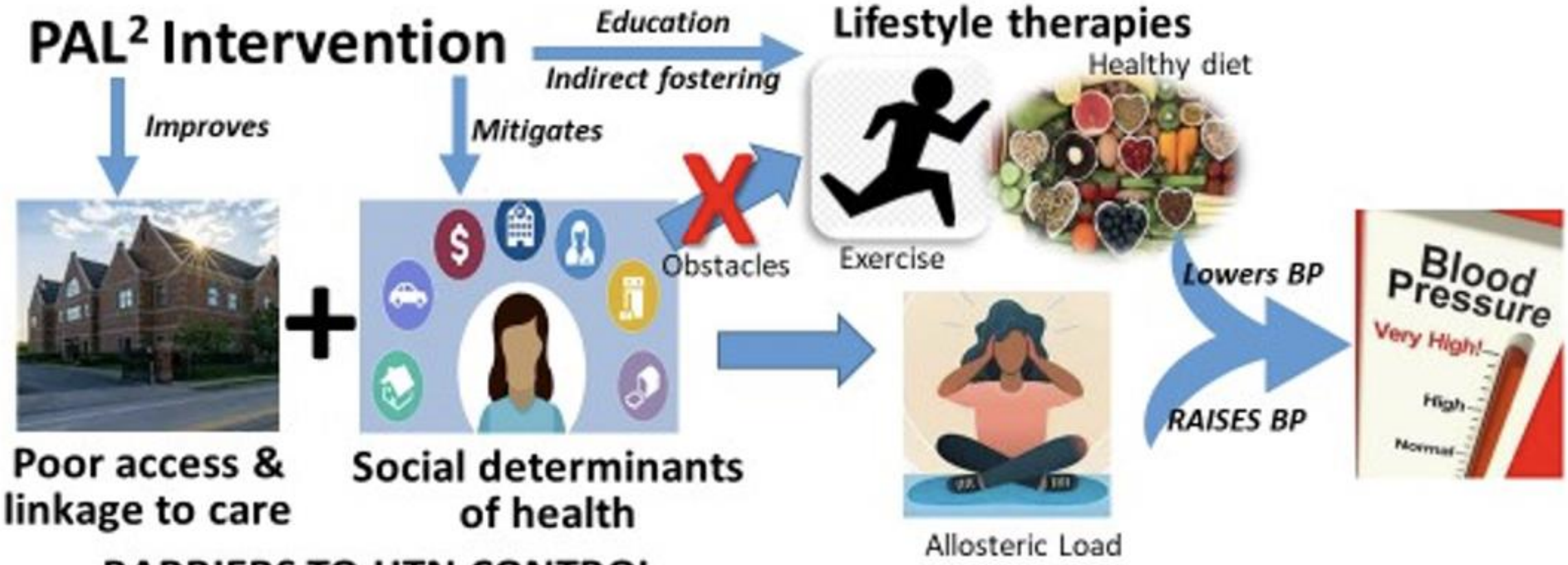
Addressing **C**ardiometabolic **H**ealth **I**nequities by Early Pre**VE**ntion in the **GREAT** Lak**E**s **R**egion

ACHIEVE GREATER

Addressing Cardiometabolic Health Inequities by Early PreVEntion in the GREAT LakEs Region



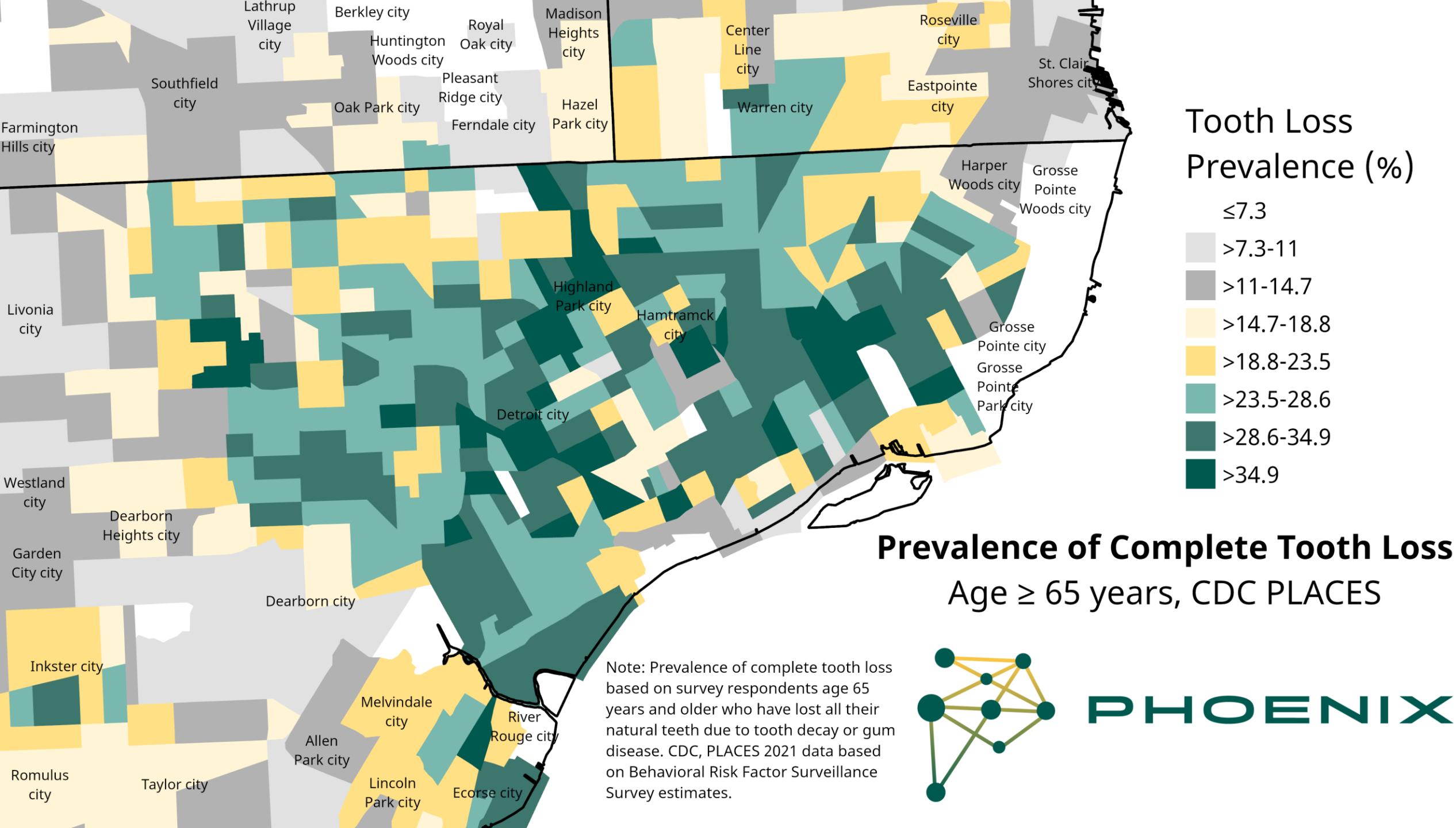
	Detroit	Cleveland	Nat'l Average
Children in poverty (%)	52.2	50.9	20.4
Income inequity score	-39.6	-39.6	-1.1
Racial segregation score	40.3	32.5	10.9
Unemployment (%)	18.6	9.0	6.8
3rd Grade reading proficiency (%)	19.2	22.8	46.2
Violent Crime (per 100,000)	1900.4	1439.3	436.1
Air pollution (PM2.5)	9.7	9.6	8.5
Housing w/ Lead Risk (%)	44.2	47.6	17.6
Limited access to healthy food (%)	48.3	46.6	63.9
Smoking (% adults)	28.9	27.8	16.7
Physical inactivity (%)	37.6	36.9	23.9
Obesity (%)	43.6	42.7	30.4


PAL² Intervention
Education
Indirect fostering
Lifestyle therapies
Improves
Mitigates
Healthy diet
Obstacles
Exercise
Lowers BP
RAISES BP
Blood Pressure
Very High!
High
Normal
Poor access & linkage to care
Social determinants of health
Allosteric Load
BARRIERS TO HTN CONTROL

Michigan Chronicle

New Mobile Dental Program Drives to Serve Detroiters


My Community Dental Centers
www.mydental.org/mobilecare
313-513-9509

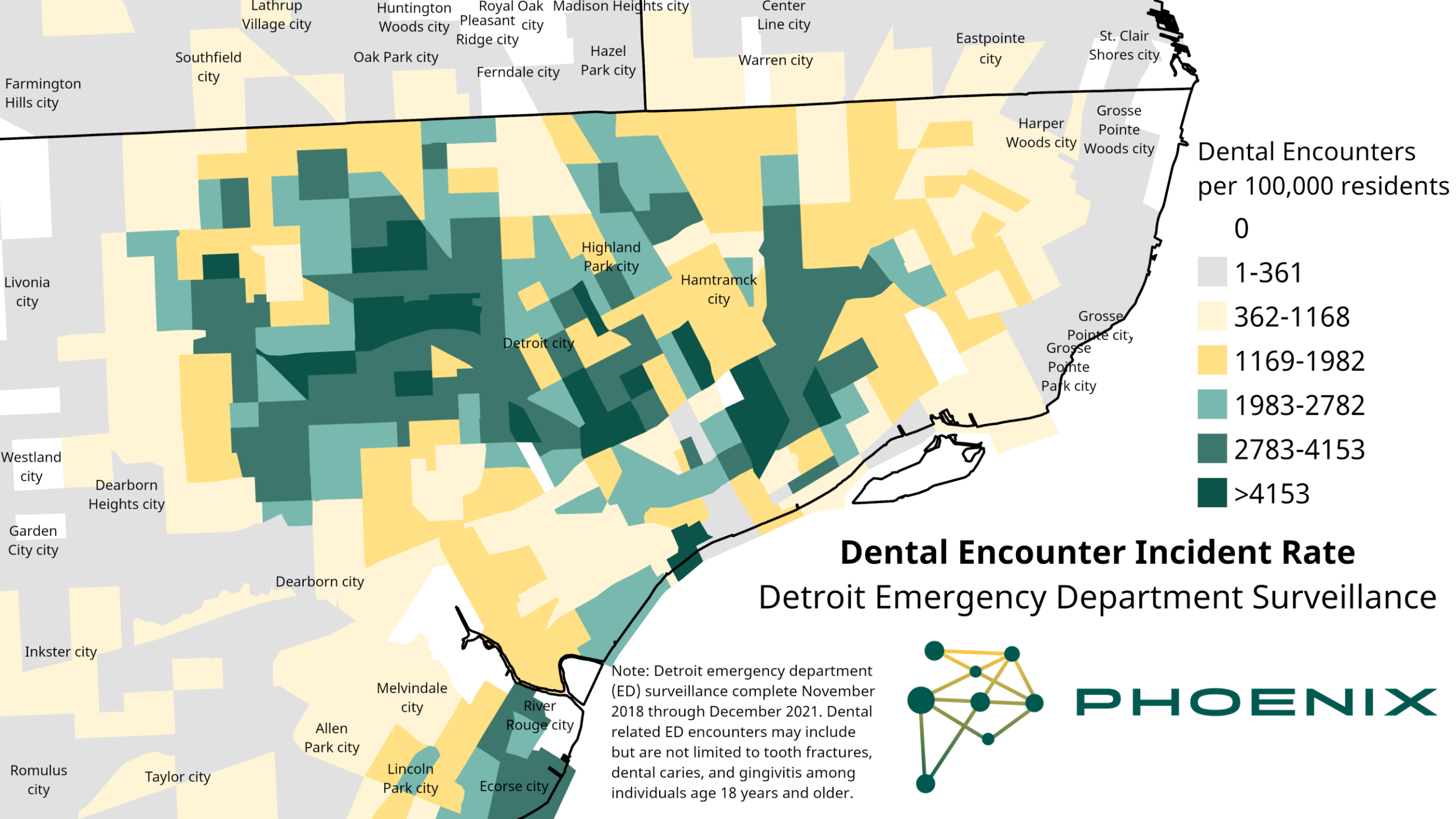


Prevalence of Complete Tooth Loss

Age ≥ 65 years, CDC PLACES

Note: Prevalence of complete tooth loss based on survey respondents age 65 years and older who have lost all their natural teeth due to tooth decay or gum disease. CDC, PLACES 2021 data based on Behavioral Risk Factor Surveillance Survey estimates.

PHOENIX

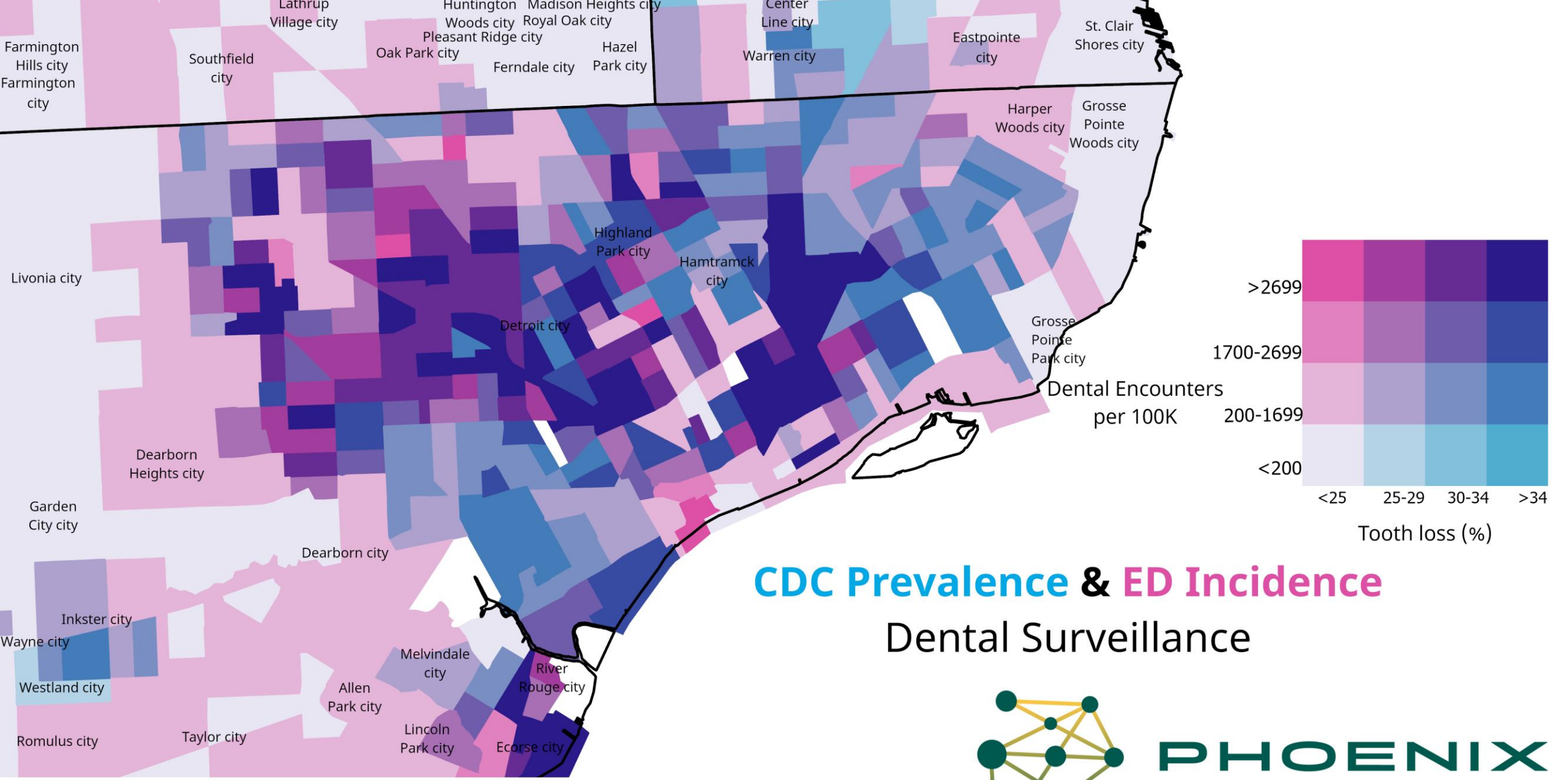


Dental Encounter Incident Rate

Detroit Emergency Department Surveillance

Note: Detroit emergency department (ED) surveillance complete November 2018 through December 2021. Dental related ED encounters may include but are not limited to tooth fractures, dental caries, and gingivitis among individuals age 18 years and older.

PHOENIX



CDC Prevalence & ED Incidence

Dental Surveillance

PHOENIX

Note: Prevalence of complete tooth loss based on survey respondents age 65 years and older who have lost all their natural teeth due to tooth decay or gum disease. CDC, PLACES 2021 data based on Behavioral Risk Factor Surveillance Survey estimates. Detroit emergency department (ED) surveillance complete November 2018 through December 2021. Dental related ED encounters may include but are not limited to tooth fractures, dental caries, and gingivitis among individuals age 18 years and older.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