

The State of Our Health:

A Statewide Health Assessment of Pennsylvania

August 2023
Update



pennsylvania
DEPARTMENT OF HEALTH

Table of Contents

- I. [Letter from the Secretary of Health](#) 3
- II. [Stakeholder Thank You](#) 4
- III. [Executive Summary](#) 7
- IV. [List of Acronyms](#) 9
- V. [Introduction](#) 10
- VI. [SHA Vision, Mission, and Guiding Principles](#) 12
- VII. [Our Process](#) 13
- VIII. [SHA Themes](#) 14
- IX. [Who are Pennsylvanians?](#) 15
- X. [Social Determinants of Health and Health Equity](#) 21
- XI. [Connections Across SHA Themes](#).. . . . 30
 - [Access to Care](#) 31
 - [Substance Use](#) 48
 - [Mental Health](#) 44
 - [Chronic Diseases](#) 50
 - [Maternal and Infant Health](#) 59
 - [Injury and Violence Prevention](#) 67
 - [Immunizations and Infectious Diseases](#) 76
 - [Environmental Health](#) 84
- XII. [Assets in Pennsylvania](#) 93
- XIII. [Next Steps](#) 95
- XIV. [Appendices](#) 96
 - A. [Leading Causes of Death by Age Group](#) 97
 - B. [Leading Causes of Death by Race and Ethnicity](#) 98
 - C. [Methods](#) 99
 - D. [Data Indicator Index](#) 104

I. Letter from the Secretary of Health



COMMONWEALTH OF PENNSYLVANIA
OFFICE OF THE SECRETARY OF HEALTH

August 2023

I am pleased to share with the public Pennsylvania's 2023 State Health Assessment (SHA). The SHA describes the health of the state's population, identifies areas for improvement, factors that impact health outcomes, and assets and resources that can be mobilized to improve population health. The SHA is updated annually and is developed by the Healthy Pennsylvania Partnership, a collaboration of public and private partners dedicated to improving the health of Pennsylvanians.

The data in the SHA suggests both health-related successes and challenges in Pennsylvania, the latter of which are opportunities for impactful areas of improvement.

Like previous SHAs, this one demonstrates ways that health is impacted by social factors such as income, education, and housing. There continue to be health disparities in chronic disease, infant and maternal mortality, substance use, violence, sexually transmitted infections, and many others. This SHA examines inequities by race and ethnicity, socio-economic status, gender, age, education, sexual orientation, geography, and disability. We can use these data to identify people most in need of programs or support to work together to eliminate disparities and improve the health of all Pennsylvanians.

This assessment was initially prepared in 2020 and has been updated annually. As the initial assessment was being prepared, Pennsylvania, our country, and the world faced three major challenges to our well-being: a global pandemic of historic scale; a significant economic recession; and the elevation of long-standing systemic racial inequities to broader shared awareness. While the COVID-19 pandemic has brought health inequities into sharp focus, we know that these inequities long predated current and ongoing crises.

Please reference and borrow from this assessment for your organization's work to improve health and advance health equity. The SHA was used to inform the 2023-2028 Pennsylvania State Health Improvement Plan and may be helpful to organizations preparing local community health assessments and improvement plans.

On behalf of the Department of Health, I want to thank our public and private partners across the Commonwealth for collaborating to create this SHA. I also wish to thank staff for their continued commitment to the people of the Commonwealth and for working each day toward a healthy Pennsylvania for all.

Thank you,

A handwritten signature in cursive script that reads "Debra L. Bogen MD".

Debra L. Bogen, MD, FAAP
Acting Secretary of Health

Debra L. Bogen, MD, FAAP, Acting Secretary of Health
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II. Stakeholder Thank You



The Healthy Pennsylvania Partnership consists of a diverse group of stakeholders that include health care professionals, associations, health systems, health and human services organizations, community collaborations, local public health agencies, government agencies, and others. These partners collaborated to identify health priorities, evaluate data, provide insight, and review the methods and content of the report. We acknowledge and thank the following individuals and organizations for their time and invaluable contributions to this project.

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Adagio Health	Montgomery County Office of Drug and Alcohol
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Allegheny County Health Department	Penn State Extension
Allentown Health Bureau	Penn State Harrisburg
Alzheimer's Association	Penn State Health
American Lung Association	Penn State University Office of Medical Innovation
Asociación Puertorriqueños en Marcha	Pennsylvania Academy of Family Physicians
Bethlehem Health Bureau	Pennsylvania Academy of Nutrition and Dietetics
Black Women's Health Alliance	Pennsylvania Association of Community Health Centers
Community Data Roundtable	Pennsylvania Association of County Administrators of Mental Health and Developmental Services
Council on Chemical Abuse	Pennsylvania Chapter of the American Academy of Pediatrics
Dental Lifeline Network	Pennsylvania Coalition Against Domestic Violence
Devereux Children's Behavioral Health Center	Pennsylvania Coalition for Oral Health
Erie County Department of Health	Pennsylvania Coalition of Medical Assistance, Managed Care Organizations
Greene County Human Services	Pennsylvania Department of Conservation and Natural Resources
Harrisburg Area YMCA	Pennsylvania Department of Drug and Alcohol Programs
Harrisburg University of Science and Technology	Pennsylvania Department of Education
Hepatitis B Foundation	Pennsylvania Department of Environmental Protection
Lancaster Osteopathic Health Foundation	Pennsylvania Department of Health
Lankenau Institute for Medical Research	Pennsylvania Department of Human Services
Latino Connection	Pennsylvania Department of Transportation
Lehigh University	Pennsylvania eHealth Partnership Program
Milton S. Hershey Medical Center, Outpatient Psychiatry Clinic	Pennsylvania Housing Finance Agency
Montgomery County Department of Health and Human Services	Pennsylvania Integrated Pest Management System
Northcentral Pennsylvania Area Health Education Center	Pennsylvania Medical Society
Novo Nordisk, Inc.	Pennsylvania Nutrition Education Network
Obesity Medicine Association	Pennsylvania Office of Mental Health and Substance Abuse Services

Pennsylvania Office of Rural Health	Rehabilitation & Community Providers Association
Pennsylvania Peer Support Coalition	Schuylkill County's VISION
Pennsylvania Psychiatric Leadership Council	South Central Pennsylvania Sickle Cell Council
Pennsylvania Psychiatric Society	Springfield Psychological
Pennsylvania Recovery Organizations – Alliance (PRO-A)	St. Christopher Hospital for Children
Pennsylvania Society of Physician Assistants	Staunton Farm Foundation
Pennsylvania State Alliance of YMCAs	Temple University Health System
Pennsylvania State Nurse Association	The Center for Rural Pennsylvania
University of Pennsylvania, Perelman School of Medicine	The Health Care Improvement Foundation
University of the Sciences, Philadelphia School of Pharmacy	The Hospital and Healthsystem Association of Pennsylvania
Philadelphia Department of Behavioral Health and Intellectual disAbility Services	University of Pennsylvania Injury Science Center
Philadelphia Department of Public Health	University of Pittsburgh Medical Center
Philadelphia Mental Health Care Corporation, Inc.	University of Pittsburgh School of the Health Sciences
Pocono Mountains United Way	WellSpan Health
Psychiatric Leadership Council	



III. Executive Summary

The State Health Assessment (SHA) is designed to offer comprehensive insights on health equity and various health determinants. In addition to the overarching framework of social determinants of health and equity, the SHA focuses on eight health themes and incorporates information related to populations impacted by the health issues under each theme. The eight health themes are: access to care, mental health, substance use, chronic diseases, immunizations and infectious diseases, maternal and infant health, injury and violence, and environmental health.

Pennsylvania's population has become increasingly racially diverse; therefore, inclusion of diversity will be a focus when creating ways to improve the health of Pennsylvanians. Data from 2020 shows that the population by race was 75% white alone, 11% Black alone, 4% Asian alone, with the remaining being multiracial and other races including American Indian and Alaska Native alone, Native Hawaiian and Other Pacific Islander alone. The population is considered an aging one, with 18% of the population being age 65 and older. With an aging and racially diverse population, a focus on social determinants is important as 12.1% of Pennsylvanians in 2021 lived below the poverty level, with higher rates noted among Black and Hispanic populations and people living in rural counties. Furthermore, 47% of Pennsylvania's population spent 30% or more of their income on rent; the highest being in Centre, Pike, Lawrence, Philadelphia, and Monroe Counties.

Addressing barriers to access to care is a key factor for improving the overall health of Pennsylvanians. Non-Hispanic Black adults faced challenges in accessing healthcare, with lower rates of health insurance coverage and higher instances of being unable to access a doctor due to cost compared to non-Hispanic white adults. Similarly, Hispanics also encountered barriers, with lower rates of insurance coverage, more likely to be unable to see a doctor due to cost, and less likely to have a personal healthcare provider compared to non-Hispanic white adults. Oral and Dental health also impacts the overall health of Pennsylvanians. Based on the 2020 Behavioral Risk Factor Surveillance System (BRFSS), 68% of all adults had visited a dentist in the year before the survey. People who are non-Hispanic Black, have low income, possess less than high school education, and lack health insurance were less likely to visit a dentist.

Mental health is also an important part of Pennsylvanians overall health and well-being, and the prevalence of mental health related issues are increasing. Specifically, the percentage of adults reporting that their mental health was not good for 14 or more days in a month increased from 12% in 2014 to 14% in 2021, with higher prevalence among people with income less than \$15,000, and who identify as lesbian, gay, or bisexual. Suicide continues to be a critical public health issue that requires both a comprehensive understanding and immediate attention to be effectively addressed. In 2020, there were 1,686 Pennsylvanians who died by suicide. Suicide rates increased by 5% between 2010 and 2020 with the greatest increase among Black, Hispanic, and older adults.

In addition to mental health, Pennsylvanians also confront the challenges posed by substance use disorders. In 2021, 5,326 people died from unintentional drug overdoses with higher rates among people who are black, male and aged 34-44 years: Black (6.9/10,000), Males (6/10,000), and age 34-44 (9.6/10,000). During 2018-2019, 6% of individuals needed but did not receive treatment for substance use disorder at a licensed treatment facility; people aged 18 to 25 years were less likely to receive treatment services compared to the other age groups.

Chronic diseases including cardiovascular diseases, cancer, lung diseases, and diabetes are also major public health issues in Pennsylvania. Obesity is a risk factor that contributes to the development or long-term effects of many chronic diseases, including cardiovascular disease. From 2011 to 2021, the prevalence of obesity rose from 29% in 2011 to 33% in 2021. The prevalence of obesity was higher among people who were non-Hispanic Black and people aged 45 to 64 years. Moreover, in 2017-2018, 18.1% of children in Pennsylvania were obese. Although tobacco use has decreased by 36% from 2011 to 2021, it continues to be a prominent risk factor for chronic diseases, particularly affecting people with less than a high school education and living in households with an annual income below \$15,000. Also, in 2019, 24% of high school students reported the use of electronic vapor products, an alarming impact on our younger population.

In a post-COVID world, a focus on immunizations and infectious diseases is a critical measure of understanding and developing safeguards for public health. Immunizations are a cornerstone for disease prevention and control. Within Pennsylvania, approximately 75% of children born between 2014 and 2017 received the recommended combined seven vaccine series by the age of 24 months. While this measure shows a commitment of families and healthcare professionals to control and prevent disease spread, Pennsylvania faces a significant public health challenge around sexually transmitted diseases. Between 2003 and 2021, both primary and secondary syphilis diagnoses increased by over 700%, chlamydia increased by 43% and gonorrhea increased by 59%. It is again important to acknowledge the racial disparities, as Black and Hispanic people were more likely to be diagnosed with syphilis, gonorrhea, and chlamydia as compared to other races and ethnicities.

Maternal and infant health remains a critical area of concern, demanding comprehensive interventions to ensure the health and well-being of pregnant persons and their newborns. From 2010 to 2021, the rate of severe maternal morbidity (SMM) increased by 69%. In 2021, there were 110 SMM cases among 10,000 in-hospital deliveries with higher rates among people who were Black, Hispanic, and age group 35-55. Additionally, Pennsylvania is working to address disparities in infant mortality. In 2020, infant mortality rate was 5.6 per 1,000 live births, but Black infants were more than twice as likely to die than white infants.

The SHA also took into consideration the impacts of injury and violence. Pennsylvania exhibits significant disparities in homicide rates across its diverse communities. The rate of homicides was 8.3 per 100,000 residents in 2020 and was approximately 15 times higher among Black compared to white residents. The disparity related to homicides was even higher among young Black males; the rate of homicides among Black males ages 15-19 was about 48 times higher compared to white males of the same age range. With an aging population, Pennsylvania also saw an increase in reports of elder abuse. Between 2015/2016 and 2020/2021, Pennsylvania saw an increase of 63% in reported elder abuse.

Environmental impacts including air quality and lead exposures continue to be public health challenges in Pennsylvania. In 2019, 61.2% of the population were living in counties that meet the National Ambient Air Quality Standard for Particulate Matter (PM_{2.5}), and in 2020, only 17.6% of children under age six (148,432) were tested for lead. Of the children tested for lead, 2.9% had a blood lead level greater than 5 µg/dL. Non-Hispanic Black (5.7%) and Hispanic (3.4%) children were more likely to have elevated blood lead levels compared to non-Hispanic white children (2.1%).

The SHA provides a comprehensive overview of Pennsylvania's health status and challenges to improving health. Understanding the health status of the diverse populations and factors associated with the disparate health outcomes, provides an important foundation to the development and identification of priority health issues for the 2023-2028 State Health Improvement Plan.

IV. List of Acronyms

ACEs: Adverse Childhood Experiences

AIDS: Acquired Immunodeficiency Syndrome

AQI: Air Quality Index

BRFSS: Behavioral Risk Factor Surveillance System

CD: Chronic Diseases

CDC: Centers for Disease Control and Prevention

CHNAs: Community Health Needs Assessments

COPD: Chronic Obstructive Pulmonary Diseases

DEP: Department of Environmental Protection

DOH: Department of Health

EH: Environmental Health

EPA: Environmental Protection Agency

FDA: Food and Drug Administration

FTEs: Full-Time Equivalent

GHG: Greenhouse Gases

HIPP: Health Improvement Partnership Program

HIV: Human Immunodeficiency Virus

HP2030: Healthy People 2030

HPP: Healthy Pennsylvania Partnership

HPSAs: Health Professional Shortage Areas

HPV: Human Papillomavirus

IID: Immunization and Infectious Diseases

IVP: Injury and Violence Prevention

LGBTQ: Lesbian, Gay, Bisexual, Transgender, and Queer

Medically Underserved Populations

MH: Mental Health

MIH: Maternal and Infant Health

MUA: Medically Underserved Areas

NPL: National Priorities List

PA: Pennsylvania

PEMA: Pennsylvania Emergency Management Agency

PHAB: Public Health Accreditation Board

PHMC: Public Health Management Corporation

PM2.5: Particulate Matter

SDOH: Social Determinants of Health

SHA: State Health Assessment

SHIP: State Health Improvement Plan

SUID: Sudden Unexpected Infant Death

SMM: Severe maternal morbidity

STI: Sexually Transmitted Infections

SU: Substance Use

U.S: United States

WHO: World Health Organization

YRBS: Youth Risk Behavior Survey

95% CI: 95% Confidence Intervals

V. Introduction

What is health? Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.¹ Multiple factors play a role in an individual's health, including genetics, social and economic factors, health behaviors, clinical care, and physical environment.²

What is public health? Public health is the science of protecting and improving the health of people and their communities by promoting healthy lifestyles, researching disease and injury prevention, and detecting, preventing, and responding to infectious diseases.³



Three key roles of public health:⁴

1. Assessment	Systematically collect, analyze, and make available information on healthy communities
2. Policy Development	Promote the use of a scientific knowledge base in policy and decision making
3. Assurance	Ensure provision of services to those in need

To fulfill a key role of public health, the Healthy Pennsylvania Partnership (HPP) with the Pennsylvania Department of Health collaborated on the development of the 2020 Pennsylvania SHA framework. The assessment has been updated annually since then. This is the update for 2023. A SHA collects and analyzes data to educate and mobilize communities to develop priorities, leverage resources, and plan actions to improve population health.

This SHA includes the state's population characteristics, social and economic factors, environmental factors, health care information, health risk behaviors, and health outcomes. Health disparities are indicated throughout the SHA to reflect where the needs are greatest. The process of developing the SHA included a systematic collection and analysis of qualitative and quantitative data from a wide range of sources with the active involvement of partners at each step. Qualitative data were collected from stakeholder meetings, focus groups, and a public poll in which open-ended questions were asked. Quantitative data were collected from local, state, and national sources.

The SHA assesses and presents the status of our population's health through a health equity lens, so that the goal of health equity can be achieved. The American Public Health Association defines health equity as everyone having the opportunity to attain their highest level of health. The Centers for Disease Control and Prevention says that health equity is achieved when every person can attain full health potential, and no one is disadvantaged from achieving this potential because of social position or other socially determined circumstances.

While the goal of this SHA is to be as inclusive as possible, the data available often describes gender of individuals as binary, either male or female. As a result, some people may not be well reflected in those statistics.

There is also a supplemental [dashboard](#) that provides critical information on indicators included in the SHA. The dashboard supports the SHA by providing trend data and details of health disparities by sociodemographic factors including age, race/ethnicity, education, income, and geography.

Additionally, citations are provided throughout the SHA to support additional information.

When statistics were referenced from a scientific sample survey with a known uncertainty, that level of uncertainty is presented with 95% confidence intervals (CI). These CI represent the range in which the result will be found 95 times if 100 samples are taken of the same population group. Estimates with wide CI should be interpreted with caution. In this report, CIs are included within the charts or in the [dashboard](#).

The maps present information that is available at the county level. If the data have small numbers, usually less than five, then data are suppressed and indicated by being left blank.

Data in this assessment were obtained from variety of sources including Behavioral Risk Factor Surveillance System (BRFSS), Youth Risk Behavior Survey (YRBS), National Survey on Drug Use and Health (NSDUH), American Community Survey (ACS), County Health Rankings & Roadmaps (CHR&R), American Health Rankings (AHR), Area Health Resources Files, Pennsylvania Youth Survey (PAYS), Birth and Death Certificate datasets, and Pennsylvania Health Care Cost Containment Council's (PHC4), and Pregnancy Risk Assessment Monitoring System (PRAMS). The most recent data available from each source is different. This results in different years of data being presented for different metrics.

Different data sources also use different definition for race and ethnicity. Across this document, Hispanic refers to any race, unless it is specified. The definitions non-Hispanic Black and non-Hispanic white are used if the data source specifies these.

Issues and data discussed in the document were identified through a multi-step process that included input from stakeholders and Pennsylvania residents, and a review of current literature.

The SHA is presented in eight themes and each theme includes the following:



- Key issues
- Datapoints to illustrate main points
- Factors contributing to health challenges
- Highlights on especially vulnerable populations
- Hyperlinks for further exploration
- Data sources

Based on the SHA, the HPP have selected priority health issues and developed the 2023-2028 State Health Improvement Plan (SHIP) to effect change in Pennsylvania. Please consider participating in SHIP development and implementation by contacting RA-ship@pa.gov.

References

1. World Health Organization. Health and Well-Being. Retrieved from: <https://www.who.int/data/gho/data/major-themes/health-and-well-being#:~:text=The%20WHO%20constitution%20states%3A%20%22Health,of%20mental%20disorders%20or%20disabilities.> Accessed: May 2, 2023.
2. Hood CM, Gennuso KP, Swain GR, Catlin BB. County Health Rankings: Relationships Between Determinant Factors and Health Outcomes. *Am J Prev Med.* 2016;50(2):129-35. .
3. CDC Foundation What is Public Health. Retrieved from: <https://www.cdcfoundation.org/what-public-health>. Accessed September 14, 2020.
4. Institute of Medicine. The future of public health. Washington, DC: National Academies Press; 1988. Retrieved from: <https://www.ncbi.nlm.nih.gov/books/NBK218218/>.

VI. Vision, Mission, and Guiding Principles

The **Healthy Pennsylvania Partnership (HPP)** is a multi-sector collaboration that identifies key health challenges in Pennsylvania and works to solve them. Within the HPP there are three initiatives: the State Health Assessment (SHA), the State Health Improvement Plan (SHIP); and the Health Improvement Partnership Program (HIPP).

- The **SHA** assesses and reports on the health status of Pennsylvanians. The assessment identifies priority health issues and the populations most impacted by those issues, and it considers factors that influence the populations being most impacted. It also describes the wide range of assets that can be leveraged to solve health problems.
- The HPP works on the **SHIP** to identify health improvement priorities to be addressed in this 5-year strategic plan. The SHIP identifies strategies and targets for addressing issues along with the parties responsible for implementing each strategy.
- The HIPP provides a seasonal newsletter to health improvement partnerships in communities throughout the commonwealth. The newsletter highlights partner and Department of Health programs, health observances, statistics, conferences, events, and various grant opportunities. (To subscribe, send email to RA-DHHIPP@pa.gov.)

Below are the vision, mission, and guiding principles of the HPP, established during the SHA process.

Vision

Pennsylvania is a place where all people can achieve their full physical, mental, and social well-being in a safe environment, free of inequities.

Mission

To protect and improve the health of all Pennsylvanians by engaging stakeholders across multiple sectors to understand and respond to the health needs of Pennsylvanians through holistic, evidence-based, and data-informed intervention and prevention efforts.

Guiding Principles

Leadership

We drive equitable health improvement strategies across the state using evidence and intersectional expertise to inform our processes.

Collaboration

We respectfully partner with members of the community and diverse stakeholders to address the root causes of key public health issues and develop strategies for collective action.

Inclusion

We foster an environment where individuals share a sense of belonging and practice acceptance and active listening, so that we may engage diverse populations.

Accountability

We value and respect each other's time, honor individual commitments, maintain transparency, and recognize our responsibility to community and the mission, while being flexible to changing circumstances.

Accessibility

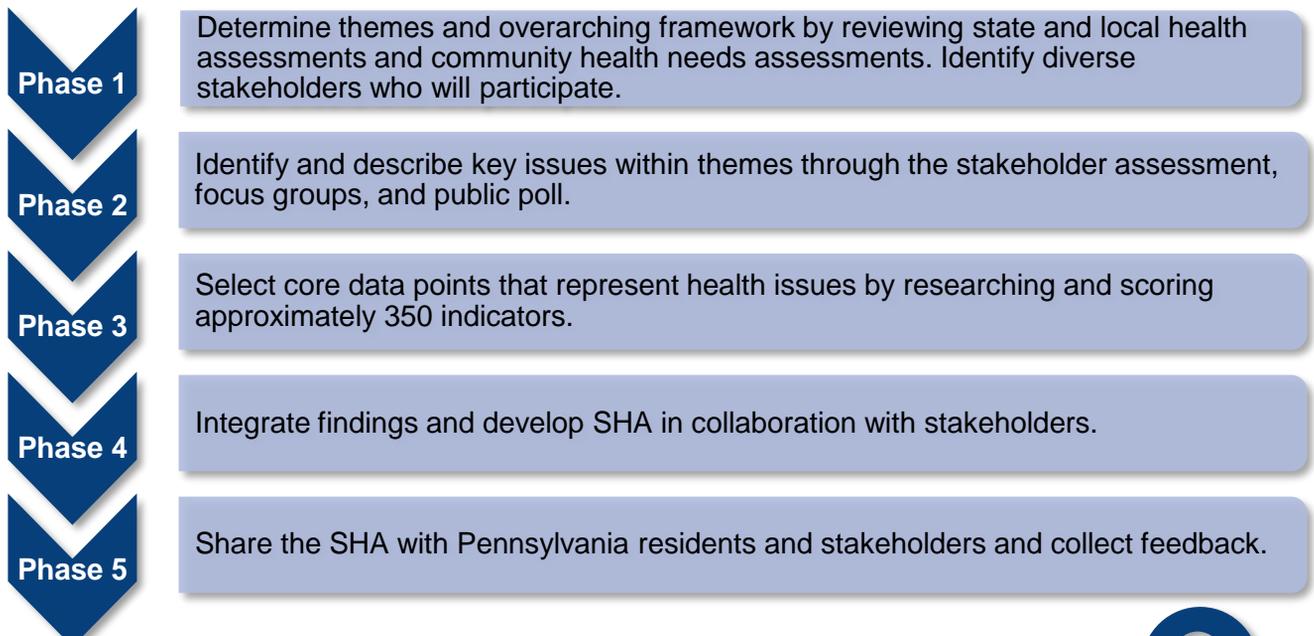
We cultivate an open dialogue between stakeholders and the public to share products, information, and data in an accessible and engaging way.

Equity

We aim to provide every person, regardless of location, religion, race, ethnicity, sexual orientation, or gender identity and expression, the same opportunities to live their healthiest life and reach their full potential.

VII. Our Process

The multi-part SHA process was informed by diverse stakeholders and constituents from across the state. The SHA was completed between January and December 2020 and is updated annually.



Instruments



Literature review: The internal team reviewed 14 SHAs, local health assessments, and community health needs assessments to study common themes, sub-themes, and indicators.

Stakeholder assessment: 77 members of the HPP completed an assessment regarding the vision for the partnership, describing vulnerable populations, criteria for selecting data indicators, local and statewide assets, pressing health issues within eight themes (pictured on the next page), and social determinants of health.

Focus groups: 68 stakeholders across eight theme-based focus groups discussed priority health issues, vulnerable populations, assets, needs, and social determinants of health.

Public poll: 2000 residents from across Pennsylvania answered an online poll about their health needs and community concerns.

Indicator scoring: Indicators associated with priority health issues were researched and scored by two independent coders using a matrix of criteria.

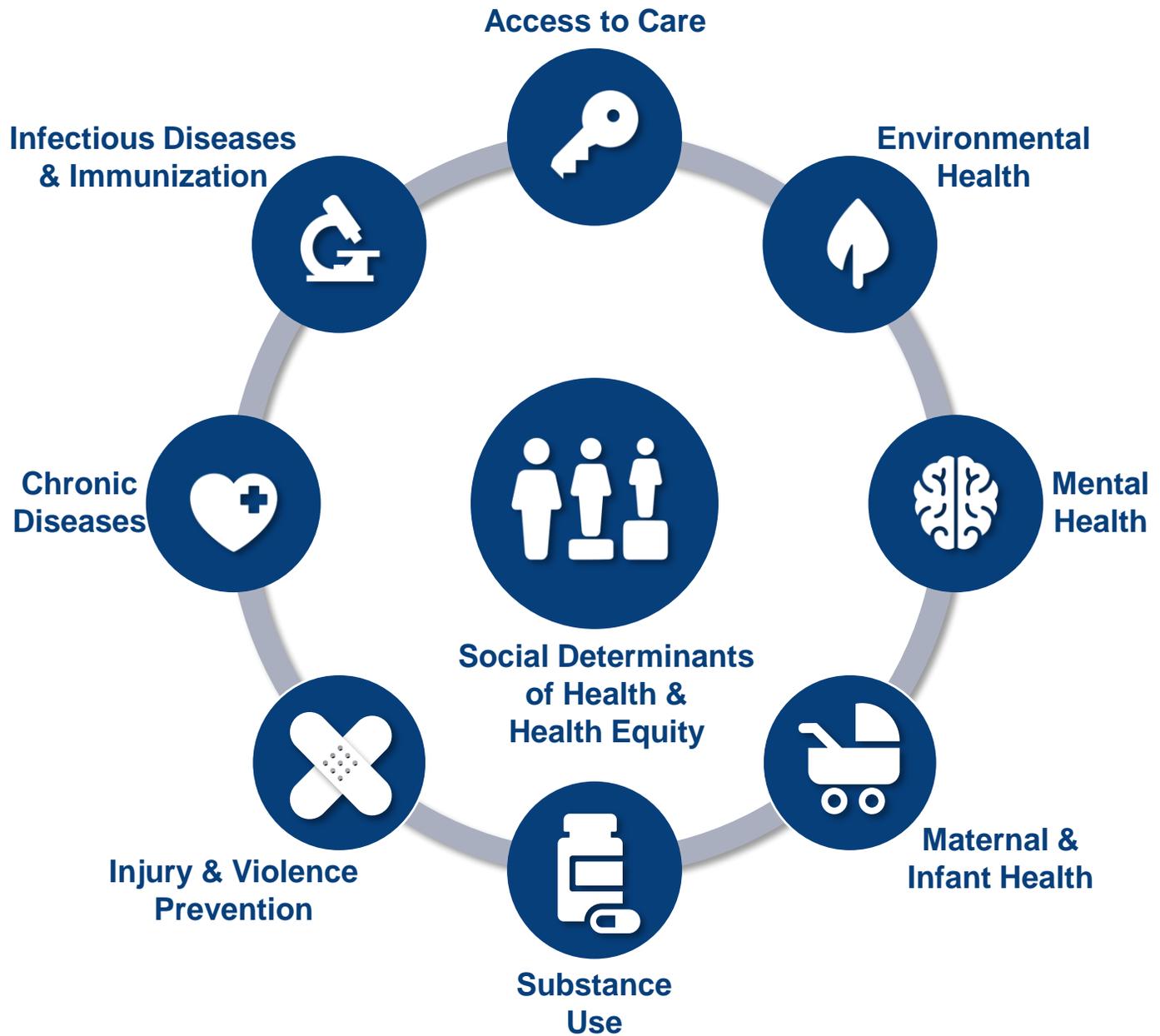
Stakeholder meetings: Stakeholders at three separate meetings provided input on visual elements of the SHA, methods of report dissemination, selection of indicators, and context surrounding the key health issues.

Report feedback survey: Both stakeholders and the public were invited to review the SHA and offer feedback. Their input was integrated into this SHA.

[Learn more about our methods in the appendix.](#)

VIII. SHA Themes

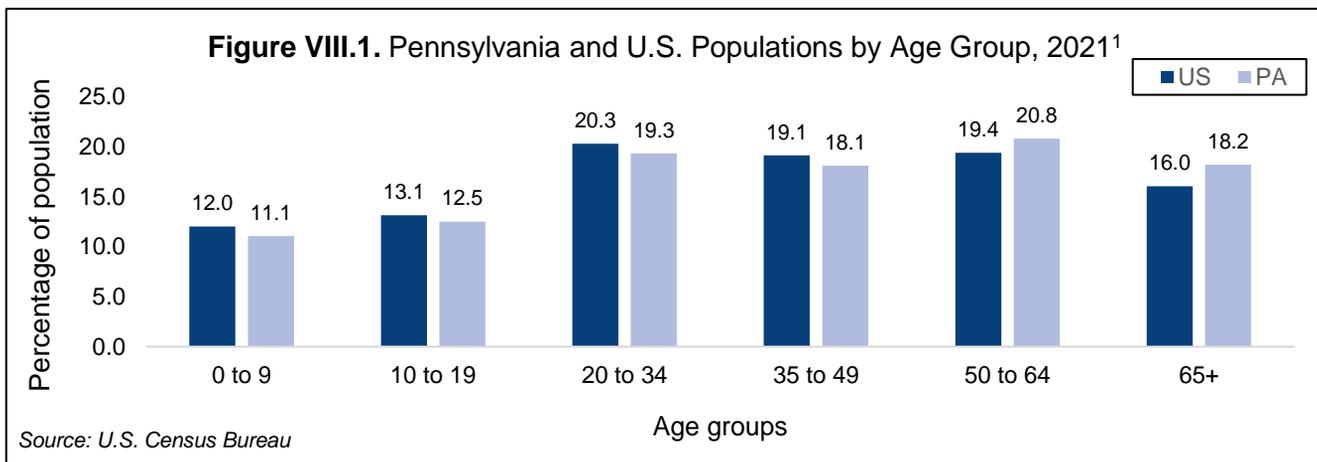
The themes presented in this SHA were based on the review of other state, local, and community health assessments. The literature review included cataloging all themes, sub-issues, and indicators included in these reports and aligning them with Healthy People 2030 (HP2030) topics, objectives, and leading health indicators. The most common themes appearing in the literature review formed the core content of this SHA.



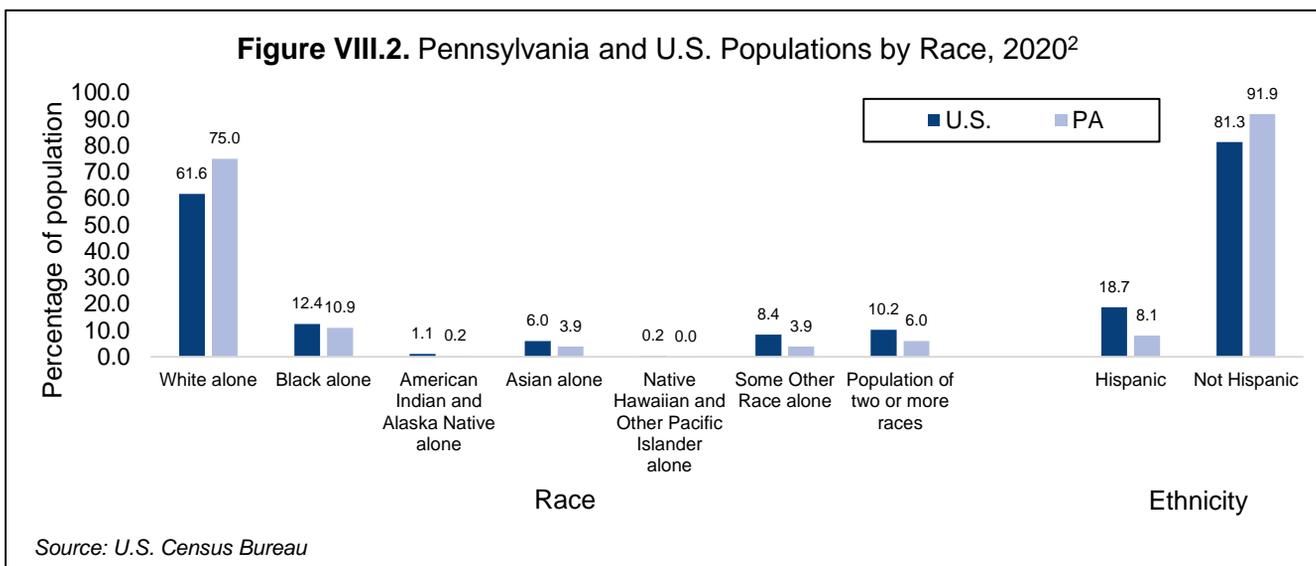
IX. Who are Pennsylvanians?

This section describes the diversity of Pennsylvanians in terms of age, race, ethnicity, geography, gender, gender identity, education, housing, and life expectancy.

- In 2021;
 - About one-quarter of Pennsylvanians were under the age of 20 and one-third were 55 and older.¹
 - Pennsylvania had a larger proportion of its population aged 65 and older (18.2%) than the U.S. overall (16.0%) (Figure VIII.1.).¹
- Pennsylvania's older population increased between 2010 and 2021. The age group 65 to 69 increased from 4.2% to 6% and the age group 70 to 74 increased from 3.3% to 4.6%.¹



Pennsylvania has a racially and ethnically diverse population. One in four Pennsylvania residents in 2020, identified themselves as Black, Asian, multiracial, or other. Eight percent identified as Hispanic or Latinx.^{2,3}



Overall, Pennsylvania's population grew by 2.4% between 2010 and 2020. The population of white alone residents decreased while Black, Asian, Multiracial, American Indian and Alaska Native, Native Hawaiian and other Pacific Islander, other races alone, and Hispanic populations increased. Multiracial population increased by 226% between 2010 and 2020.²

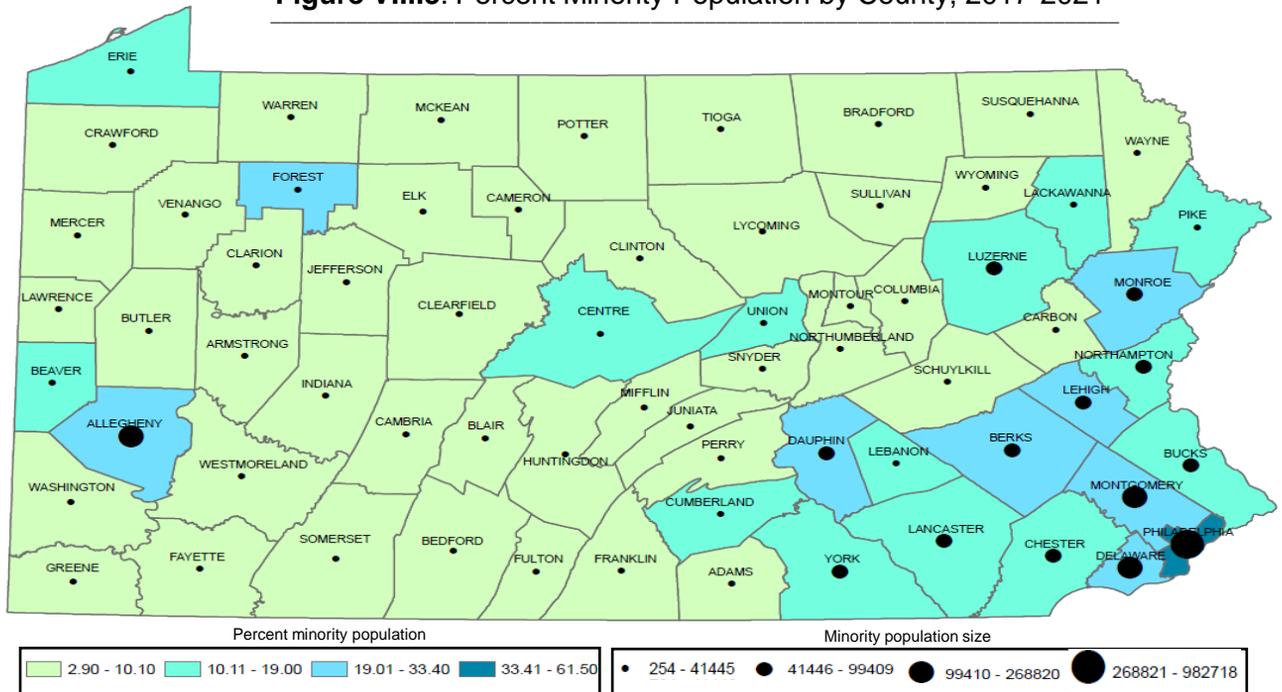
Table VIII.1. Pennsylvania Population Change by Race and Ethnicity^{2,3}

Race/ Ethnicity	2010	2020	Percent Change
White alone	10,406,288	9,750,687	-6.3%
Black alone	1,377,689	1,423,169	3.3%
American Indian and Alaska Native alone	26,843	31,052	15.7%
Asian alone	349,088	510,501	46.2%
Native Hawaiian and Other Pacific Islander alone	3,653	4,276	17.1%
Other races alone	300,983	508,531	69.0%
Multiracial	237,835	774,484	225.6%
Hispanic	719,660	1,049,615	45.8%
Non-Hispanic	1,198,2719	1,195,3085	-0.2%
Total	12,702,379	13,002,700	2.4%

Source: U.S. Census Bureau

Minority populations ranged from 2.9% in Jefferson County to 61.5% in Philadelphia County (Figure VIII.3). Philadelphia, Forest, Delaware, Dauphin, Monroe, Lehigh, Berks, Montgomery, and Allegheny, counties have the largest minority populations.⁴

Figure VIII.3. Percent Minority Population by County, 2017-2021⁴



Source: U.S. Census Bureau

Limited English Proficiency. In 2021, about 12% (1.4 million) of Pennsylvania residents aged five years and older spoke a language other than English at home.⁵ Of these, 37.9% (544,019) spoke English less than very well. Spanish was the most common language among people who do not speak English as their primary language at home, making up a significant 44% of the population, followed by other Indo-European languages and Chinese.

Although Chinese speakers make up just under 10% of people with limited English proficiency, the number of people who speak Chinese in Pennsylvania increased by over 44% from 2010 to 2021 (compared to a 29% increase among Spanish speakers, and a 22.8% increase in the total number of people with limited English proficiency).⁵

In addition, there are people whose primary language is spoken English but have difficulty with reading comprehension.

The top 10 commonly spoken languages at home other than English are: Spanish (5.2%), Chinese (including Mandarin and Cantonese) (0.8%), Yiddish, Pennsylvania Dutch, or other West Germanic languages (0.6%), Russian (0.4%), German (0.3%), Arabic (0.3%), Vietnamese (0.3%), French (including Cajun) (0.3%), Italian (0.3%) and Korean (0.2%).⁵

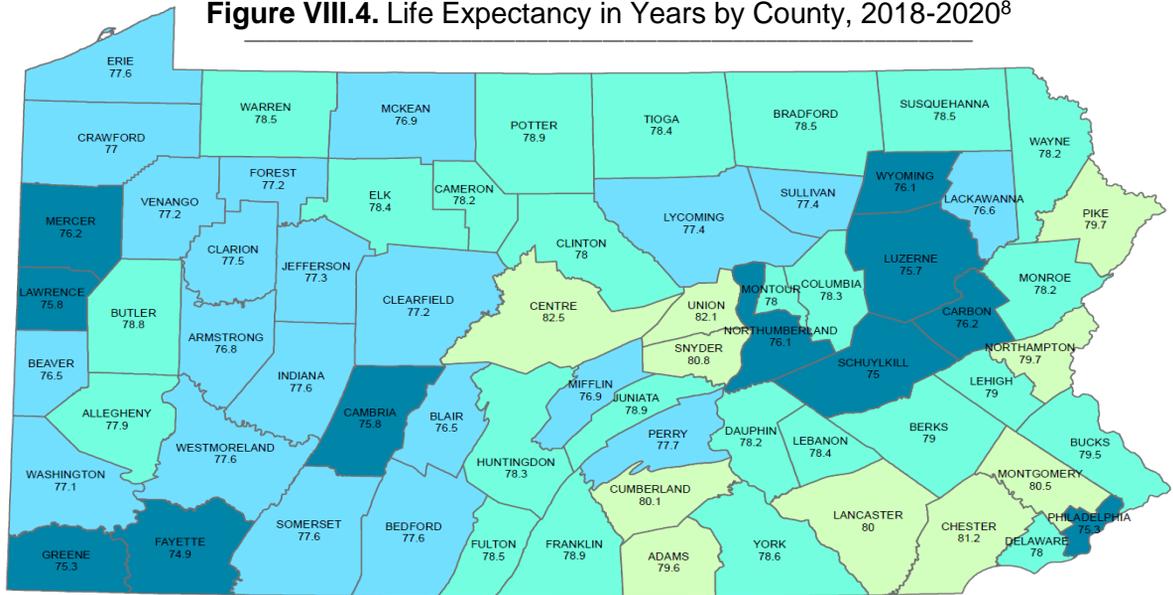
Gender. As of 2020, Pennsylvania had a total of 13,002,700 residents. Based on 2021 estimates, 49% of the population identified as males and 51% identified as females (note: no other options were available).^{1,2}

Sexual Identity. In 2021, 2% of the population self-identified as gay, and 1% self-identified as lesbian or gay. Moreover, 1% self-identified as transgender.⁶

Population Density. Pennsylvania’s area is 44,742 square miles, with a population density of approximately 291 persons per square mile. Based on the Center for Rural Pennsylvania’s definition, a county is rural when the number of persons per square mile within the county is less than the state average (291). By this definition, of Pennsylvania’s 67 counties, 48 are rural and 19 are urban. About one-third of residents live in rural counties.⁷

Life Expectancy. In 2020, Pennsylvanians’ average life expectancy was 78 years, ranging from 74.9 to 82.5 years across counties.⁸ The map below shows significant differences in life expectancy by counties.

Figure VIII.4. Life Expectancy in Years by County, 2018-2020⁸



Source: County Health Rankings



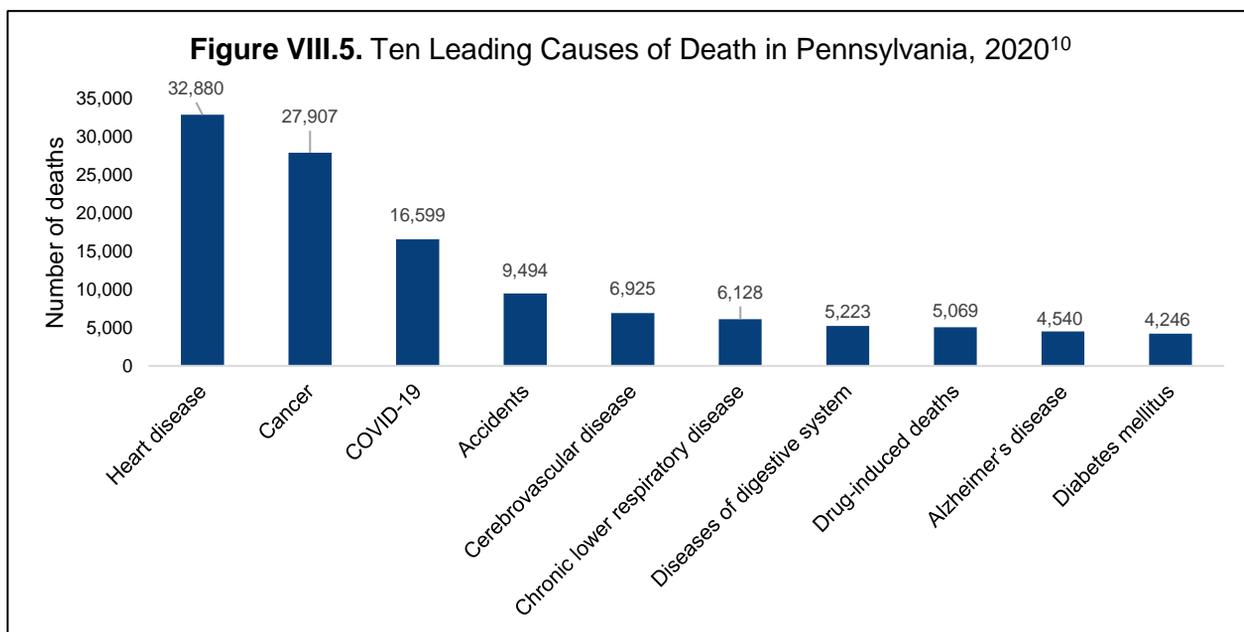
Death Rates

In Pennsylvania in 2020, 155,551 people died; 85% were people age 65 and older. The age-adjusted death rate was 890 per 100,000 residents.¹⁰

There were geographic, racial, and ethnic disparities in the overall age-adjusted death rates. In 2020, across the counties, the age-adjusted death rate per 100,000 ranged from 693.0 in Pike County to 1,100.5 in Schuylkill County. The age-adjusted death rate per 100,000 was also higher among Black residents (1,184.0) compared to white (851.7), Hispanic (739.8), and Asian/Pacific Islanders (436.3).¹⁰

Causes of Death (for leading causes by age group see Appendix A)

- In 2020, the top two causes of death were heart disease and cancer (Figure VIII.5).
- Accidents, drug-induced deaths, suicide, and homicide were among the top leading causes of death for people age 20 to 44 in 2020 (see Appendix A). Cancer, heart disease, COVID-19, mental and behavioral disorders, cerebrovascular diseases, and chronic lower respiratory diseases were the top five leading causes of death for people age 65 and older.¹⁰
- Premature deaths are measured by the number of years of potential life lost before age 75 per 100,000 population. Pennsylvania ranked 25th among states in 2022 in premature deaths.¹²



Source: Pennsylvania Death Certificate Dataset

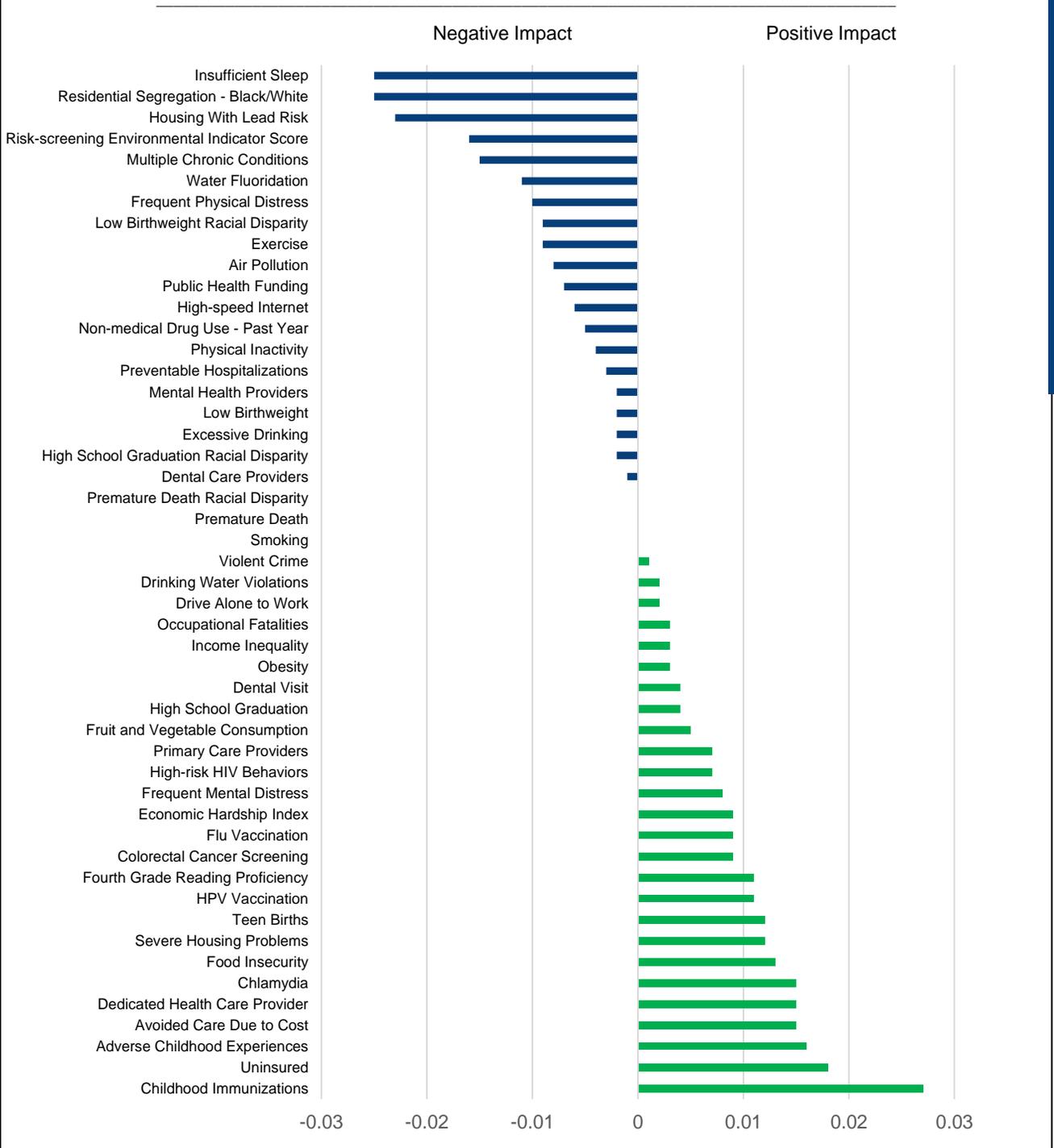
Overall Challenges and Strengths

Based on America's Health Rankings composite measure, Pennsylvania ranked 25th among all states in its overall health status.¹¹

- Pennsylvania's top strengths included high childhood immunization rate, low percent of uninsured persons, low rate of adverse childhood experiences, low percentage of adults who avoided care due to cost and having dedicated health care providers.
- Top challenges included high Black/white residential segregation, high prevalence of insufficient sleep, and housing with lead risk.¹¹

The following chart compares Pennsylvania to other states using selected core measures. The 50 states are compared against each other on each of these metrics. Metrics that are in the top of the rankings have negative impact on the overall ranking, and those that fall in the lower half have positive impact on the overall ranking.

Figure VIII.6. America's Health Rankings Core Measures Impact in Pennsylvania, 2022¹¹



Source: America's Health Rankings

Impact on Pennsylvania's score compared to other states

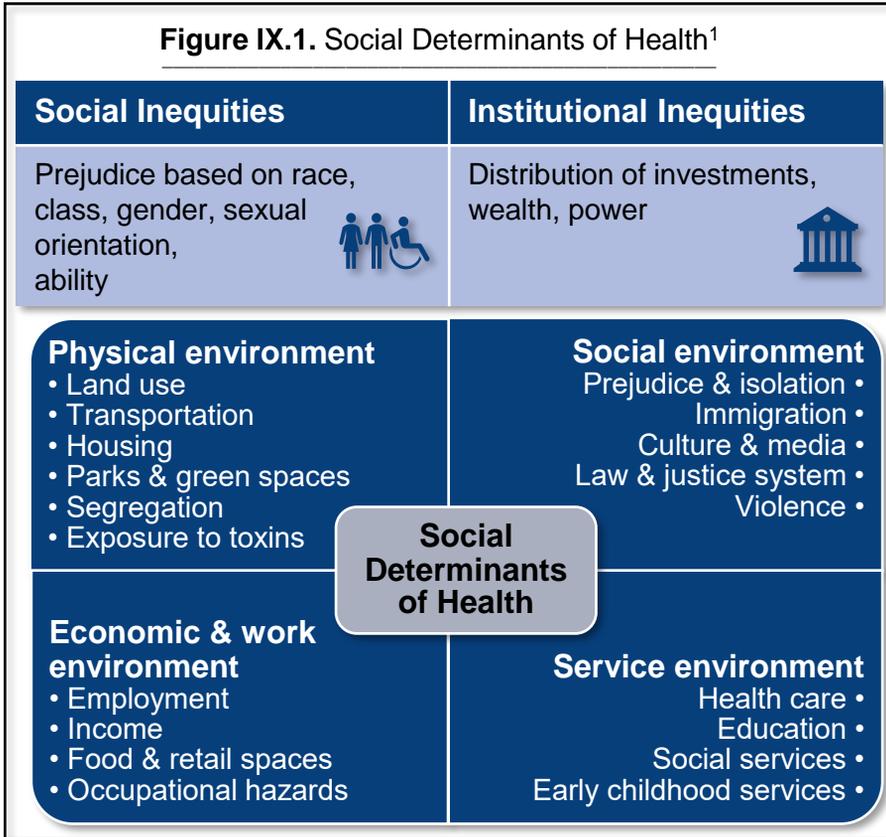
References

1. U.S. Census Bureau, 2021. American Community Survey. Retrieved from: https://data.census.gov/table?q=0100000US_0400000US42&tid=ACSST5Y2021.S0101. Accessed January 23, 2023.
2. U.S. Census Bureau, 2020. American Community Survey. Retrieved from: <https://data.census.gov/table?q=&q=0400000US42&tid=DECENNIALPL2020.P1>. Accessed January 23, 2023.
3. U.S. Census Bureau, 2020. census.gov. Retrieved from: <https://data.census.gov/cedsci/table?q=&text=hispanic&q=0400000US42&tid=DECENNIALPL2020.P2>. Accessed October 15, 2021.
4. U.S. Census Bureau. American Community Survey 5-Year Estimate, Tables B02001 [Data file]. Retrieved from: <https://data.census.gov/cedsci/table?q=B02001&q=0400000US42%240500000&tid=ACSDT5Y2020.B02001&moe=false&tp=false>. Accessed March 28, 2023.
5. U.S. Census Bureau, 2021. American Community Survey 5-Year Estimate, Tables S1601, DP02, B16002 and [Data file]. <https://data.census.gov/cedsci/>. Accessed January 25, 2023.
6. Pennsylvania Behavioral Risk Factor Surveillance System (BRFSS), 2021. Enterprise Data Dissemination Informatics Exchange. Retrieved from <https://www.phaim1.health.pa.gov/EDD/WebForms/BRFSSstate.aspx>. Accessed January 25, 2023.
7. The Center for Rural Pennsylvania. Rural/Urban PA. Retrieved from: <https://www.rural.pa.gov/data/rural-urban-definitions>. Accessed January 24, 2023.
8. County Health Rankings, 2022. countyhealthrankings.org. Retrieved from: <https://www.countyhealthrankings.org/explore-health-rankings/pennsylvania?year=2022&measure=Life+Expectancy>*. Accessed January 24, 2023.
9. Pennsylvania Department of Health, Division of Health Informatics. Data request. September 23, 2020.
10. Pennsylvania Death Certificate Dataset, 2020. Enterprise Data Dissemination Informatics Exchange. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/DeathCntySt.aspx>. Accessed January 23, 2023.
11. America's Health Rankings. Retrieved from: <https://www.americashealthrankings.org/explore/states/PA>. Accessed January 24, 2023.

X. Social Determinants of Health and Health Equity



Health disparities persist throughout Pennsylvania and the nation, and COVID-19 has underscored and magnified this reality. Some residents across the state die prematurely and live with a poor quality of life due to social, economic, service environment, and physical environment factors, which are called the social determinants of health. Figure IX.1 outlines examples of the social determinants that cause these harms. Some of these inequities are demonstrated in this section.



Key Terms²

Health disparities:

These occur when individuals in some communities have better health outcomes than others. They are preventable differences in overall outcomes.

Social Determinants of Health:

These are impacted by where people live, learn, work, and play. Examples include housing, prejudice, education, and income. They are largely dictated by what resources are available financially and physically, as well as what is marketed.

Health equity:

Equity, specifically in relation to health, is a step beyond equality. It ensures all have the opportunity to live their healthiest life, regardless of other factors. Equity reflects meeting people where they are to achieve their full health potential.



A growing body of research highlights the importance of upstream factors that influence health and the need for policy interventions to address those factors — in addition to clinical approaches and interventions aimed at modifying behavior.”

– The Centers for Disease Control and Prevention²

Approximately 40% of modifiable determinants of health are due to social and economic factors, 30% are due to health behaviors, 20% are due to clinical care, and 10% are due to physical environment.³ Social determinants of health, including education, socioeconomic status, social supports, access to services, systemic racism and oppression, racial segregation, housing, and the built environment contributed to different health outcomes for Pennsylvanians. Below are a small number of examples of disparities found throughout this SHA.

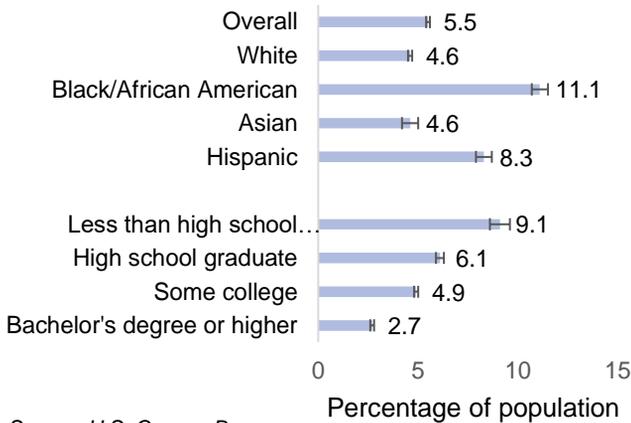
- Non-Hispanic Black Pennsylvanians were more likely to have financial difficulty paying their mortgage, rent, or utility bills, buying food, eating a balanced diet, seeing a doctor due to cost, and being uninsured.⁴
- People who identify as gay, lesbian, or bisexual high school students were at higher risk of being bullied in school, being the victims of sexual violence, feeling sad or hopeless, attempting suicide, experimenting with marijuana, not using protection during sexual intercourse, being physically inactive, and being obese.⁵
- Compared to white residents, Black residents had higher rates of infant mortality, maternal mortality, low birth weight babies, teen births, and having no prenatal care.⁶
- Compared to non-Hispanic white residents, Hispanic residents were more likely to be uninsured, not have a health care provider, be unable to see a doctor due to cost, and to have greater health literacy challenges.⁴
- Rural counties in Pennsylvania had lower rates per 100,000 residents of physicians and dentists compared to urban counties. Residents in rural counties had lower percentages of babies born with low birth weight and lower overdose deaths compared to residents from urban counties.⁷
- People with lower educational levels were more likely to have financial difficulty paying mortgage, rent, or utility bills, eating a balanced diet, having a personal health care provider, visiting a dentist, and receiving care due to cost.⁴

“ *It is undeniable that racism impedes our vision of a healthy Pennsylvania for all.*”

- Former Secretary of Health Rachel L Levine

The HP2030 grouped social determinants of health into five domains: economic stability, educational access and quality, health care access and quality, neighborhood and built environment, and social and community context.⁸ In this section, we will cover economic stability and education. The other components of social determinants of health are covered in the other sections such as environmental health, injury and violence, and access to care sections.

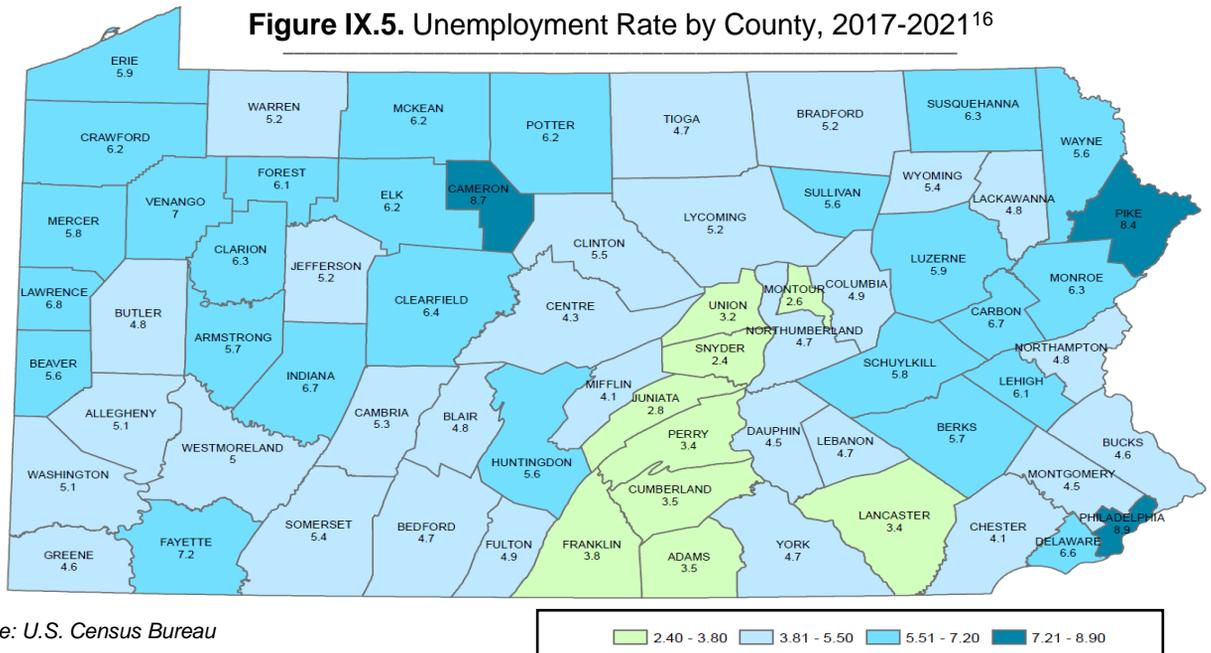
Figure IX.4. Unemployment Rate by Education, Race, and Ethnicity, 2021¹⁴



Source: U.S. Census Bureau

- Employment does not equate to stability. Stakeholders discussed concerns about the “working poor.”¹⁵
- In 2021, Black and Hispanic Pennsylvanians were more likely to be unemployed than whites (see Figure IX.4).¹⁴
- As shown in Figure IX.5, the unemployment rate, based on 2017-2021 estimate, ranged from 3.2% in Snyder County to 8.9% in Philadelphia County.¹⁶
- The COVID-19 pandemic has exacerbated unemployment, as it jumped from 5% in January to 16.2% in April 2020. Unemployment decreased slowly and in June 2021 it was 6.9%.¹⁶

Figure IX.5. Unemployment Rate by County, 2017-2021¹⁶



Source: U.S. Census Bureau

Philadelphia

Philadelphia accounts for 20% of Pennsylvania’s population, and 22% of its residents lived below the poverty line.¹⁷

Making Ends Meet

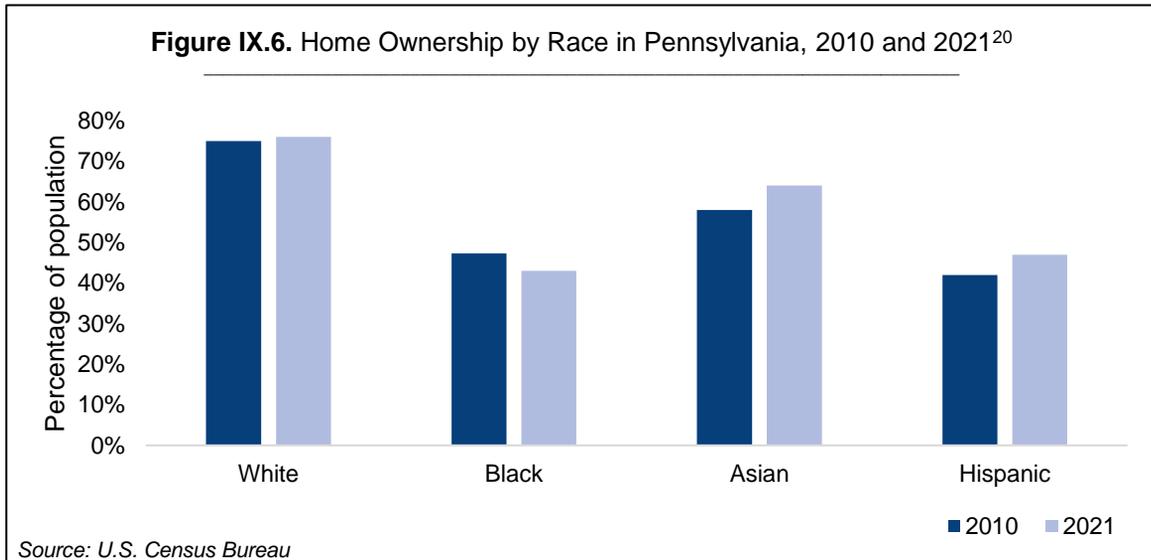
When asked if there was enough money at the end of a month, half of public poll respondents, said they either had just enough to make ends meet or not enough month.¹⁵

Public Assistance

Across Pennsylvania, 26% of households with children received Supplemental Security Income (SSI), public assistance, or Supplemental Nutrition Assistance Program (SNAP).¹⁸

As of 2020, there were about 5.7 million housing units in Pennsylvania, which was a 3.2% growth from 2010 to 2020.¹⁹ Home ownership was lower among minority residents compared to their white counterparts. The percentage of Black Pennsylvanians who owned homes decreased between 2010 and 2021.²⁰

In 2021, the median gross rent was \$1,013, while nationwide it was \$1,163. Median gross rent increased by 37% between 2010 and 2021 in Pennsylvania.²¹ Urban areas have more renting, older houses, median gross rent, and housing cost burden, whereas rural areas have more vacant houses.²²



2021

69% of housing units were owner occupied²³

Affordable Housing

Based on 2017-2021 estimate, 47% of Pennsylvania population spent 30% or more of their income on rent; the highest being in Centre, Pike, Lawrence, Philadelphia, and Monroe counties.²⁴

Homelessness

In 2020, 13,375 people experienced homelessness on any given day (8 of every 10,000 people).^{25,26}

About 52% (6,793) of the homeless individuals were Black.

Moreover, majority were severely mentally ill (3,221) or with chronic substance use (2,393).

In Pennsylvania, individuals with higher ACE scores were more likely to indicate they have fair or poor general health and higher prevalence of cardiovascular problems.³²

- In a 2019 survey, an estimated 50% of Pennsylvania adults reported having experienced one or more ACE.³²
- In Pennsylvania, non-Hispanic Black adults and Hispanic adults were three times more likely during childhood to have lived with someone who served time or was sentenced to serve time in a prison, jail, or other correctional facility than non-Hispanic white adults.³²
- Non-Hispanic Black adults, and Hispanic adults were two times more likely to have had parents who were divorced or separated.



We have been talking about the social determinants of health for a decade. We need to take action to chip away at all of these aspects that contribute to it — racism, poverty — they are all intertwined.”

- Focus group participant

References

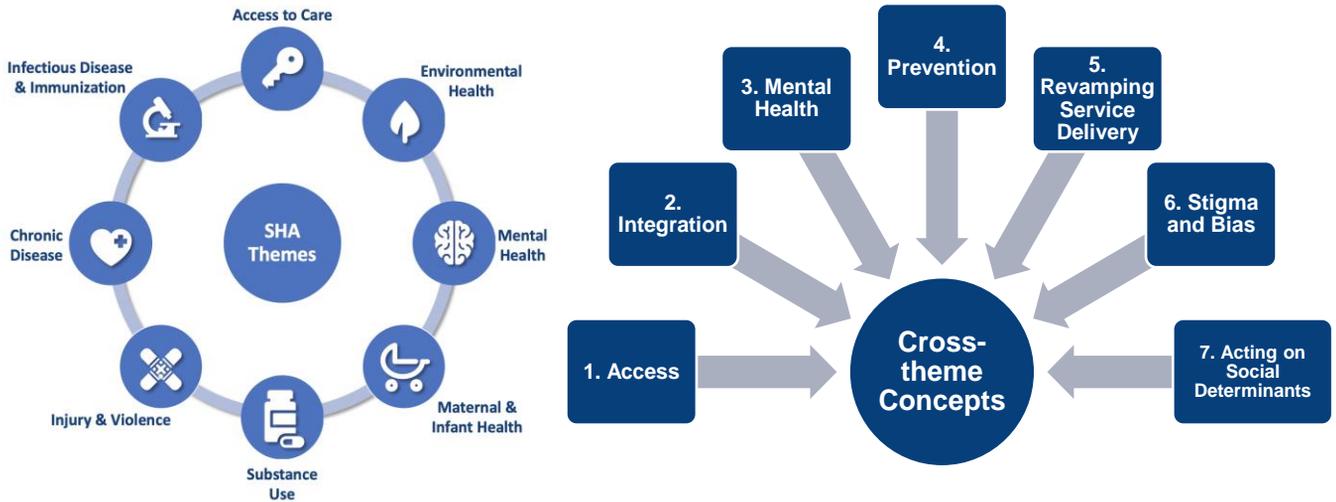
1. A Public Health Framework for Reducing Health Inequalities. Bay Area Regional Health Inequities Initiative. Retrieved from: <https://www.barhii.org/barhii-framework>. Accessed October 15, 2020.
2. NCHHSTP Social Determinants of Health. The Centers for Disease Control and Prevention. Retrieved from: <https://www.cdc.gov/nchhstp/socialdeterminants/faq.html#addressing-role>. Accessed November 4, 2020.
3. Hood CM, Gennuso KP, Swain GR, Catlin BB. County Health Rankings: Relationships Between Determinant Factors and Health Outcomes. *Am J Prev Med.* 2016;50(2):129-35. .
4. Pennsylvania Behavioral Risk Factor Surveillance System (BRFSS). Enterprise Data Dissemination Informatics Exchange. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/BRFSSstate.aspx>. Accessed October 15, 2020.
5. Youth Risk Behavioral Survey (YRBS), 2019. Centers for Diseases Control and Prevention (CDC). Retrieved from: <https://nccd.cdc.gov/youthonline/App/Results.aspx?LID=PA>. Accessed October 15, 2020.
6. Health Equity. Pennsylvania Department of Health. Retrieved from: <https://www.health.pa.gov/topics/Documents/Health%20Equity/The%20State%20of%20Health%20Equity%20in%20PA%20Report%20FINAL.pdf>. Accessed October 15, 2020.
7. Demographics, Quick Facts. The Center for Rural Pennsylvania. Retrieved from: https://www.rural.palegislature.us/demographics_about_rural_pa.html. Accessed July 15, 2020.
8. Social Determinants of Health. Healthy People 2030. Retrieved from: <https://health.gov/healthypeople/objectives-and-data/social-determinants-health>. Accessed on November 17, 2021.
9. U.S. Census Bureau, 2021. American Community Survey 1-Year Estimate, Tables S1701 [Data file]. Retrieved from: <https://data.census.gov/table?text=S1701&q=040XX00US42&tid=ACSST1Y2021.S1701>. Accessed January 26, 2023.
10. U.S. Census Bureau, 2021. American Community Survey 5-Year Estimate, Tables S1903 [Data file]. Retrieved from: https://data.census.gov/table?q=&t=Income+and+Poverty&q=0100000US_0400000US42&tid=ACSST5Y2021.S1903. Accessed January 26, 2023.
11. Pennsylvania Department of Labor and Industry. (2019). Center for Workforce Information and Analysis. Labor Force Statistics Dashboard. <https://www.workstats.dli.pa.gov/dashboards/Pages/Labor-Stats.aspx>. Accessed August 24, 2020.
12. U.S. Census Bureau, 2021. American Community Survey 5-Year Estimate, Table B19001. census.gov. Retrieved from: <https://data.census.gov/table?text=B19001&q=0400000US42&tid=ACSST5Y2021.B19001>. Accessed February 24, 2023.
13. U.S. Census Bureau. American Community Survey 5-Year Estimate. Retrieved from: [https://data.census.gov/table?q=Poverty&q=040XX00US42\\$0500000&tid=ACSST5Y2021.S1701&tp=false](https://data.census.gov/table?q=Poverty&q=040XX00US42$0500000&tid=ACSST5Y2021.S1701&tp=false). January 26, 2023.

References

14. U.S. Census Bureau, 2021. American Community Survey 5-Year Estimate, Tables S2301 [Data file]. Retrieved from: <https://data.census.gov/table?text=S2301&q=0400000US42&tid=ACSST5Y2021.S2301>. Accessed January 27, 2023.
15. Pennsylvania Statewide Health Assessment Poll and Focus Groups, 2020. Pennsylvania Department of Health. Harrisburg, PA.
16. U.S. Census Bureau. American Community Survey 5-Year Estimate. Table S2301. Retrieved from: [https://data.census.gov/table?text=S2301&q=040XX00US42,42\\$0500000&tid=ACSST5Y2021.S2301&moe=false](https://data.census.gov/table?text=S2301&q=040XX00US42,42$0500000&tid=ACSST5Y2021.S2301&moe=false). January 26, 2023.
17. U.S. Census Bureau, 2020. QuickFacts Philadelphia city, Pennsylvania. Retrieved from: <https://www.census.gov/quickfacts/fact/table/philadelphiacitypennsylvania/PST045219#>. Accessed January 27, 2023.
18. U.S. Census Bureau, 2021. American Community Survey 5-Year Estimate, Tables B09010 [Data file]. Retrieved from: <https://data.census.gov/table?text=B09010&q=0400000US42&tid=ACSST5Y2021.B09010>. Accessed February 22, 2023.
19. U.S. Census Bureau, 2020. Pennsylvania: 2020 Census. Retrieved from: <https://www.census.gov/library/stories/state-by-state/pennsylvania-population-change-between-census-decade.html>. Accessed February 22, 2023.
20. U.S. Census Bureau, 2021. American Community Survey 5-Year Estimate, Tables B25003B, B25003D, B25003H and B25003I [Data file]. www.census.gov. Accessed February 22, 2023.
21. U.S. Census Bureau, 2021. American Community Survey 5-Year Estimate, Tables B25064 [Data file]. Retrieved from: https://data.census.gov/table?text=B25064&q=0100000US_0400000US42&tid=ACSST5Y2021.B25064. Accessed February 22, 2023.
22. Pennsylvania Comprehensive Housing Study. Pennsylvania Housing Finance Agency. 2020. Retrieved from: https://www.phfa.org/forms/housing_study/2020/pennsylvania-comprehensive-housing-study-full-report.pdf. Accessed on November 17, 2021.
23. U.S. Census Bureau, 2021. Quick facts, Pennsylvania. Retrieved from: <https://www.census.gov/quickfacts/fact/table/PA/BZA010218>. Accessed February 22, 2023.
24. U.S. Census Bureau, 2021. American Community Survey 5-Year Estimate 2017-2021. Retrieved from: [https://data.census.gov/table?q=B25070:+GROSS+RENT+AS+A+PERCENTAGE+OF+HOUSEHOLD+INCOME+IN+THE+PAST+12+MONTHS&q=0100000US_0400000US42,42\\$0500000&tid=ACSST5Y2021.B25070&moe=false](https://data.census.gov/table?q=B25070:+GROSS+RENT+AS+A+PERCENTAGE+OF+HOUSEHOLD+INCOME+IN+THE+PAST+12+MONTHS&q=0100000US_0400000US42,42$0500000&tid=ACSST5Y2021.B25070&moe=false). Accessed February 22, 2023.
25. U.S. Department of Housing and Urban Development. The 2020 Annual Homeless Assessment Report (AHAR). Retrieved from: https://www.hudexchange.info/programs/coc/coc-homeless-populations-and-subpopulations-reports/?filter_Year=2020&filter_Scope=State&filter_State=&filter_CoC=&program=CoC&group=PopSub. Accessed June 23, 2022.
26. HUD 2019 Continuum of Care Homeless Assistance Programs Homeless Populations and Subpopulations. U.S. Department of Housing and Urban Development. 2020. Retrieved from: https://files.hudexchange.info/reports/published/CoC_PopSub_State_PA_2019.pdf. Accessed June 23, 2022.
27. U.S. Census Bureau, 2021. American Community Survey 5-Year Estimate, Tables C15002, C15002B, C15002D, C15002H, and C15002I [Data file]. www.census.gov. Accessed February 24, 2023.
28. Pennsylvania Department of Education, 2021. Cohort Graduation Rate. Retrieved from: <https://www.education.pa.gov/DataAndReporting/CohortGradRate/Pages/default.aspx>. Accessed February 24, 2023.
29. U.S. Census Bureau. American Community Survey 5-Year Estimate (2017-2021), Tables B15003 [Data file]. Retrieved from: [https://data.census.gov/table?q=B15003&q=040XX00US42\\$0500000&tid=ACSST5Y2021.B15003](https://data.census.gov/table?q=B15003&q=040XX00US42$0500000&tid=ACSST5Y2021.B15003). Accessed March 28, 2023.
30. Gundersen, C., A. Dewey, E. Engelhard, M. Strayer & L. Lapinski. Map the Meal Gap 2020: A Report on County and Congressional District Food Insecurity and County Food Cost in the United States in 2020. Retrieved from: <https://map.feedingamerica.org/county/2020/overall/Pennsylvania>. Accessed March 23, 2023.
31. Pennsylvania Department of Agriculture. About Food Insecurity in Pennsylvania. Retrieved from: https://www.agriculture.pa.gov/Food_Security/Pages/About-Food-Insecurity.aspx. Accessed November 11, 2021.
32. 2019 Adverse Childhood Experiences. Pennsylvania Department of Health. Retrieved from: <https://www.health.pa.gov/topics/HealthStatistics/BehavioralStatistics/InjuryStatistics/Documents/ACE%20Report%202019.pdf>. Accessed February 24, 2023.
33. Adverse Childhood Experiences (ACEs). Centers for Diseases Control and Prevention. Retrieved from: <https://www.cdc.gov/violenceprevention/pdf/preventingACES.pdf>. Accessed October 15, 2020.

XI. Connections Across SHA Themes

In the pages that follow, the core themes of the SHA are explored in depth. During the SHA development, stakeholders of diverse experiences and expertise aligned on several cross-theme concepts. These connections are in addition to social determinants of health and health equity discussed on previous pages.



1. Access

Access impacts all themes and relates not only to accessing health providers, health centers, and information, but also to accessing essentials, such as jobs, food, transportation.

2. Integration

Advancing whole-person care, breaking down silos between systems, coordinating efforts, and integrating mental and physical health are top priorities.

3. Mental Health

Mental health issues cut across all themes, ranging from access to care, to isolation and desperation exacerbated by COVID-19, to trauma, to the need for more minority providers.

4. Prevention

There is a strong need to apply a prevention framework to mental health, substance use, and violence in the same way it is applied to physical health. Involving families and building on social-emotional learning are important parts of this preventative work.

5. Revamping Service Delivery

Service delivery can be improved in a wide variety of ways, for example through telehealth, community health workers, schools as community hubs, and increased data tracking and sharing.

6. Stigma and Bias

Stigma prevents many people from getting the care they need, and provider biases need to be addressed to improve health care.

7. Acting on Social Determinants

It is essential to address the root causes of social determinants of health, specifically racism and structural inequities.



Access to Care

Access to care is a cross-cutting topic, affecting all themes related to the health of Pennsylvanians. This section addresses barriers to accessing care, such as insurance status and the number of adults without a personal health care provider. It examines challenges in accessing dental care and recognizes the importance of oral health care. There is a focus on geographic implications for residents, including shortages of providers, transportation barriers, and access to care in rural communities. This section also looks at health literacy and provider cultural humility as issues impacting access. Access issues for individuals with disabilities and other challenges are presented.

Data shared in this section are primarily from 2017 to 2022.

Pennsylvanians experience barriers in accessing care due to cost and insurance issues.

2020
10%
 of Pennsylvanians aged 18-64 were uninsured.¹

Lack of health insurance is a major barrier to accessing care and is linked to worse health outcomes and higher costs of care.² Overall in 2020, 10% of Pennsylvania’s population aged 18-64 was uninsured with higher rates being among people of Hispanic ethnicity and people with less than high school education.¹

Having health insurance does not necessarily mean that people can access care. Insurance policy limitations regarding provider networks and covered services, provider availability, and provider acceptance of various insurance plans vary across the state.

2021
7%
 of adults skipped medical care due to costs.¹

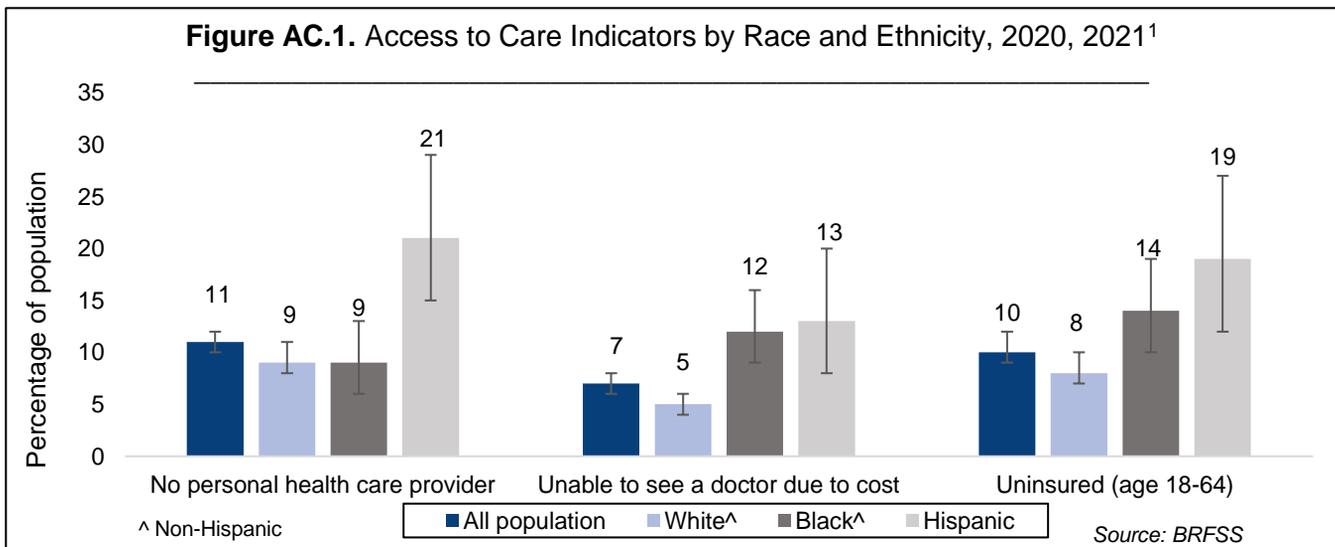
Some residents are underinsured, meaning they have deductibles, co-pays, and other health care costs that are too high relative to their income. This financial burden can prevent people from accessing the care they need. In addition, network adequacy which is a health insurance plan’s ability to deliver the benefits promised by providing reasonable access to a sufficient number of in-network providers, is another factor affecting patient access to health care.³

2021
11%
 of adults did not have a personal health care provider.¹

In 2021, six counties had only one insurer participating in the Affordable Care Act marketplace (McKean, Venango, Mercer, Lawrence, Indiana, Bedford), 28 counties had two insurers, and 33 counties were served by three or more insurers.⁴

In 2021, 11% of adults did not have a personal health care provider with higher prevalence among people who are males, non-Hispanic Black, Hispanic, non-Hispanic Asian, lesbian gay or bisexual, have less than high school education, and have no primary source of health insurance.

There were also racial and ethnic disparities for access. Compared to non-Hispanic white and non-Hispanic Black residents, Hispanic residents were more likely to be uninsured, not have a health care provider, and be unable to see a doctor due to cost. Access disparities are shown below in figure AC.1.



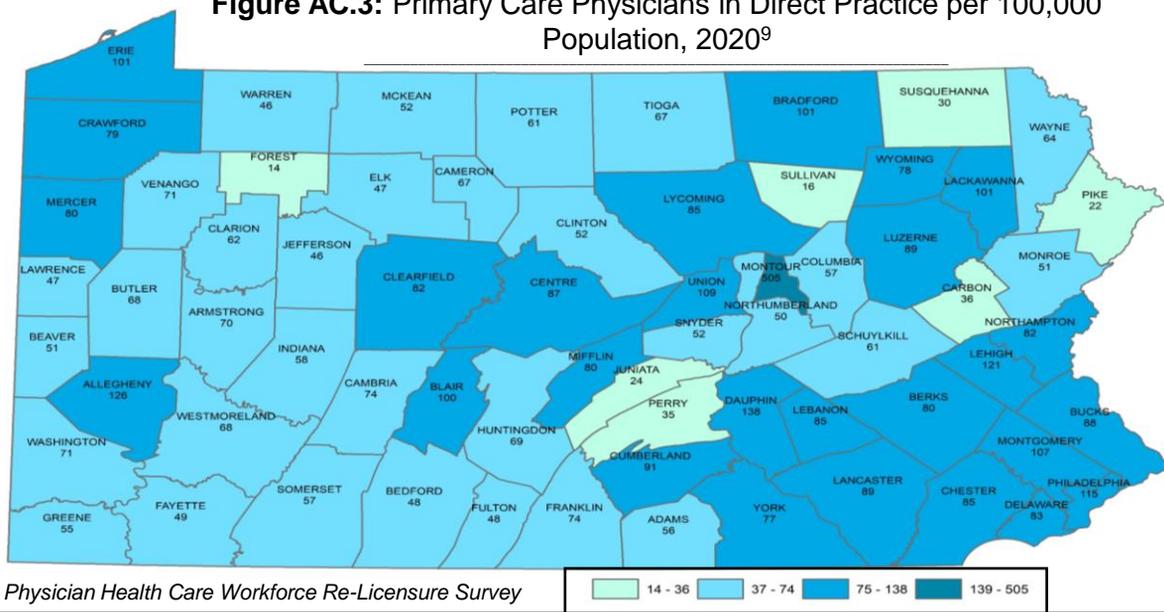
Health Professional Shortage Areas (HPSAs) indicate geographic areas and population groups experiencing a shortage of health care professionals and facilities in primary care, dental health, or mental health.

In 2022, about two million Pennsylvanians (16%) were living in dental HPSAs or mental health care HPSAs, and half a million (4%) were living in primary care HPSAs. To remove these designations, an additional 337 dentists, 118 mental health professionals, and 109 primary care physicians would be needed.⁷

Medically Underserved Areas (MUA) or Medically Underserved Populations (MUP) are areas or populations with a shortage of health care services. In 2018, Pennsylvania had 143 MUAs and 13 MUPs.⁸

Based on the 2020 Physician Health Care Workforce Re-Licensure Survey, there were 91 primary care physicians in direct patient practice per 100,000 population in the state. The response rate of the survey was 70%, so this rate could be an underestimate.

Figure AC.3: Primary Care Physicians in Direct Practice per 100,000 Population, 2020⁹



Source: Physician Health Care Workforce Re-Licensure Survey

Access to public transportation can improve health outcomes, reduce health disparities, and increase healthcare access to communities.

- Of workers 16 years and over, 2.8% used public transportation to commute to work in 2021, which is lower than the HP 2030 national goal (5.3%). Moreover, 66.8% drove alone, 7.0% carpooled, and 2.9% walked to work. Working from home increased due to the pandemic, 18.7% were working from home in 2021.¹⁰
- Pennsylvanians with disabilities and people age 65 and older are eligible to apply for transportation assistance programs. Pennsylvania Department of Transportation published a [map](#) that shows five types of public transportation options that include fixed bus routes, intercity passenger bus, medical assistance transportation, passenger rail, and Shared-Ride/Demand Response.

Stakeholders were particularly concerned about people living in rural areas having access care.

In 2020, there were lower rates per 100,000 residents of primary care physicians (refer to Figure AC.3 for the county breakdown), dentists, mental health providers, and nurse practitioners in rural Pennsylvania compared to urban areas.⁵⁻⁹

Telehealth is a growing tool to potentially address some access to care barriers. Lack of access to high-speed broadband is a barrier to expanding telehealth utilization. In 2021, 89% of households in Pennsylvania had internet subscription and 93.2% of households had one or more types of computing devices. Internet subscription varies based on income; only 71% of households with income <\$20,000 had broadband internet subscription compared to 96% of households with income >\$75,000.¹¹ Still, older adults and rural residents had lower access to broadband.^{12,13} The state received funding to increase access to high-speed broadband infrastructure to underserved areas and this could help to enhance the quality of life for residents.

“ *The very normal situation of having to wait six months to see a psychiatrist. That is the first thing that comes to mind.*”

– Focus group participant

Based on Medicaid data, telehealth claims increased from 2015 to 2019 with a larger jump in 2020. The top three telehealth services in 2020 were outpatient office/clinic visits, outpatient psychotherapy, and speech language therapy.¹⁴

Health literacy and the cultural humility of providers add other challenges to accessing care.

Due to varying levels of health literacy, some patients do not get the health information they need. About 6% of Pennsylvanians reported having difficulty understanding information from health professionals. Challenges with health literacy were more common among people with household incomes below \$15,000 (10%), \$15,000-24,999 (12%) and people with less than a high school education (13%) but did not vary significantly with age.¹

Language barriers, including lack of Sign Language interpretation services, can also prevent understanding of medical terms and impede people’s ability to navigate care. Providers carry various levels of implicit bias, which impacts their delivery of care.¹⁵ Stakeholders point out that providers may use stigmatizing language that can alienate patients.¹⁶

The 2022 Pennsylvania lesbian, gay, bisexual, transgender, and queer (LGBTQ) Health Need Assessment reported that LGBTQ individuals believed health care providers lack medical expertise related to their health needs. It also found that one in three of the respondents feared seeking health care services because of past or potential negative reactions from health care providers.¹⁷

When public poll respondents were asked what barriers prior to COVID-19 led to difficulty seeing a provider regularly, the most common responses included: cost of care, lack of time, health insurance challenges, delays, wait times, and fear.

“ *On a day-to-day basis, most people don’t understand the difference between a deductible and a co-pay, let alone the complexities of medical issues. I think we need to level the playing field by providing better initiatives around health literacy.*”

- Focus group participant

Older Pennsylvanians and individuals with disabilities have additional factors to navigate, often facing further challenges.

2020
26%

of adult Pennsylvanians had one or more disability.¹⁸

2020
41%

of Hispanic adult Pennsylvanians had one or more disability.¹⁸

2017
\$41.5

billion per year spent on health care disability costs in Pennsylvania (37% of the state's healthcare spending).¹⁹

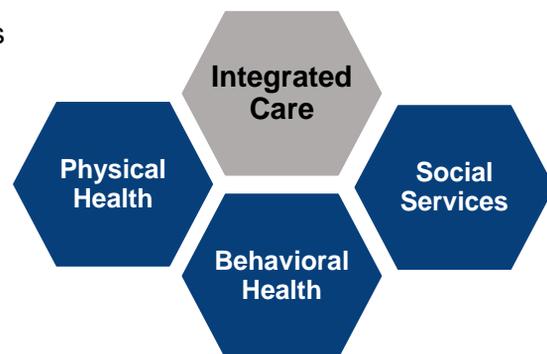
- Older Pennsylvanians tend to have more disabilities and less access to internet. As a result, they have less access to disease information, telehealth, self-care management programs with an online component, and other online activities to reduce social isolation. About one in four of Pennsylvanians aged 65 and over do not have access to internet.²⁰
 - 26% of Pennsylvanians reported having a disability (one or more difficulty in hearing, seeing, concentrating, remembering, making decisions, walking, dressing, bathing, and shopping), which is the same percent as the country overall.¹⁸
 - By race and ethnicity, 23% of white, 41% of Hispanic, 28% of non-Hispanic Black, and 35% of multi-race Pennsylvanians reported one or more disabilities.¹⁸
 - Disabilities increased with age, from 19% of 18- 44- year-olds to 40% among people 65 and over.¹⁸
 - Many social determinants of health including housing, transportation, and social interactions are impacted by having a disability.
- A report from Pennsylvania Health Access Network shows that the major challenges of people with disabilities in rural Pennsylvania include; barriers in getting the right information, lack of accommodation for people with disabilities, access to transportation, provider's competencies to treat people with disabilities, and limiting access to health care by insurance companies by denying claims to treatments and equipment.²¹

Stakeholders referred to Whole-person care bridges health, behavioral health, and social services; stakeholders referred to it as a possible solution to barriers to accessing care.

- Whole-person care is based on the concept that health and well-being extend beyond just physical health. It emphasizes the importance of integrating comprehensive care for the entire individual, which in turn enhances the effectiveness of interventions and solutions.

“ I would like to see Pennsylvania work toward what is called whole-person primary health. It is a fusion of behavioral health, a fusion of medical, and it is something that is going to reshape...the terminology of primary care cannot be furthered without considering whole person health. That should be something that we, as a commonwealth, grasp and shape.”

– Focus group participant



This section summarized priority issues related to access to care and explored:

- Health insurance status and cost
- Primary care providers
- Dental and oral health care
- Geographic implications
- Health literacy and cultural competency
- People with disabilities
- Whole-person care

Visit these SHA sections for additional context:



- [Social Determinants of Health, Equity & Racism](#)
- [Mental Health](#)
- [Assets](#)

References

1. Pennsylvania Behavioral Risk Factor Surveillance System (BRFSS). Enterprise Data Dissemination Informatics Exchange. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/BRFSSstate.aspx>. Accessed on February 27, 2023.
2. Institute of Medicine (US) Committee on the Consequences of Uninsurance. *Care Without Coverage: Too Little, Too Late*. Washington (DC): National Academies Press (US); 2002. 3, Effects of Health Insurance on Health. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK220636/>.
3. Network Adequacy. Center for Insurance Policy and Research. 2022. Available at: <https://content.naic.org/cipr-topics/network-adequacy>. Accessed June 23, 2022.
4. Insurer Participation on the ACA Marketplaces, 2014-2021. Kaiser Family Foundation. Retrieved from: <https://www.kff.org/private-insurance/issue-brief/insurer-participation-on-the-aca-marketplaces-2014-2021/>. Accessed November 10, 2021.
5. Pennsylvania Dentist Health Care Workforce Re-licensure Survey, 2019. Pennsylvania Department of Health. Data request March 10, 2023.
6. Area Health Resources Files. United States Department of Health & Human Services, Health Resources and Services Administration (HRSA). Retrieved from: <https://data.hrsa.gov/topics/health-workforce/ahrf>. Accessed on February 27, 2023.
7. Designated Health Professional Shortage Areas Statistics, 2022. United States Department of Health & Human Services, Health Resources and Services Administration (HRSA). Retrieved from: <https://data.hrsa.gov/Default/GenerateHPSAQuarterlyReport>. Accessed on February 27, 2023.
8. Pennsylvania's Designated Medically Underserved Areas/Populations (MUA/P), 2018. Pennsylvania Department of Health. Retrieved from: [https://www.health.pa.gov/topics/Documents/Health%20Planning/Designated%20Medically%20Underserved%20Areas%20Pop%20\(MUA-P\)%20List.pdf](https://www.health.pa.gov/topics/Documents/Health%20Planning/Designated%20Medically%20Underserved%20Areas%20Pop%20(MUA-P)%20List.pdf). Accessed November 3, 2020.
9. Pennsylvania Physician Health Care Workforce Re-licensure Survey, 2020. Pennsylvania Department of Health. Data request January 12, 2022.
10. U.S. Census Bureau, 2021. American Community Survey 1-Year Estimate, Selected Economic Characteristics. Tables DP03 [Data file]. Retrieved from: <https://data.census.gov/table?q=&text=DP03&q=0400000US42&tid=ACSDP1Y2021.DP03>. Accessed on February 27, 2023.
11. U.S. Census Bureau, 2021. American Community Survey 1-Year Estimate, Selected Economic Characteristics. Tables S2801 [Data file]. Retrieved from: <https://data.census.gov/table?q=&text=DP03&q=0400000US42&tid=ACSDP1Y2021.DP03>. Accessed on March 28, 2023.
12. Broadband Internet Access. Pennsylvania State Data Center. Retrieved from: https://pasdc.hbg.psu.edu/sdc/pasdc_files/researchbriefs/September_2020.pdf. Accessed September 30, 2020.
13. Broadband Availability and Access in Rural Pennsylvania. Center for Rural Pennsylvania. Retrieved from: https://www.rural.palegislature.us/broadband/Broadband_Availability_and_Access_in_Rural_Pennsylvania_2019_Report.pdf. Accessed September 30, 2020.
14. Medicaid report. Pennsylvania Department of Human Services. 2021. Data request.
15. Fitzgerald C, Hurst S. Implicit bias in healthcare professionals: A systematic review. *BMC Medical Ethics*. 2017;18(1). doi:10.1186/s12910-017-0179-8.
16. Pennsylvania Statewide Health Assessment Poll and Focus Groups, 2020. Pennsylvania Department of Health. Harrisburg, PA.
17. Research & Evaluation Group at Public Health Management Corporation and Bradbury-Sullivan LGBT Community Center. 2022 Pennsylvania LGBTQ Health Needs Assessment. Retrieved from: https://assets.nationbuilder.com/bradbrysullivancenter/pages/2872/attachments/original/1673023325/2022_PA_LGBTQ_HNA_Report_Final_approved.pdf?1673023325. Accessed February 27, 2023.
18. Disability and Health Data System. Centers for Disease Control and Prevention (CDC). 2020. Retrieved from: https://www.cdc.gov/ncbddd/disabilityandhealth/dhds/index.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fncbddd%2Fdisabilityandhealth%2Fdhds.html. Accessed February 27, 2023.
19. Centers for Diseases Control and Prevention. Disability Impacts in Pennsylvania. CDC's National Center on Birth Defects and Developmental Disabilities. 2021. Retrieved from: <https://www.cdc.gov/ncbddd/disabilityandhealth/impacts/pennsylvania.html>. Accessed March 28, 2023.
20. Disrupting Disparities in Pennsylvania. AARP Pennsylvania and Drexel University. 2021. Retrieved from: <https://aarp-states.brightspotcdn.com/6f/b6/de161f3a4a63a23e811693d90b68/aarp-drexel-pennsylvania-disrupting-disparities-design-0421-final.pdf>. Accessed on November 18, 2021.
21. Pennsylvania Health Access Network. Healthcare Access for People With Disabilities in Rural Pennsylvania. 2021. Retrieved from: <https://www.paddc.org/wp-content/uploads/2020/09/rural-access-report-summary2.pdf>. Accessed on September 21, 2022.



Substance Use

Substance use, which includes the nonmedical use of illicit and legal psychoactive substances, is a major public health challenge in the U.S. and Pennsylvania. This section presents information about the overall usage of various substances, the prevalence of substance use disorder, rates of drug overdose deaths, hospitalizations related to opioids, factors contributing to health challenges, disparities in substance use, and barriers to treatment for substance use. A discussion of the challenges caused by the separation between mental health and substance use systems is presented. Finally, prevention of substance use among adolescents are explored.

Data shared in this section are from 2016 to 2022.

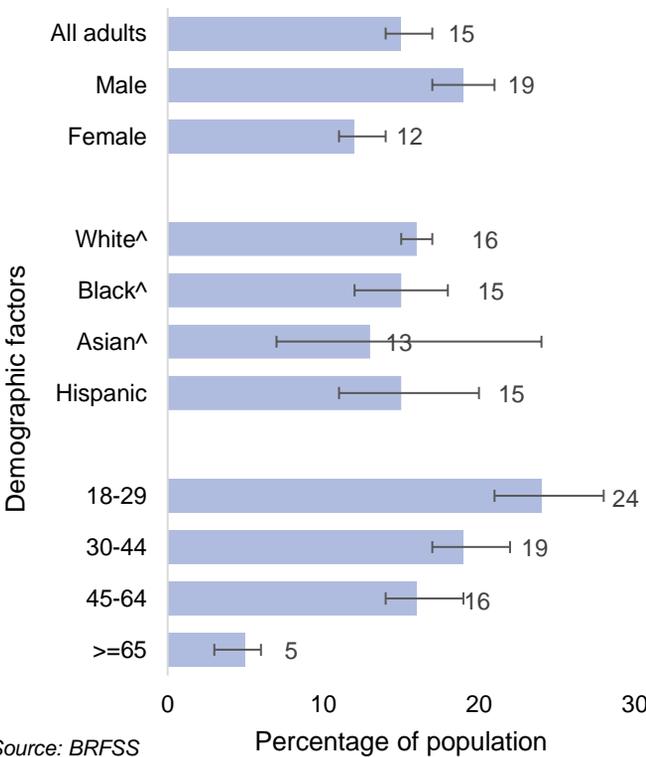
Pennsylvanians experience high numbers of substance use-related hospitalizations.^{1,2} Substance use disorders occur when the recurrent use of alcohol and drugs causes clinically significant impairment, including health problems, disability, and failure to meet major responsibilities at work, school, or home.³ Below are the list of some of the commonly used substances and their prevalence by age group (Table SU.1). Methamphetamine and marijuana use are increasing among all age groups.⁴

Table SU.1: Prevalence of Substances Used in the Year Before the Survey by Age Group (2018-2019)⁴

Substances	12-17 years (%)	18-25 years (%)	26 years and over (%)
Marijuana	12	33.7	13.9
Prescription pain reliever	1.9	5.0	3.0
Heroin	0.02	0.7	0.4
Methamphetamine	0.2	0.9	0.7
Cocaine	0.4	6.4	1.7

Source: National Survey on Drug Use and Health (NSDUH)

Figure SU.1. Binge Drinking, Pennsylvania, 2021⁵



Source: BRFSS

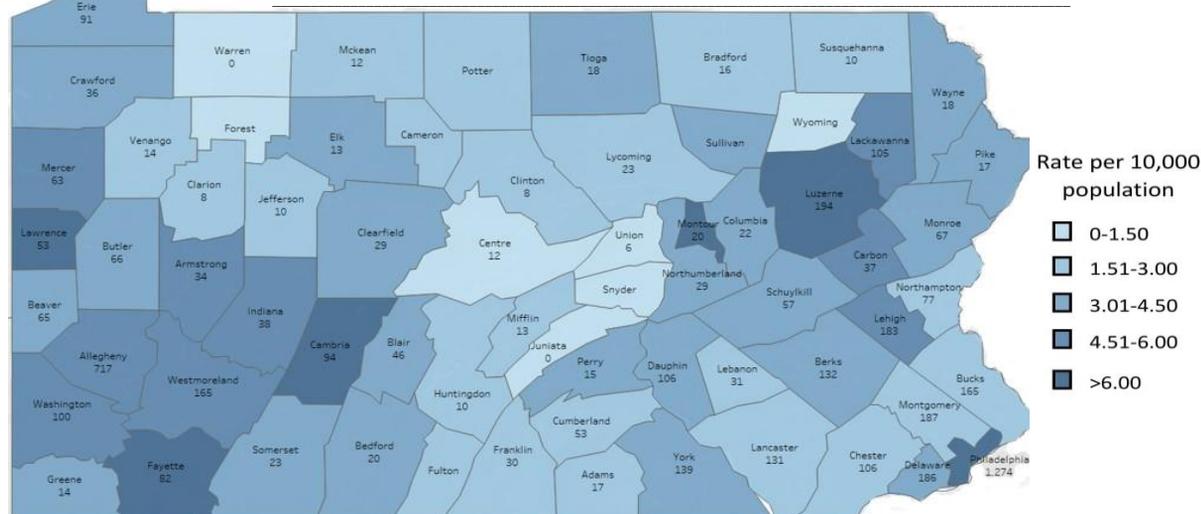
^ Non-Hispanic

- Binge drinking is defined as having five or more drinks for males and four or more drinks for females on one occasion.⁵
- Binge drinking was more common among males than females.
- In 2021, adults identifying as lesbian, gay, or bisexual were more likely to report binge drinking (26%) than heterosexual adults (15%).⁵
- The HP2030 target for US for past-month illicit drug use is 12%.⁶ During 2019-2020, 12.4% of Pennsylvania adults (aged 18 or older) reported past-month illicit drug use, slightly less than the 13.8% rate among all U.S. adults during the same time.⁴
- During 2018-2019, compared to other age groups, adults aged 18 to 25 had higher percentages of past-year illicit drug use disorder (8%), alcohol use disorder (10%), and any substance use disorder (15%).⁴

“There are long-term trends [in substance use], and it is typical that a trend toward opioid use will be followed by a stimulant trend. It’s almost as if one generation does not learn to not use drugs; they learn to not use the drug that they saw harm the prior generation.”

– Focus group participant

Figure SU.2: Unintentional Drug Overdose Deaths* and Crude Unintentional Drug Overdose Death Rate per 10,000, by County in Pennsylvania, 2021.⁷



* Unintentional Drug overdose deaths include overdoses from illicit, prescription or over-the-counter drugs, excluding alcohol-only related overdoses; counts do not include suicides or homicides where someone intended to harm another person by poisoning. Counts for counties with overdose death counts between 1 and 5 are suppressed. 2021 death data is preliminary, based on death record data as of July 2022 and counts may increase.

Source: Pennsylvania Department of Health, Office of Drug Surveillance and Misuse Prevention

- Figure SU.2 shows the rates of unintentional drug overdose deaths in Pennsylvania. Counties in the East and southwestern parts of the state have higher drug overdose death rates.
- As of July 2022, the highest year number (5,425) of unintentional overdose deaths in Pennsylvania occurred in 2017. While Pennsylvania saw an 18% decrease in 2018 (4,451) and a minor increase in 2019 (4,480), there were significant increases in 2020 (5,169) and in preliminary 2021 (5,326) unintentional overdose death counts.⁷
- Increases in unintentional overdose deaths have been disproportionately driven by increasing rates among Pennsylvania’s Black communities (6.9 deaths per 10,000 population; 52% increase compared to 2019). Moreover, overdose deaths were higher among males (6/10,000) and people aged 34-44 (9.6/10,000).⁷
- Most unintentional overdose deaths involve an opioid, and an increasing proportion involve both an opioid and a stimulant, such as methamphetamine/amphetamine or cocaine (31% in 2017 vs. 40% in 2021 as of July 2022). Additional details about drug specificity among unintentional overdose deaths can be found on the Drug Overdose Surveillance [Interactive Data Report](#).⁷
- Another emerging threat is the increase in unintentional overdose deaths involving xylazine, a sedative for large animals also referred to as “tranq”. People often knowingly or unknowingly use it in combination with other drugs, particularly illicitly obtained fentanyl.⁸ While xylazine was initially detected in unintentional overdose decedents in Philadelphia in 2006, it has been detected in people who died from unintentional overdose in at least 30 counties across the Commonwealth as of 2021.
- Non-fatal overdose surveillance is conducted by the DOH via Pennsylvania’s syndromic surveillance system, EpiCenter, which monitors emergency department data in near-real time for a variety of overdose-related visits. The system alerts local and state public health officials when higher than expected are detected. The data are disseminated to additional stakeholders who can respond. Trends in non-fatal overdoses are found on the Drug Overdose Surveillance [Interactive Data Report](#).

Hospitalizations for opioid overdose has decreased but opioid use continues to be a pressing issue in Pennsylvania

- Between 2008 and 2017, Pennsylvania experienced a dramatic rise in opioid-related hospitalizations.^{1,2} Hospitalizations for opioid overdose decreased 31% between 2017 and 2021.
- In 2021, 30% of the opioid overdose-related admissions were related to heroin and 70% to pain medication.²
- In 2021, admissions were higher among males and those in areas with lower median income and rates varied by race and ethnicity; the rate among non-Hispanic Black, Hispanic, and non-Hispanic white were, 26.3, 18.7, and 13.7 per 100,000 respectively.²

Evidence-based harm reduction strategies can help to reduce negative consequences associated with drug use.

Harm reduction is one of the four pillars of the U.S. Department of Health and Human Services' Overdose Prevention Strategy.⁹ Substance Abuse and Mental Health Services Administration defines harm reduction as “an approach that emphasizes engaging directly with people who use drugs to prevent overdose and infectious disease transmission, improve the physical, mental, and social wellbeing of people served, and offer low-threshold options for accessing substance use disorder treatment and other health care services”.¹⁰

Harm reduction is an important strategy for reducing overdose deaths in Pennsylvania. Improving access to life-saving resources and services, increasing the availability of naloxone and fentanyl test strips, and advocating for change to permit utilization of harm reduction strategies, including the establishment of syringe service programs are some of the harm reduction tactics that should be pursued.¹¹

Pennsylvania is one of 11 states where Syringe Service Programs are illegal to operate.¹² As such, these programs currently exist only in areas with local ordinances allowing them including Allegheny and Philadelphia Counties.

Current treatment structures and systems separate mental health and substance use issues, which are often co-occurring.

Although mental health and substance use issues can be closely related, people seeking help often must choose which treatment system to enter. In 2019, 21% of adults served through state mental health agencies had co-occurring mental health and substance use disorders.¹³

Despite this co-occurrence, communication between mental health and substance use systems can be challenging. The treatment and system structures are different, and there are different professional standards regarding knowledge, skills, and abilities in the two fields.¹⁴

Together, these factors may complicate people's ability to get the treatment they need.

Stakeholders noted that people use multiple substances simultaneously and caution against focusing on any one substance. They emphasized the importance of a “whole-person” approach and a continuum of treatment services.

Stakeholders identified several obstacles that prevent residents from getting the full spectrum of care they need, including:

- lack of public transportation;
- lack of providers in rural areas;
- prohibitive cost of treatment and insufficient insurance coverage;
- lack of long-term treatment through recovery community organizations and other services; and
- continued stigma and view of substance use as a moral problem.

Needing but not receiving treatment services for substance use in the past year was higher among 18 to 25-year-olds compared to other age groups: 14% of 18 to 25 -year-olds did not receive the treatment they needed, compared to 3% of 12 to 17 -year-olds and 6% of people 26 and older.⁴

“The most important thing to focus on moving forward is long-term solutions that don’t just involve the treatment component, but rather new, creative, innovative ways to fund and mobilize recovery. We are talking about a chronic disease that is often treated as an acute episode. We don’t always do the best job of providing that stable base of recovery services.”

- Focus group participant

2018-2019

6%

of individuals (12+ years old) needed but did not receive treatment for substance use at a specialty facility.⁴

This section summarized priority issues related to substance use and explored:

- Overall usage of substances and its impact
- Drug overdose deaths
- Vulnerable populations
- Substance use treatment
- Substance use and mental health co-morbidity and system divisions
- Use of substances among high school students

Visit these SHA sections for additional context:



- [Social Determinants of Health, Equity & Racism](#)
- [Assets](#)

References

1. Hospital Admissions for Opioid Overdose and Opioid Use Disorder, 2022. PA Health Care Cost Containment Council. Retrieved from: https://www.phc4.org/reports/researchbriefs/opioids/21/docs/researchbrief_opioids21.pdf. Accessed February 28, 2023.
2. Hospitalizations for Opioid Overdose: Three-Year Review. 2019. PA Health Care Cost Containment Council. Retrieved from: http://www.phc4.org/reports/researchbriefs/overdoses/18/docs/researchbrief_overdoses18.pdf. Accessed February 28, 2023.
3. Mental Health and Substance Use Disorders. Substance Abuse and Mental Health Service Administration. Retrieved from: <https://www.samhsa.gov/find-help/disorders>. Accessed November 4, 2020.
4. Interactive NSDUH State Estimates, 2018-2019. Substance Abuse and Mental Health Data Archive. Retrieved from: <https://pdas.samhsa.gov/saes/state>. Accessed February 28, 2023.
5. Pennsylvania Behavioral Risk Factor Surveillance System (BRFSS), 2021. Enterprise Data Dissemination Informatics Exchange. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/BRFSSstate.aspx>. Accessed February 28, 2023.
6. Healthy People 2030. US Office of Diseases Prevention and Health Promotion. Retrieved from: <https://health.gov/healthypeople/objectives-and-data/browse-objectives/drug-and-alcohol-use/reduce-proportion-adults-who-used-drugs-past-month-su-07>. Accessed November 3, 2022.
7. Pennsylvania Department of Health. Drug Overdose Surveillance Interactive Data. Retrieved from: <https://www.health.pa.gov/topics/programs/PDMP/Pages/Data.aspx>. Accessed February 28, 2023.
8. National Institute on Drug Abuse. Xylazine. <https://nida.nih.gov/research-topics/xylazine>. Accessed February 28, 2023.
9. U.S. Department of Health and Human Services. Overdose Prevention Strategy. Retrieved from: <https://www.hhs.gov/overdose-prevention/>. Accessed on November 15, 2022.
10. U.S. Department of Health and Human Services. SAMHSA. Retrieved from: <https://www.samhsa.gov/find-help/harm-reduction>. Accessed on November 15, 2022.
11. Pennsylvania Opioid Command center. Strategic plan 2020-2023. Retrieved from: <https://www.ddap.pa.gov/Documents/Symposium/EXHIBITS/Opioid%20Command%20Center.pdf>. Accessed on November 15, 2022.
12. The Policy Surveillance Program. Temple University. Syringe Service Program Laws. Retrieved from: <https://lawatlas.org/datasets/syringe-services-programs-laws>. Accessed on November 15, 2022.
13. Pennsylvania 2018 Mental Health National Outcome Measures (NOMS): SAMHSA Uniform Reporting System. Retrieved from: <https://www.samhsa.gov/data/sites/default/files/reports/rpt27970/Pennsylvania%202019%20URS%20Output%20Tables/Pennsylvania%202019%20URS%20Output%20Tables.pdf>. Accessed October 15, 2021.
14. Pennsylvania Statewide Health Assessment and Focus Group Convenings, 2020. Pennsylvania Department of Health. Harrisburg, PA.



Mental Health

Mental health is an important part of overall health and well-being. This section examines the overall mental health status of Pennsylvanians, the prevalence of mental health conditions, self-reported “poor” mental health days, rates of depression and suicide, and factors that contribute to mental distress and poor health outcomes, including social isolation, access to mental health treatment, and barriers to care. Youth mental health is another focus area, featuring issues such as depressive thoughts and suicidality. This section concludes with an overview of well-being and associated mental and physical outcomes.

Data shared in this section are from 2016 to 2022.

The prevalence of mental health issues and the increasing frequency of mental distress are major concerns.

2020

12.3 per 100,000
suicide deaths (age-adjusted rate)¹

Public poll respondents ranked “mental health problems” as the most important health issue facing their communities.

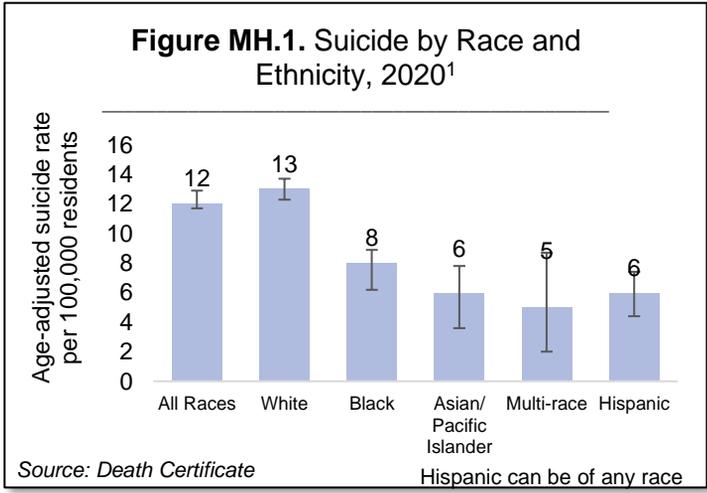
2021

14%
of PA adults had 14+ poor mental health days in the past month.²

The percentage of adults reporting that their mental health was not good for 14 or more days in the past month, increased from 12% in 2014 to 14% in 2021.²

About 8% of Pennsylvanians aged 18 or older had a major depressive episode* in 2019.³

In 2020, there were 1,686 Pennsylvanians who died by suicide, with higher rates among white residents (13 per 100,000) than other racial groups, as shown in figure MH.1.¹



Suicide rates increased by 5% between 2010 and 2020 with greatest increase among Black (38%), Hispanic (26%), and older adults (34% among age group 85+).¹

Mental health is influenced by social factors, which can impact sub-populations in a variety of ways.

Socioeconomic status and geographic location may limit the accessibility of mental health treatment, as they may reduce access to facilities and providers.

There were significant disparities in poor mental health experiences lasting 14 days or more. In 2021, poor mental health was higher among people with income less than \$15,000 (27%), and lesbian, gay, or bisexual (35%).¹

According to the 2022 Pennsylvania LGBTQ Health Need Assessment, 75% of the respondents experienced a mental health challenge in the year before the survey, and 50% of transgender, non-binary, or genderqueer respondents considered suicide in their lifetime.⁴

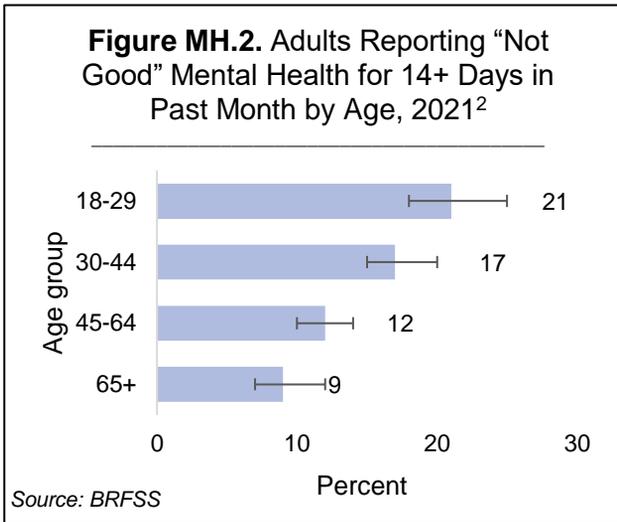
Stakeholders discussed vulnerable populations who have reduced access to essential services and higher rates of mental health problems,⁵ including:

- Older adults (65+)
- Farmers
- Incarcerated people
- Residents in rural areas
- Institutionalized individuals
- Veterans
- LGBTQ+ individuals

*Major depressive episode is defined as a period of two weeks or longer when a person experienced a depressed mood or loss of interest or pleasure in daily activities, and had majority of specified symptoms, such as problems with sleep, eating, energy, concentration, or self-worth (Based on DSM-IV criteria).

Mental health among young adults is of particular concern.

- One in five adults aged 18 to 29 reported their mental health was “not good” for 14+ days in the past month in 2021.²
- Approximately 20% of adults reported having “any” mental illness, with the highest prevalence, 30%, among 18- to 25-year-olds.³
- Suicide was among the top three causes of death among the age groups 15 to 19 and 20 to 24.¹
- In 2018/19, the rate of major depressive episodes and serious suicidal thoughts was highest among 18 to 25 -year-olds (15% and 13%), and trending upward.³



Meaningful relationships are key to mental health, particularly among seniors, as social support and connection are associated with better health outcomes and overall well-being.

“When people are isolated and they don’t feel like they are a part of the community, they are less likely to seek help, to help others. Those are all the protective factors that help our communities do better.”

– Focus group participant

Seniors without meaningful relationships or support networks are at higher risk for poor cognitive functioning and premature mortality.^{6,7,8} Factors strongly related to overall risk of social isolation include:⁸

- Being divorced, separated, or widowed
- Never having married
- Higher levels of poverty
- Having difficulty living independently
- Living with a disability
- Living alone

What is mental health parity and how does it impact access to treatment?

The Mental Health Parity and Addiction Equity Act of 2008 is a federal law that requires the same health insurance coverage for mental health and/or substance use disorder conditions as patients would receive for coverage of medical/surgical services. Pennsylvania passed this act in 2010.¹⁰

Accessing mental health services may be difficult for some populations, especially when considering cost-related barriers associated with lack of parity in insurance reimbursement rates.

In 2017, the average in-network reimbursement rates in Pennsylvania for PPO plans were higher for medical or surgical office visits compared to those for behavioral health visits. Individuals received 17.9% higher reimbursement percent for primary medical care compared to behavioral health care.⁹

Youth mental health and crisis prevention are important issues for Pennsylvanians.

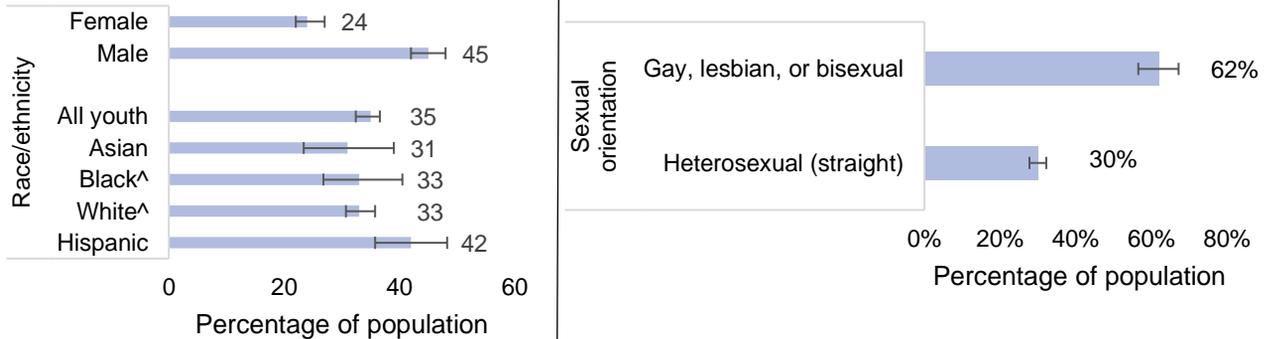
35% 2019
of high school students reported feeling sad or hopeless.¹¹

8% 2019
of high school students attempted suicide.¹¹

- The percent of high school students who, in the past 12 months, felt sad or hopeless almost every day for two weeks or more in a row, so that they stopped doing some usual activities, increased from 28% in 2015 to 35% in 2019.¹¹
- Among High school students, a higher percentage of Hispanic students reported feeling sad or hopeless than non-Hispanic white students.
- Students who identified as lesbian, gay, or bisexual were over twice as likely to experience feeling sad or hopeless, as people identifying as heterosexual.¹¹

- Stakeholders providing services in rural Pennsylvania expressed how the availability of mental health providers offering specialized services is limited, especially considering youth-focused services.
- In 2021, about 17% of students in the 6th, 8th, 10th, and 12th grades reported participating in organized prosocial community activities, a decrease from 24% in 2015.¹² Similar decreases in participation in other school and faith-based prosocial activities are also seen among the students. This could have negative impact on the mental health of the students.

Figure MH.3. High School Students Reporting Feeling Sad/Hopeless by Race and Ethnicity and Sexual Orientation, 2019¹¹



Source: YRBS

Stakeholders discussed the need for widespread prevention efforts and social-emotional learning in schools to address mental health issues.

In 2020, 86% of Pennsylvania secondary schools reported having teachers who tried to increase student knowledge on emotional and mental health in a required course.¹³ Several focus group participants highlighted the need for additional support inside schools, such as school-based health centers, to ease the burden on school counselors and psychologists.

Pennsylvania schools continue to face shortages of school-employed mental health professionals (e.g., school counselors, school psychologists, school social workers), with ratios that far exceed national recommendations.

[^] Non-Hispanic

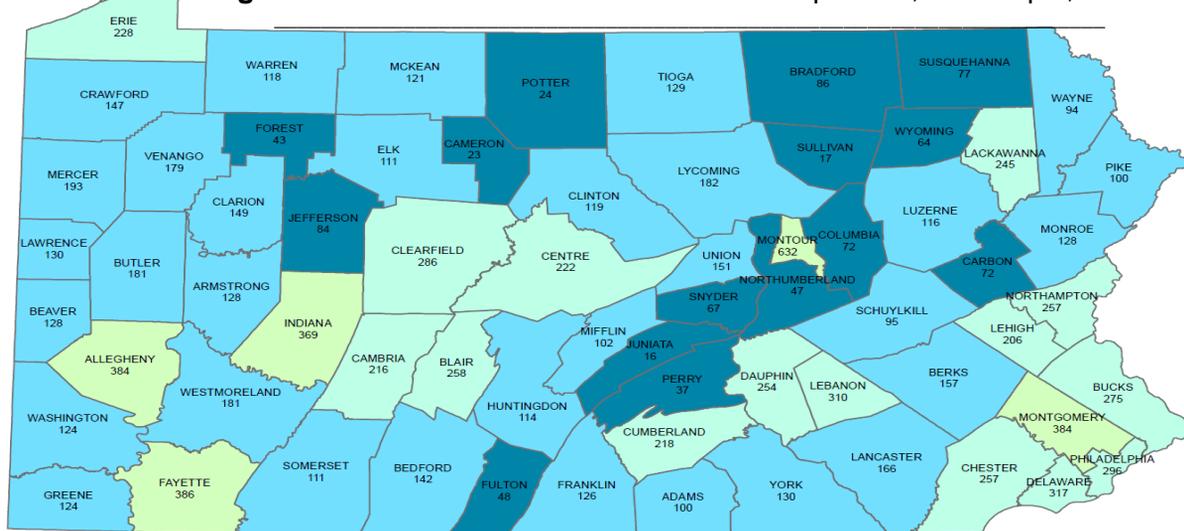
While access to mental health providers has improved in recent years, Pennsylvania continues to face a shortage of licensed clinicians and mental health providers, particularly in rural areas.

Pennsylvania’s ratio of population to mental health providers has improved in recent years from 600:1 people per provider in 2016 to 420:1 in 2021 and the state remains above the national ratio of 350:1.¹⁴ Non-licensed providers face barriers in getting the formal supervision needed for licensure, thus reducing the number of potential providers.⁴

Rural areas face challenges, especially with access to psychiatrists. There are 18 psychiatrists in urban areas, compared to five psychiatrists per 100,000 population in rural areas.¹⁵ Lack of representation across clinicians is an added barrier for those who might benefit from provider-client cultural congruency. In addition to the lack of behavioral health resources in rural counties, additional barriers include transportation, stigma, telehealth, internet access, and technology issues.¹⁶

It is also important to have specialists who focus on older populations such as geriatric psychologists, who play a role in diagnosing of dementia and other chronic diseases of this age group.⁴

Figure MH.4. Rate of Mental Health Providers per 100,000 People, 2021¹⁴



Source: County Health Rankings

“In general, empowering all sorts of care providers, no matter what specialty, to be able to provide mental health care in any sort of integrated platform would be very useful....so that anybody who encounters a provider can feel that someone, somewhere is going to hear them and help them tackle their problems without having to go to a mental health provider specifically.”

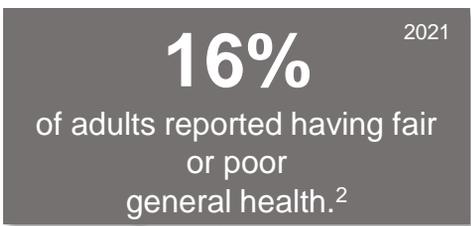
– Focus group participant

Even among those able to access a provider, stakeholders pinpoint challenges in continuity of care and navigation:⁴

- High staff turnover can result in patients seeing multiple providers in a shorter time span, potentially impacting quality of care, connection, and rapport.
- Navigation of paperwork and insurance can complicate access, especially when jumping from provider to provider.
- Lack of communication between health care providers can prevent patients from receiving timely care when facing a crisis.

Well-being is a holistic means of assessing physical and mental health, with important implications for overall quality of life and numerous physical and mental health outcomes.¹⁷

Self-reported physical and mental health are measures of an individual's perceived quality of life. In 2021, the percentage of adults reporting fair or poor general health was particularly high among people making less than \$25,000 per year and people with less than high school education.²



Other factors, like sleep hours, contribute to quality of life. Overall, 35% of Pennsylvanians reported getting an average of six or fewer hours of sleep per night, with a higher percent reported among non-Hispanic Black adults.²

This section summarized priority issues related to mental health and explored:

- Overall mental health in Pennsylvania
- Social isolation
- Access to mental health treatment and parity
- Youth mental health
- Well-being

Visit these SHA sections for additional context:



- [Social Determinants of Health and Equity](#)
- [Injury and Violence](#)
- [Assets](#)

References

1. Pennsylvania Death Certificate Dataset, 2020. Enterprise Data Dissemination Informatics Exchange. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/DeathCntySt.aspx>. Accessed March 1, 2023.
2. Pennsylvania Behavioral Risk Factor Surveillance System (BRFSS), 2021. Enterprise Data Dissemination Informatics Exchange. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/BRFSSstate.aspx>. Accessed March 1, 2023.
3. Interactive NSDUH State Estimates, 2018-2019. United States Substance Abuse and Mental Health Services Administration (SAMHSA). Retrieved from: <https://pdas.samhsa.gov/saes/state>. Accessed November 10, 2021.
4. Research & Evaluation Group at Public Health Management Corporation and Bradbury-Sullivan LGBT Community Center. 2022 Pennsylvania LGBTQ Health Needs Assessment. Retrieved from: https://assets.nationbuilder.com/bradburysullivancenter/pages/2872/attachments/original/1673023325/2022_PA_LGBTQ_HNA_Report_Final_approved.pdf?1673023325. Accessed March 1, 2023.
5. Pennsylvania Statewide Health Assessment and Focus Group Convenings, 2020. Pennsylvania Department of Health. Harrisburg, PA.
6. National Academies of Sciences, Engineering, and Medicine. *Social Isolation and Loneliness in Older Adults: Opportunities for the Health Care System*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/25663>. Accessed August 27, 2020.
7. Cacioppo JT, Cacioppo S. Older adults reporting social isolation or loneliness show poorer cognitive function 4 years later. *Psychosom Med*. 2013; 75(2):161-170. doi:10.1097/PSY.0b013e31827f09cd. Epub Jan 29, 2013. Accessed Aug 27, 2020.
8. America's Health Rankings Senior Report, 2022. America's Health Rankings. Retrieved from: <https://www.americashealthrankings.org/learn/reports/2018-senior-report/senior-report-spotlight>. Accessed March 1, 2023.
9. Melek S, Davenport S, Gray TJ. Addiction and mental health vs. physical health: Widening disparities in network use and provider reimbursement. Retrieved from: http://assets.milliman.com/ekron/Addiction_and_mental_health_vs_physical_health_Widening_disparities_in_network_use_and_provider_reimbursement.pdf. Published 2019. Accessed October 5, 2020.
10. Pennsylvania Insurance Department. Retrieved from: <https://www.insurance.pa.gov/Coverage/Pages/Mental-Health-Parity-FAQs.aspx>. Accessed March 1, 2023.
11. Youth Risk Behavior Survey, 2019. Centers for Disease Control and Prevention (CDC). <https://nccd.cdc.gov/Youthonline/App/Default.aspx>. Published August 2020. Accessed March 1, 2023.
12. Pennsylvania Youth Survey Web Tool. 2021. retrieved from: <http://www.bach-harrison.com/payswebtool/Variables.aspx>. Accessed March 1, 2023.
13. Profiles Report, 2020. Centers for Disease Control and Prevention (CDC). Retrieved from: <https://www.cdc.gov/healthyyouth/data/profiles/pdf/2020/CDC-Profiles-2020.pdf>. Accessed March 1, 2023.
14. County Health Rankings & Roadmaps 2022. University of Wisconsin Population Health Institute. Retrieved from: <https://www.countyhealthrankings.org/app/pennsylvania/2020/measure/factors/62/data>. Accessed March 1, 2023.
15. Area Health Resources Files. United States Department of Health & Human Services, Health Resources and Services Administration (HRSA). Retrieved from: <https://data.hrsa.gov/topics/health-workforce/ahrf>. Accessed October 4, 2021.
16. Svistova J., Lee A., Harris C., etl al. Center for Rural Pennsylvania. Access to Mental Health Services in Rural Pennsylvania. 2022. Retrieved from: <https://www.rural.pa.gov/getfile.cfm?file=Resources/reports/assets/1/Mental%20Health%20Access%20Final%20Report%20January%202022.pdf&view=true>. Accessed September 15, 2023.
17. Well-Being Concepts. Centers for Disease Control and Prevention (CDC). Retrieved from: <https://www.cdc.gov/hrqol/wellbeing.htm>. Published October 2018. Accessed October 5, 2020.

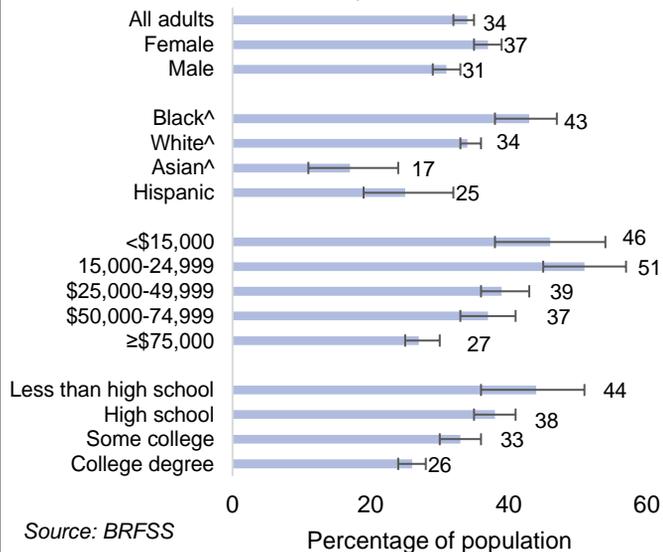


Chronic Diseases

Chronic diseases are a major public health challenge throughout Pennsylvania and the U.S. This section presents overall prevalence of chronic diseases and explores common chronic diseases: cardiovascular disease, cancer, diabetes, obesity, and asthma. This section also reviews tobacco and nicotine use, healthy diet, and physical activity, which are all connected to preventing or managing several chronic diseases.

Data shared in this section are from 2016 to 2021.

Figure CD.2. Adults Who Have Ever Been Told They Had High Blood Pressure, 2021²



- Among white Pennsylvanians, the age-adjusted rate of cardiovascular diseases was 225 per 100,000, compared to 322 per 100,000 Black Pennsylvanians.¹
- In 2021, 7% of residents over 35 reported that they had had a heart attack and 5% reported they had a stroke; people with lower household income and lower educational attainment were at higher risk.²
- In 2021, 34% of adults reported having ever been told they had high blood pressure. Non-Hispanic Black adults, people with household income below \$25,000, and people with high school education or less were particularly at risk for high blood pressure (Figure CD.2).² Among people with high blood pressure, 81% were taking medication for it.

Older Pennsylvanians are especially at risk for chronic diseases including diabetes.

- In 2021, there were 193 diabetes related hospitalizations per 100,000 residents with higher rates among Black residents (420 per 100,000).³ The prevalence of diabetes was 11% in 2021. Moreover, an additional 11% of adults were also told they have pre-diabetes or borderline diabetes.²
- There was low rates of diabetes screening among adults and Medicaid recipients.^{2,4} During 2021, of people diagnosed with diabetes, only 31% had their A1C checked 4 or more times, 73% had a dilated eye exam, and 52% had taken a class on how to self-manage diabetes in the past year.²
- Chronic diseases were more prevalent among people 65 and over compared to people 45 to 64, as shown in table CD.1.

Table CD.1. Prevalence of Chronic Diseases Among People Age 45 to 64 and 65 or over, 2021

Chronic condition	45-64	65+
Diabetes ²	13%	22%
COPD, emphysema or chronic bronchitis ²	8%	12%
Stroke ²	4%	9%
Arthritis ²	35%	55%
Heart diseases ²	5%	11%
Kidney disease ²	3%	7%

Source: BRFSS

[^] Non-Hispanic

Older Pennsylvanians

- Roughly 2.4 million people in Pennsylvania are age 65 or older.⁵
- Among people age 65 and older, 280,000 are living with Alzheimer's disease, the sixth leading cause of death.⁶
- 83% of Pennsylvanians with subjective cognitive decline have at least one chronic condition.⁷
- In 2021, there were 7 Alzheimer's disease related hospitalizations per 100,000 population with higher rates among Hispanic (13 per 100,000).³

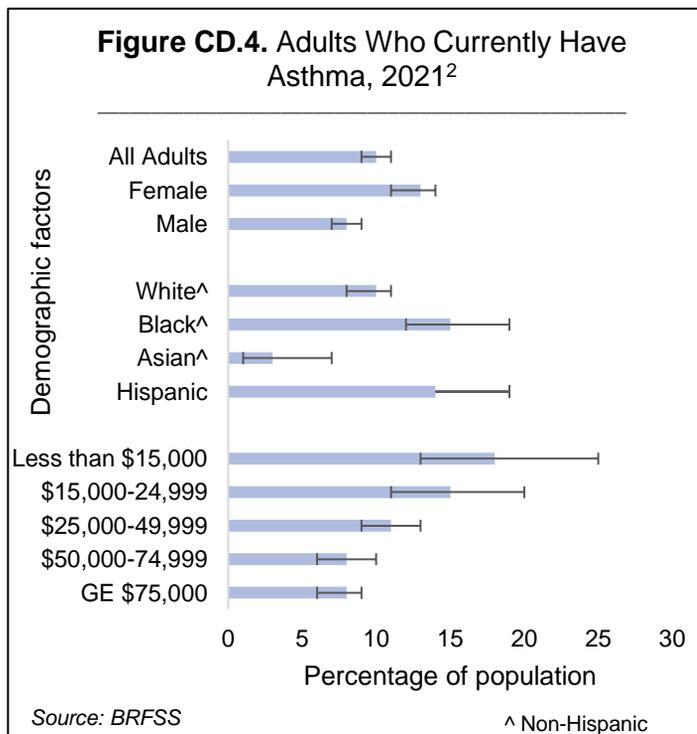
Common cancers in Pennsylvania are breast, lung and bronchus, and prostate cancers.⁸

- In PA in 2020, 27,907 people died from cancer (155 deaths per 100,000 residents); the incidence of cancer in 2019 was 449.5 per 100,000. By county, the age-adjusted rate of all cancer deaths ranged from 129 deaths per 100,000 residents in Centre County to 194 deaths per 100,000 residents in Perry County.^{1,9}
- Black residents were less likely to be diagnosed early and more likely to die of cancer than white residents. The age-adjusted cancer death rate per 100,000 population among residents by race and ethnicity were: Black 183, whites 152, Asian/Pacific Islanders 81, and Hispanic 109.^{1,8}

Early detection is an important part of fighting cancer, yet there are significant differences in who receives cancer screenings.

- In 2020, 79% of females aged 21 to 65 reported that they had a Pap test in the past three years, and 81% of females aged 50 to 74 reported that they had a mammogram in the past two years. People with household incomes \$15,000-24,999 were less likely to receive mammogram screening (67%) compared to people with income ≥\$75,000 (85%). Non-Hispanic Black women have higher rates of pap test (92%) compared to non-Hispanic white women (79%).²
- Colonoscopy was found to reduce colorectal cancer incidence and mortality by 69% and 68% respectively.¹⁰ Approximately 71% of people aged 50 to 75 had a colonoscopy in the past ten years.²

Chronic Obstructive Pulmonary Disease (COPD) and Asthma affect many Pennsylvanians.



- In 2021, there were 79 COPD related hospitalizations per 100,000 population in Pennsylvania. Rates range from 30 per 100,000 in Bedford County to 162 per 100,000 in Philadelphia County; and were higher among Black residents (161 per 100,000).³
- Females, Hispanic adults, and adults with lower household incomes had higher prevalence of asthma than their counterparts (Figure CD.4).²
- Poor air quality can be related to geography, climate, population density, land use, tree cover, and regional industries, and can impact lung function and worsen asthma symptoms.¹¹

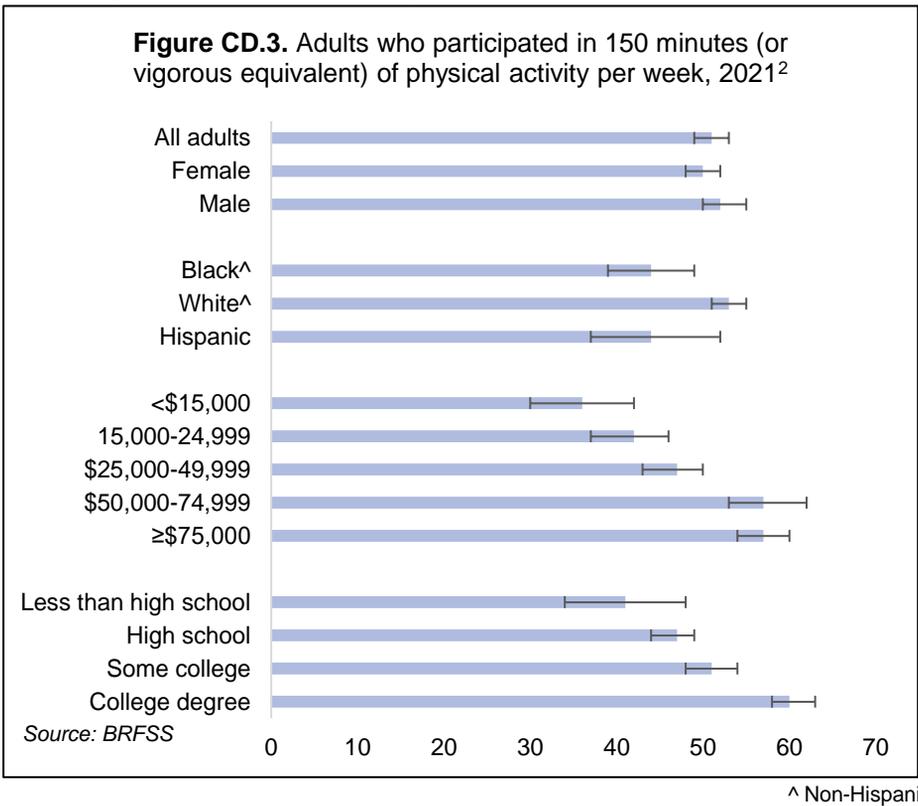
Healthy diet and physical activity can decrease risks of several common chronic conditions.

- Active people generally live longer and have lower risk for serious health problems like heart disease, type 2 diabetes, obesity, and some cancers. Low-income and minority communities often lack convenient places with affordable healthier foods or safe places for exercise.

2019
51%
 of adults exercised 150 minutes or more per week.²

- In 2019, 51% of adults participated in the recommended amount of physical exercise. Non-Hispanic Black, Hispanic, and people with lower educational attainment were less likely to have participated in the recommended amount of physical exercise.²
- Among high school students, 12.6% reported that they did not participate in at least 60 minutes of physical activity on at least 1 day (in any kind of physical activity, during the previous 7 days before taking the survey, that increased their heart rate and made them breathe hard some of the time). Non-Hispanic Black (24.5%), Hispanic (19.3%), and Asian (18.9%) had higher prevalence compared to non-Hispanic white (9.3%). Moreover, lesbian, gay, or bisexual people have higher rates (21.7%) compared to heterosexual people (11%).¹²

Figure CD.3. Adults who participated in 150 minutes (or vigorous equivalent) of physical activity per week, 2021²



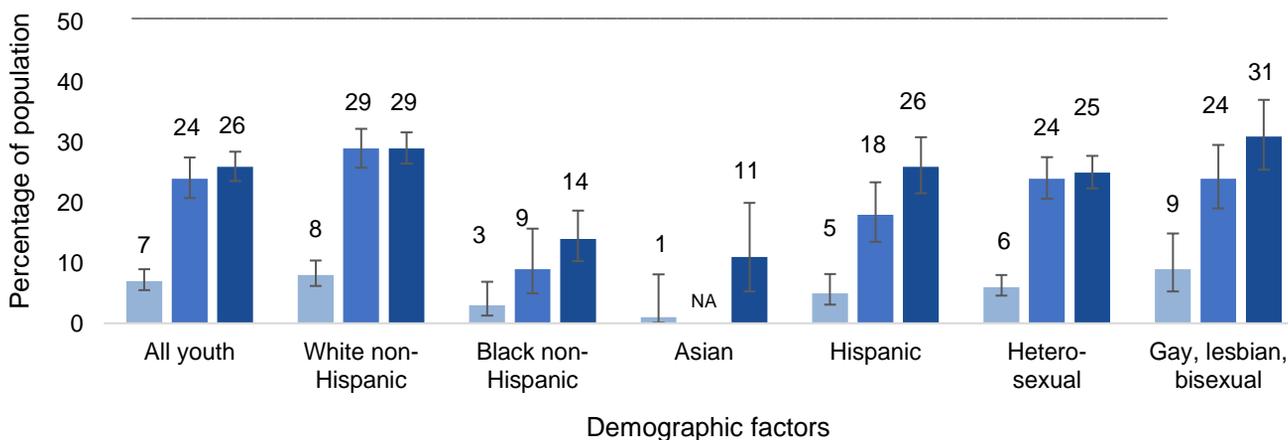
- Vegetables and fruits are an important part of a healthy diet. Consuming diets high in fruits and vegetables can reduce the risk of some chronic diseases including lowering blood pressure, blood sugar, the risk of heart disease and stroke, and preventing some types of cancer. In 2021, Only 14% of adults consumed five or more servings of fruits and vegetables daily.²

- High school students who did not eat vegetables - green salad, potatoes (not counting French fries, fried potatoes, or potato chips), carrots, or other vegetables - during the 7 days before the survey increased from 4.8% in 2009 to 7.9% in 2019 with higher prevalence among non-Hispanic Black (18.1%) compared to non-Hispanic white (6.6%) students. In contrast, high school students who drank sugary carbonated beverages one or more times per day decreased between 2015 (26%) and 2019 (14%).¹²

Smoking and alcohol use among high school students is associated with behavioral and mental disorders, which can extend into adulthood.

- Student use of cigarettes, cigars, smokeless tobacco, or electronic vapor products (at least one day during the 30 days before the survey) increased from 19% in 2017 to 27% in 2019.¹²
- In 2019, about one in four high school students used alcohol at least once in the past month and 11% binge drank.¹²
- Cigarette use among high school students decreased from 18% in 2009 to 7% in 2019, and frequent cigarette use (20 or more days in the past 30 days) decreased from 8% in 2009 to 2% in 2019.¹²
- Use of electronic vapor products was 24% in 2019, and frequent use (20 or more days of use in the past 30 days) of these products increased from 3% to 10% between 2015 and 2019.¹²
- As seen in figure CD.4, non-Hispanic white high school students were more likely to use cigarettes and electronic vapor products compared to non-Hispanic Black and Hispanic students.¹²
- Nearly one in five high school students (20%) were offered, sold, or given an illegal drug on school property in the past year, which has increased from 16% in 2009.¹²
- Gay, lesbian, or bisexual high school students were more likely to experiment with marijuana, prescription drugs, cocaine, and inhalants compared to heterosexual students.¹²

Figure CD.4. High School Students' Use of Cigarettes, Electronic Vapor Products, and Alcohol in Past Month, 2019¹²



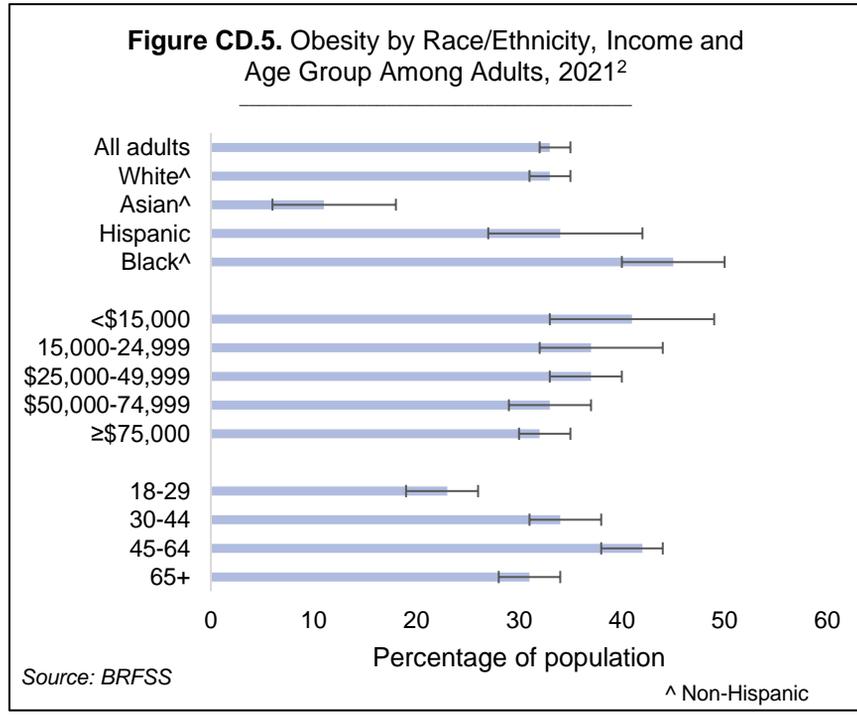
Source: YRBS

“ I would underscore the need for solid, comprehensive, upstream prevention and for it to not get lost. There’s always the next substance and next epidemic. If we lose sight of prevention because we are focused on the immediacy of the epidemic, we are just going to be in Groundhog Day over and over again.”

- Focus group participant

Obesity continues to be a public health challenge. People with obesity have poorer mental health conditions and reduced quality of life.¹¹

- Obesity is associated with increased risk for hypertension, high LDL cholesterol, low HDL cholesterol, type 2 diabetes, coronary heart disease, stroke, gallbladder disease, osteoarthritis, sleep apnea, breathing problems, mental illness, and low quality of life. Being overweight is also a risk factor for many of these outcomes.^{13,14}
- Obesity is also associated with increased risk of adenocarcinoma of the esophagus; cancers of the breast (in postmenopausal women); colon and rectum; endometrium (corpus uterus), gallbladder, gastric cardia; kidney (renal cell); liver; ovary; pancreas; thyroid; meningioma; and multiple myeloma.¹⁵ People with obesity who have bariatric surgery appear to have lower risks of obesity-related cancers than those who do not have bariatric surgery.¹⁴



- In 2019, obesity-related medical care costs in the U.S. were estimated to be \$173 billion.¹⁶
- Obesity prevalence among Pennsylvania adults increased from 29% to 33% between 2011 and 2021.² More non-Hispanic Black, and age group 45-64 had obesity (Figure CD.5).²
- According to the 2017-2018 school health statistics, 18.1% of students (K-12) had BMI \geq 95th percentile for age.¹⁷

Tobacco use among adults has declined from 22% in 2011 to 14% in 2021.

- Smoking is a major risk factor for chronic diseases (cancer, heart disease, stroke, lung diseases, type 2 diabetes, and other chronic health conditions).¹⁸ In Pennsylvania in 2021, 14% of adults were current cigarette smokers.²
- The prevalence of current cigarette smoking was also higher among people who identified as gay, lesbian, or bisexual (21%), people with less than high school education (24%), and with income <\$15,000 (27%).²
- The life loss and economic cost of smoking is huge. About 22,000 Pennsylvania adults die each year from smoking-related diseases and 31% of cancer deaths are attributable to smoking. More than seven billion dollars in annual health care costs in Pennsylvania are directly related to smoking.¹⁹
- Policies to reduce tobacco use have strengthened. The HP2030 goal tax on cigarettes is greater than \$2.60. Pennsylvania has already achieved this goal.²⁰

Dental caries is one of the most common chronic diseases in the country.

- Oral health is an important aspect of an individual's physical well-being. Although dental caries (cavities) and periodontal (gum) disease are highly preventable, dental caries is one of the most common chronic diseases in the U.S.²¹
- During fiscal year 2020-21, among children aged 1-17 in Pennsylvania, about 10.7% reported having oral health problems such as toothaches, bleeding gums or decayed teeth or cavities.²²
- Oral and pharyngeal cancers are increasing in Pennsylvania (24% increase between 2010 and 2019).⁹ In 2019, there were 2,151 oral and pharyngeal cancers diagnoses. The age-adjusted mortality rate was 2.8 per 100,000 residents in 2020.¹
- Pennsylvania Oral Health Plan 2020-2030 identified oral health priority areas including improving access to dental care, preventive services and health literacy, increasing oral health work force, and improving oral health infrastructure.²³

This section summarized priority issues related to chronic disease and explored:

- Overall chronic diseases
- Cardiovascular disease
- Obesity
- Diabetes
- Common cancers
- Asthma
- Physical activity and healthy diet
- Tobacco use
- Oral health

Visit these SHA sections for additional context:



- [Social Determinants of Health, Equity & Racism](#)
- [Substance use](#)
- [Mental health](#)
- [Assets](#)

References

1. Pennsylvania Death Certificate Dataset. Enterprise Data Dissemination Informatics Exchange. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/DeathCntySt.aspx>. Accessed March 6, 2023.
2. Pennsylvania Behavioral Risk Factor Surveillance System (BRFSS). Enterprise Data Dissemination Informatics Exchange. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/BRFSSstate.aspx>. Accessed March 6, 2023.
3. Pennsylvania Health Care Cost Containment Council (PHC4). Enterprise Data Dissemination Informatics Exchange. <https://www.phaim1.health.pa.gov/EDD/WebForms/HospitalDischargeCntySt.aspx>. Accessed January 11, 2023.
4. Joint State Government Commission. Diabetes in Pennsylvania. 2019. Retrieved from: <http://jsg.legis.state.pa.us/resources/documents/ftp/publications/2019-09-25%20DIABETES%209.25.19%20Web.pdf>. Accessed November 23, 2021.
5. Population and Housing Unit Estimates Tables. U.S. Census Bureau. Retrieved from: <https://www.census.gov/programs-surveys/popest/data/tables.html>. Accessed March 6, 2023.
6. Alzheimer's & Dementia: State Overview. Alzheimer's Association. Retrieved from: <https://www.alz.org/professionals/public-health/state-overview/Pennsylvania>. Accessed March 6, 2023.
7. Alzheimer's Disease and Healthy Aging. Centers for Diseases Control and Prevention. Retrieved from: <https://www.cdc.gov/aging/data/infographic/2018/pennsylvania-cognitive-decline.html>. Accessed March 6, 2023.
8. Cancer dashboard, 2019. Pennsylvania Department of Health. Retrieved from: <https://www.health.pa.gov/topics/HealthStatistics/CancerStatistics/dashboard/Pages/Cancer-Dashboard.aspx>. Accessed March 6, 2023.
9. Pennsylvania Cancer Registry Dataset, 2017. Enterprise Data Dissemination Informatics Exchange. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/CancerCntySt.aspx>. Accessed March 7, 2023.

References

10. Shaukat A, Kahi CJ, Burke CA, Rabeneck L, Sauer BG, Rex DK. ACG Clinical Guidelines: Colorectal Cancer Screening 2021. *Am J Gastroenterol*. 2021 Mar 1;116(3):458-479.
11. Guarnieri M, Balmes JR. Outdoor air pollution and asthma. *Lancet*. 2014;383(9928):1581-1592. doi:10.1016/S0140-6736(14)60617-6.
12. Youth Risk Behavioral Survey. Centers for Diseases Control and Prevention. Retrieved from: <https://nccd.cdc.gov/youthonline/App/Results.aspx?LID=PA>. Accessed March 7, 2023.
13. Centers for Diseases Control and Prevention. Health Effects of Overweight and Obesity. Retrieved from: <https://www.cdc.gov/healthyweight/effects/index.html>. Accessed April 7, 2023.
14. Schauer DP, Feigelson HS, Koebnick C, Caan B, Weinmann S, Leonard AC, Powers JD, Yenumula PR, Arterburn DE. Association Between Weight Loss and the Risk of Cancer after Bariatric Surgery. *Obesity (Silver Spring)*. 2017: S52-S57.
15. Centers for Diseases Control and Prevention. Obesity and Cancer.. Retrieved from: <https://www.cancer.gov/about-cancer/causes-prevention/risk/obesity/obesity-fact-sheet#r35>. Accessed April 7, 2023.
16. Centers for Diseases Control and Prevention. Consequences of Obesity. Retrieved from: <https://www.cdc.gov/obesity/basics/consequences.html>. Accessed April 7, 2023.
17. Pennsylvania Department of Health. School Health Statistics. Retrieved from: <https://www.health.pa.gov/topics/school/Pages/Statistics.aspx>. Accessed January 13, 2023.
18. Centers for Diseases Control and Prevention. Tobacco Use. 2021. Retrieved from: <https://www.cdc.gov/chronicdisease/resources/publications/factsheets/tobacco.htm>. Accessed November 24, 2021.
19. Campaign for tobacco free kids. U.S. State and local issues. Broken promise to our children. Pennsylvania. Available at: <https://www.tobacofreekids.org/problem/toll-us/Pennsylvania>. Accessed March 7, 2023.
20. Health People 2030. Pennsylvania Department of Health. Retrieved from: <https://www.health.pa.gov/topics/HealthStatistics/HealthyPeople/Documents/current/state/tobacco-use.aspx>. Accessed March 7, 2023.
21. Hygiene-related Diseases. Centers for Disease Control and Prevention. Retrieved from: https://www.cdc.gov/healthywater/hygiene/disease/dental_caries.html. Accessed June 20, 2020.
22. National Survey of Children's Health (NSCH), 2018-2019. Data Resource Center for Child & Adolescent Health. Retrieved from: <https://www.childhealthdata.org/browse/survey>. Accessed March 7, 2023.
23. Pennsylvania Oral Health Plan 2020-2030. 2020. Pennsylvania Department of Health. Retrieved from: <https://www.health.pa.gov/topics/Documents/Programs/Pennsylvania%20Oral%20Health%20Plan%202020-2030.pdf>. Accessed March 7, 2023.



Maternal and Infant Health

The Maternal and Infant Health section describes the health of women* related to pregnancy, childbirth, and postpartum periods, family planning, and infant health. This section addresses disparities in maternal and infant health outcomes, such as infant mortality, maternal mortality, low birthweight, and preterm live births, followed by an examination of social determinants of health and racism as driving forces of these disparities. The section discusses the need for culturally responsive health care services that cover the lifespan. Substance use and mental health data for pregnant and parenting women are also shared as are infant health, breastfeeding, and reproductive health and health services.

Data shared in this section are from 2013 to 2021.

* Although it is recognized that not all individuals who may become pregnant or who interact with reproductive health services are cisgender women, this SHA did not explore the unique needs of non-binary and transgender individuals. Secondary data sources may or may not have included gender minorities in their samples. To be congruent with available data, the term “women” is used throughout this section to refer to people using reproductive health services and experiencing pregnancy.

There are disparities in maternal and infant health outcomes across Pennsylvania.

- Maternal mortality (i.e, death during pregnancy or within 42 days of delivery) is increasing in the U.S.¹ In Pennsylvania, Black mothers and infants were twice as likely to die than their white counterparts (Figure MIH.1 and Table MIH.1).^{2,3}
- In 2018, pregnancy-associated mortality ratios (defined as the death of a woman while pregnant or up to one year from the end of a pregnancy) was 82 deaths per 100,000 live births. Non-Hispanic Black people had two times higher rates of maternal mortality compared to non-Hispanic white. Moreover, individuals giving birth in the 40+ age category had more than two times higher pregnancy-associated mortality ratio compared to individuals giving birth in the 25-29, 30-34 and 35-39 age categories.⁴
- Factors associated with pregnancy-associated deaths include less than high school and high school, inadequate prenatal care, and accidental poisoning (drug-related overdose deaths).^{4,5,6}
- Severe maternal morbidity (SMM) is increasing in Pennsylvania. From 2010 to 2021, the rate of SMM increased by 69%. In 2021, there were 110 SMM cases among 10,000 in-hospital deliveries with higher rates among Black (176 per 10,000), Hispanic (117 per 10,000), and age group 35-55 (162 per 10,000).⁷
- Preterm birth and low birthweight rates were higher among Black than white pregnant persons in 2019.⁸
- Both preterm birth and low birthweight are associated to increased risk of death and potential lifelong disabilities. Preterm birth occurs when a baby is born prior to completing 37 weeks of pregnancy. Low birthweight occurs when a baby is born weighing less than five pounds, eight ounces and can be caused by preterm birth.⁹
- Complications and causes of infant deaths can be attributed to birth defects, low birthweight, pregnancy complications, Sudden Unexpected Infant Death (SUID), and injuries.¹⁰
- In Pennsylvania, prematurity and SUID are among the leading causes of infant deaths.¹¹

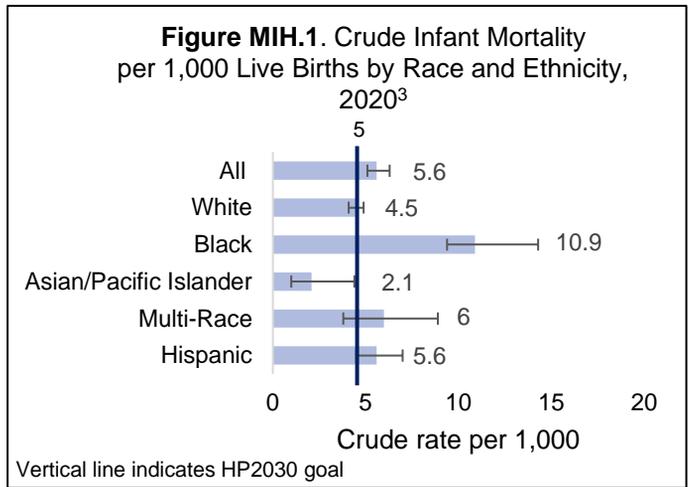
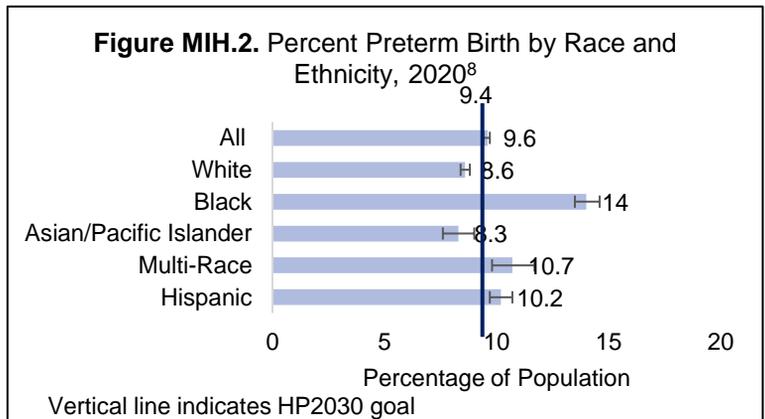


Table MIH.1. Maternal Mortality per 100,000 by Race, 2015-2019²

	Maternal mortality rate per 100,000 live births	HP2030 goal
All	10.9	15.7
White	8.9	15.7
Black	22.0	15.7



Disparities in maternal health and birth outcomes are driven by many factors, including inequities in social determinants of health and racism.

There are well-documented, individual-level risk factors for poor birth outcomes, such as age, marital status, income, and health behaviors. Yet, individual-level factors alone do not account for the racial disparities seen in preterm birth, low birthweight, and infant mortality.¹²

Structural racism refers to “the ways in which societies foster racial discrimination through mutually reinforcing systems of housing, education, employment, earnings, benefits, credit, media, health care, and criminal justice.” One way to improve population health, including maternal health, is through the dismantling of these structures of systemic racism.¹³

“Your ZIP code impacts your health much more than your genetics.”

- Focus group participant

Stakeholders raised nearly every aspect of social determinants of health when discussing maternal and infant health. They identified additional populations that experience adverse birth outcomes, including rural and urban residents, low-income individuals, immigrants, undocumented individuals, people who are uninsured and underinsured, and populations lacking culturally appropriate services.

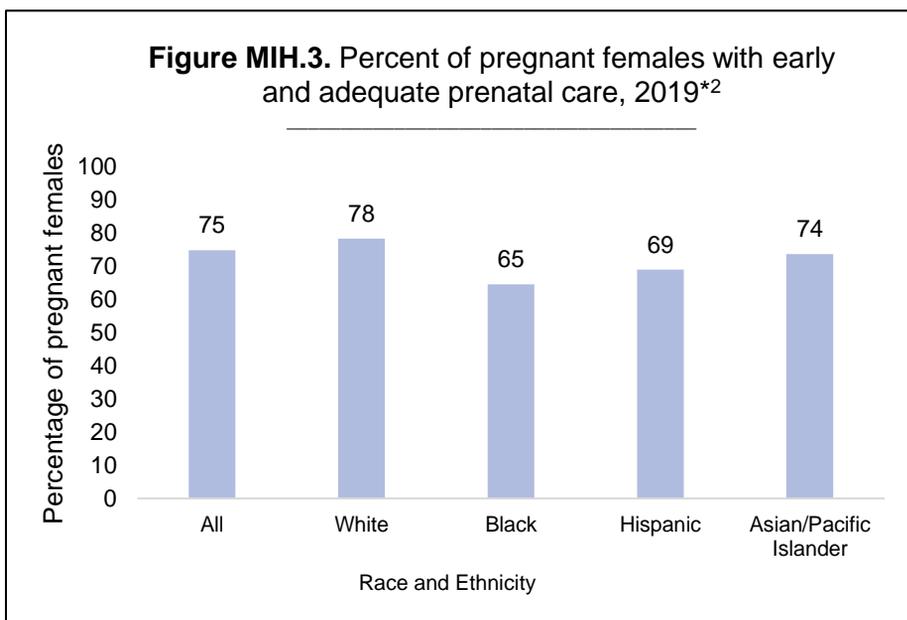
They stressed that basic needs must be met before health can improve.

“There is a lack of access – you can almost insert anything here – to fresh fruit and vegetables, transportation, education.”

- Focus group participant

Many women of all races and ethnicities in Pennsylvania are not receiving early and adequate prenatal care.

- Early and adequate prenatal care is important for the health of the pregnant person. The HP2030 goal for early and adequate prenatal care is 80.5%. Overall, 74.7% of pregnant persons received early and adequate prenatal care in 2019 (see Figure MIH.3). Receipt of early and adequate prenatal care was higher among white pregnant women compared to Black pregnant women.²



* Early and adequate prenatal care is defined as adequate or adequate plus (intensive) per Kotelchuck's Adequacy of Prenatal Care Utilization Index.

Reproductive health is an integral part of overall health, and preventative services are crucial for lowering health risks.

2019-2021

75%

of women with a recent live birth said that either they or their partner was doing something to prevent pregnancy after delivery.¹⁴

2019-2020

75%

of women 18 to 44 had a preventive medical care visit in the past year.¹⁵

2019

11%

of sexually active high school students did not use any contraception at last sexual intercourse.¹⁶

- Pennsylvania ranked 15 among 50 states for women who had a preventive medical visit (well-woman visit) in the past year.¹⁵
- During 2019-2021, about three in four women with a recent live birth said that they or their partner were doing something to prevent pregnancy after delivery.¹⁴
- Between 1990 to 2020, teen births have declined by 73%. Yet in 2019, 3.7% of births were to teens (15 to 19 years old), with a higher prevalence among Black and multi-race women compared to white women.⁸

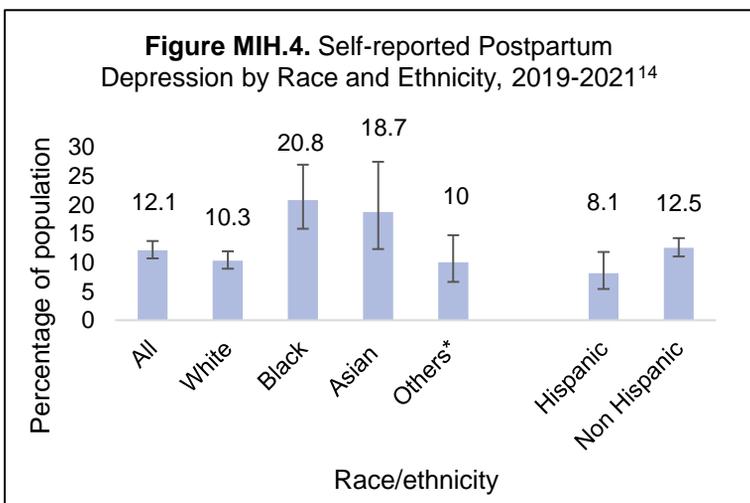
There is concern regarding stress among women and young families, their need for more personal connections and support, and improved access to mental health treatment.

Between 2019 and 2021, in the three months prior to pregnancy, 28% of women with a recent live birth reported experiencing anxiety and 17% reported experiencing depression. Approximately 12% of women reported postpartum depression.¹⁴

Black and Asian women were more likely to report postpartum depression as compared to white women (see Figure MIH.4).¹⁴

“ We need to mitigate stress and toxic effects, talk about building strengths and resilience... Some say that having one safe, nurturing, positive relationship can be that mitigating factor. How do we do that for moms so that they can be the resilient source for the child?”

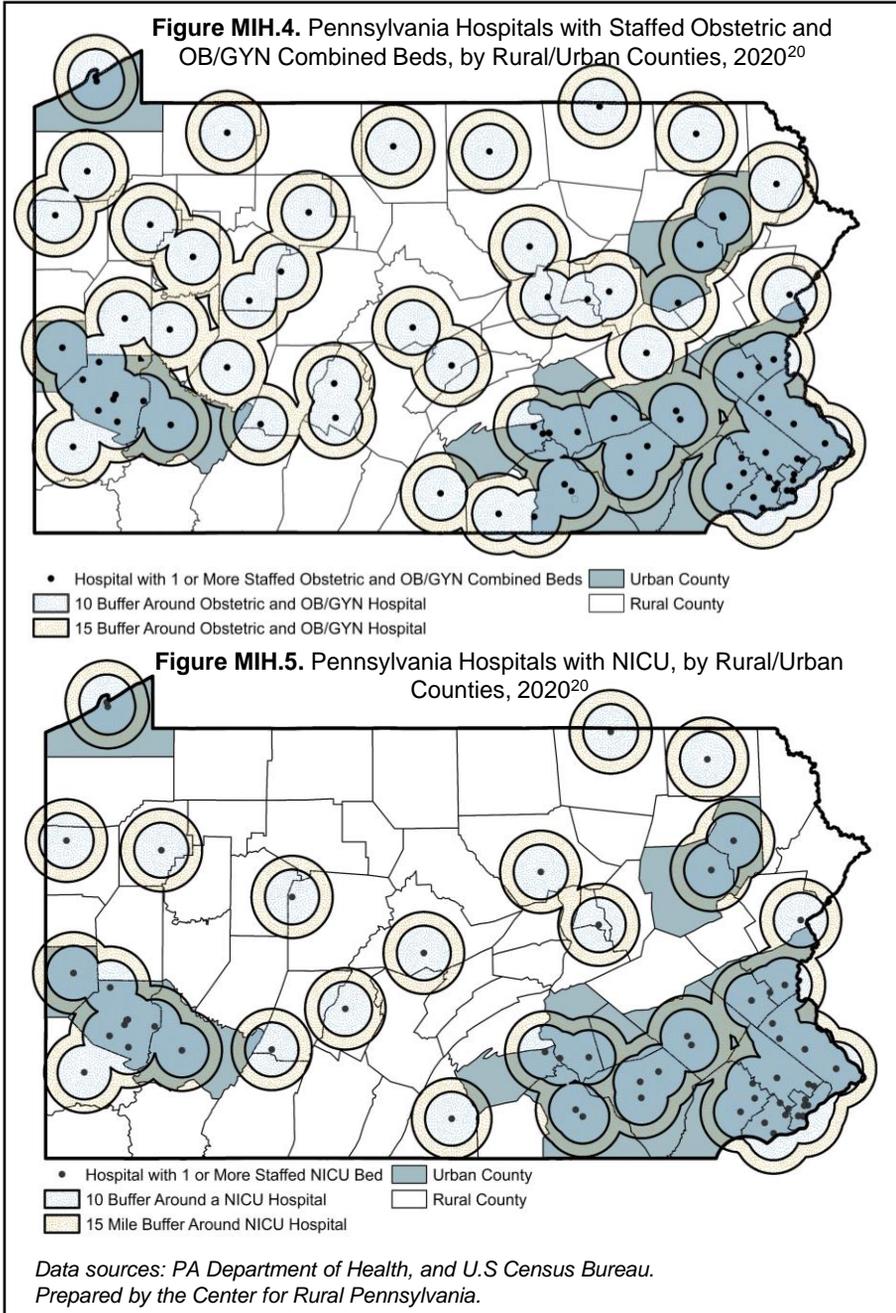
– Focus group participant



*Others include American Indian, Hawaiian, Alaskan Native, Mixed race

Women may struggle with other aspects of continuous health care access.

- Roughly 32,000 women in Pennsylvania live in a maternity care desert,¹⁷ where care is limited or absent through lack of services or other barriers to access.¹⁸
- There was significant rural/urban disparity in access to obstetric and Neonatal Intensive Care Units (NICU) services in Pennsylvania (Figure MIH.4 and MIH.5) .

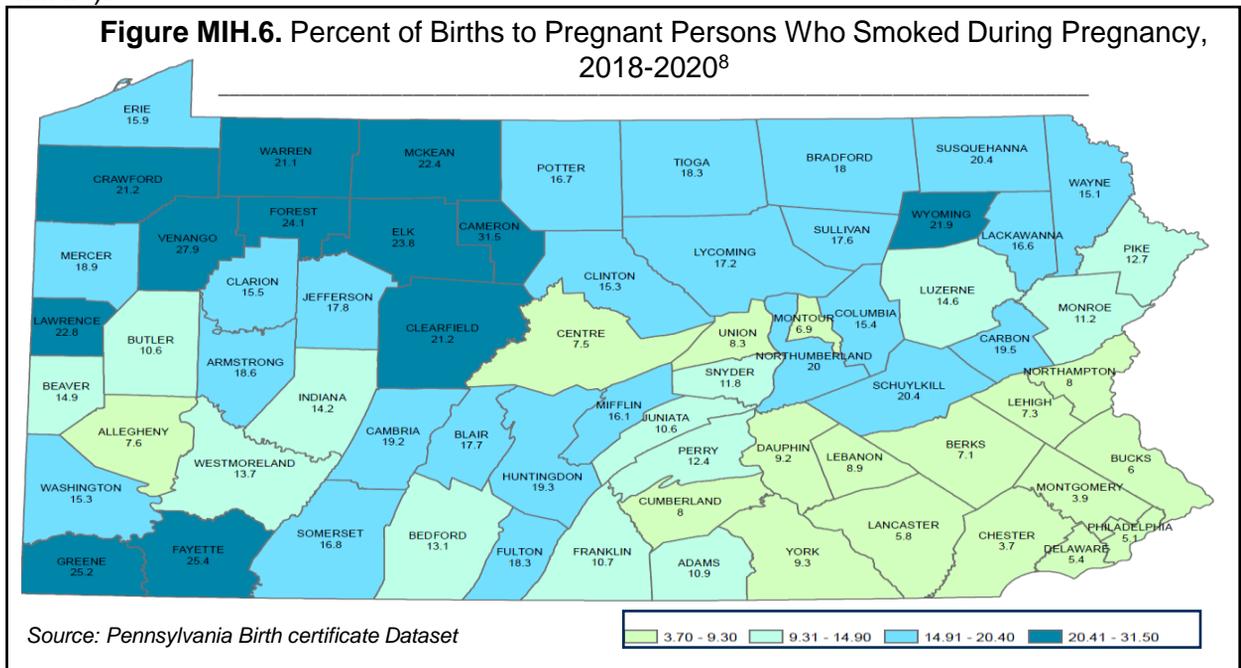
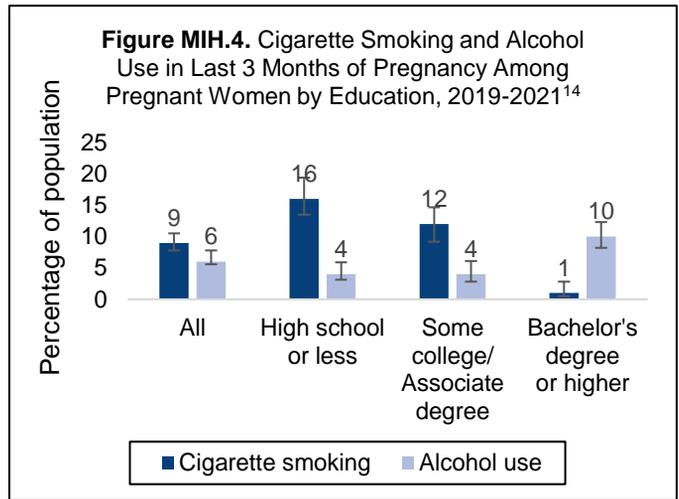


Focus group respondents identified access to health care challenges in the state to include the following:¹⁹

- a lack of accessible providers in rural and urban areas due to transportation challenges, provider shortages, and the merging of hospitals;
- insurance barriers preventing adequate health care before and after pregnancy;
- the stress associated with trying to access various types of care at multiple locations within typical business hours, while working and caring for children;
- lack of awareness of resources and services; and
- health information that is not communicated effectively to low-literacy populations and to people for whom English is not their first language.

- In Pennsylvania, in 2020, 95% of urban residents were living within 15 miles of a hospital with NICU but only 45% of rural residents were living within 15 miles of a hospital with NICU.²⁰
- Access to hospital-based OB/GYN services can be threatened by closures of those units when small rural hospitals join larger, urban health systems. In addition, 10 rural counties in the state do not have a hospital, further impacting access to local maternal and infant health services.

- Stakeholders spoke about substance use during pregnancy, including illicit substances, alcohol, and vaping, which is taking the place of tobacco.
- Cigarette smoking was higher and alcohol use was lower among pregnant women with lower educational attainment. Of people who had a live birth, 9% smoked in the last three months of pregnancy and 6% consumed alcohol, (Figure MIH.4).¹⁴ Smoking during pregnancy varied across the state from 3.7% in Chester County to 31.5% in Cameron County (Figure MIH.6).⁸



- Between 2000 and 2016, maternal hospital stays involving any substance increased from 15 to 40 per 1,000 hospital stays.²¹
- Close to 49% of maternal hospital stays with substance use in 2016-2017 involved an opioid drug.²¹
- Neonatal Abstinence Syndrome (NAS) is a newborn withdrawal syndrome due to prenatal exposure to opioids, benzodiazepines, or barbiturates. Newborns with NAS have higher rates of respiratory distress, difficulty feeding, low birth weight, prematurity, and added an estimated \$15.2 million in hospital payments in 2018.²²
- There were 1,825 NAS-related newborn hospital stays in Pennsylvania in 2020.²³ The rate of NAS in newborns increased by more than 1000% (from 1.2 to 15.0 per 1,000 newborn stays) between 2000-2001 and 2016-2017.²⁴ NAS was highest among residents who were white, from rural parts of the state, and had lower household incomes.^{19,23}

2016-2017

1 in 25

maternal hospital stays had substance use present.¹⁸

Physical exercise, regular well-checks, and breastfeeding are important aspects of infant health.

The American Academy of Pediatrics provides the “Periodicity Schedule,” which outlines the screenings and assessments that are recommended at well-child visits from infancy through adolescence.²⁵ Pennsylvania ranked 11 of 50 states for children receiving one or more preventive services.²⁶

Breastfeeding is beneficial to both woman and infant. Breast-fed infants have a reduced risk of many conditions, including asthma, obesity, type 1 diabetes, and SUID. Women who breastfeed have a reduced risk of high blood pressure, type 2 diabetes, and ovarian and breast cancers.²⁷

Breastfeeding initiation was less common among Black and multi-race infants compared to white infants.⁷ Breastfeeding barriers include lack of provider and hospital support, the need for the woman to return to work, inflexible work environments, and lack of breastfeeding knowledge and social support.²⁸

Women younger than 25 were also less likely to initiate breastfeeding. However, initiation of breastfeeding increased in women aged 20-24 from 60% in 2009 to 76% in 2020.⁸

Regular exercise during pregnancy benefits the pregnant person and the baby. Between 2019 - 2021, 40% of pregnant women reported doing exercise at least three days per week during the 12 months before pregnancy. Women with low income and lower educational attainment were less likely to exercise before pregnancy.¹⁴

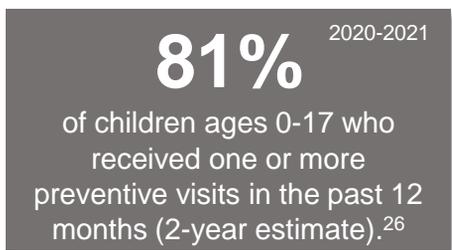


Table MIH.2. Infants Ever Breastfed, 2020⁸

Race and ethnicity	Percentage breastfed
All	82%
White	83%
Black	76%
Hispanic	81%
Asian/Pacific Islander	89%
Multi-race	81%

This section summarized priority issues related to maternal and infant health and explored:

- Infant and maternal mortality
- Low birthweight and preterm birth
- Racism and social determinants of health
- Healthcare quality and access
- Mental health and substance use
- Infant health
- Reproductive health and health services

Visit these SHA sections for additional context:



- [Social Determinants of Health, Equity & Racism](#)
- [Injury and violence](#)
- [Assets](#)

References

1. Thomas ME, Declercq ER. All-Cause Maternal Mortality in the US Before vs During the COVID-19 Pandemic. *JAMA Netw Open*. 2022;5(6):e2219133.
2. Pennsylvania Healthy People 2030. Pennsylvania Department of Health. Retrieved from: <https://www.health.pa.gov/topics/HealthStatistics/HealthyPeople/Documents/current/state/index.aspx>. Accessed March 8, 2023.
3. Pennsylvania Death Certificate Dataset. Enterprise Data Dissemination Informatics Exchange.. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/BirthCntySt.aspx>. Accessed March 8, 2023.
4. Pennsylvania Department of Health. Pregnancy Associated Deaths in Pennsylvania, 2013–2018. Retrieved from: <https://www.health.pa.gov/topics/Documents/Diseases%20and%20Conditions/Pregnancy%20Associated%20Deaths%202013-2018%20FINAL.pdf>. Accessed on November 18, 2021.
5. Pennsylvania Department of Health. Pennsylvania Maternal Mortality Review: 2021 Report. Retrieved from: <https://www.health.pa.gov/topics/Documents/Programs/2021%20MMRC%20Legislative%20Report.pdf>. Accessed on March 10, 2022.
6. Philadelphia Department of Public Health. Maternal Mortality in Philadelphia. Retrieved from: <https://www.phila.gov/media/20210322093837/MMRReport2020-FINAL.pdf>. Accessed April 4, 2023.
7. U.S. Department of Health & Human Services. Agency for Healthcare Research and Quality. Retrieved from: <https://dataools.ahrq.gov/hcup-fast-stats>. Accessed on March 8, 2023.
8. Pennsylvania Birth Certificate Dataset, 2020. Enterprise Data Dissemination Informatics Exchange. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/BirthCntySt.aspx>. Accessed March 8, 2023.
9. Low Birthweight. March of Dimes. Retrieved from: <https://www.marchofdimes.org/complications/low-birthweight.aspx>. Published March 2018. Accessed September 25, 2020.
10. Infant Mortality. Centers for Diseases Control and Prevention. Retrieved from: <https://www.cdc.gov/reproductivehealth/maternalinfanthealth/infantmortality.htm>. Accessed March 8, 2023.
11. Pennsylvania Department of Health. 2021 Pennsylvania Child Death Review Annual Report. 2021. Retrieved from: <https://www.health.pa.gov/topics/Documents/Programs/2021%20CDR%20Annual%20Report.pdf>. Accessed June 28, 2022.
12. Matoba N, Collins JW. Racial disparity in infant mortality. *Seminars in Perinatology*. 2010;41:354-359.
13. Bailey ZD, Kreiger N, Agenor M, Graves J, Linos N, Bassett MT. Structural racism and health inequities in the USA: Evidence and interventions. *The Lancet*. 2017;389:(10077):1453-1463. doi: [https://doi.org/10.1016/S0140-6736\(17\)30569-X](https://doi.org/10.1016/S0140-6736(17)30569-X). Accessed September 25, 2020.
14. Pennsylvania Department of Health. Pregnancy Risk Assessment Monitoring System (PRAMS). Data request .
15. Well-Woman Visit. America's Health Rankings. Retrieved from: https://www.americashealthrankings.org/explore/health-of-women-and-children/measure/well_woman_visit_women/state/PA. Accessed March 9, 2023.
16. Youth Risk Behavioral Survey (YRBS), 2019. Centers for Diseases Control and Prevention (CDC). [cdc.gov](http://www.cdc.gov). Retrieved from: <https://nccd.cdc.gov/youthonline/App/Results.aspx?LID=PA>. Accessed March 9, 2023.
17. Healthy Moms. Strong Babies. March of Dimes. [marchofdimes.org](http://www.marchofdimes.org). Retrieved from: https://www.marchofdimes.org/peristats/tools/ReportFiles/HMSB/Healthy%20Moms%20Strong%20Babies_Pennsylvania.pdf. Published 2018. Accessed May 2, 2023.
18. Nowhere to Go: Maternity Care Deserts Across the U.S. March of Dimes. Retrieved from: <https://www.marchofdimes.org/maternity-care-deserts-report>. Published 2018. Accessed May 2, 2023.
19. Pennsylvania Department of Health. 2020. Pennsylvania Statewide Health Assessment and Focus Group Convenings. Harrisburg, PA. Accessed August 2020
20. Center for Rural Pennsylvania resource. Maternity Data: Post Birth Outcomes and Resources. 2022. Data request.
21. Maternal Hospital Stays involving Substance Use and Opioids. Pennsylvania Health Care Cost Containment Council (PHC4). Retrieved from: http://www.phc4.org/reports/researchbriefs/opioids/17/docs/researchbrief_opioids17.pdf. Published March 2018. Accessed September 17, 2020.
22. Hospitalizations for Newborns with Neonatal Abstinence Syndrome. Pennsylvania Health Care Cost Containment Council (PHC4). Retrieved from: http://www.phc4.org/reports/researchbriefs/neonatal/18/docs/researchbrief_neonatal18.pdf. Published March 2018. Accessed September 17, 2020.
23. Pennsylvania Department of Health. Neonatal Abstinence Syndrome: 2020 report. Retrieved from: <https://www.health.pa.gov/topics/Documents/Opioids/2020%20NAS%20REPORT.pdf>. Accessed March 9, 2023.
24. Hospitalizations for Newborns with Neonatal Abstinence Syndrome. Pennsylvania Health Care Cost Containment Council (PHC4). Retrieved from: https://www.phc4.org/reports/researchbriefs/neonatal/17/docs/researchbrief_neonatal2017.pdf. Accessed September 17, 2021.
25. Periodicity Schedule. American Academy of Pediatrics. Retrieved from: <https://www.aap.org/en-us/professional-resources/practice-transformation/managing-patients/Pages/Periodicity-Schedule.aspx>. Accessed September 17, 2020.
26. Well-Woman visit and Well-Child visit. America's Health Rankings. Retrieved from: https://www.americashealthrankings.org/explore/health-of-women-and-children/measure/wellchild_visit_0to17/state/PA. Accessed March 9, 2023.
27. Breastfeeding: Why It Matters. Centers for Diseases Control and Prevention. Retrieved from: <https://www.cdc.gov/breastfeeding/about-breastfeeding/why-it-matters.html>. Published November 4, 2019. Accessed September 17, 2020.
28. Bearegard JL, Hamner HC, Chen J, Avila-Rodriguez W, Elam-Evans LD, Perrine CG. Racial Disparities in Breastfeeding Initiation and Duration Among U.S. Infants Born in 2015. *Morbidity and Mortality Weekly Report*. 2019;68(34):745-748. doi: <http://dx.doi.org/10.15585/mmwr.mm6834a3>.



Injury and Violence Prevention

Injury and violence prevention is another high-priority topic in Pennsylvania. This section examines preventable causes of death, including unintentional injuries and homicides. The section then reviews violent crime and the impact of violence, including sexual violence, intimate partner violence, and child maltreatment, on overall quality of life. Youth violence is another focus area, featuring issues such as bullying, juvenile arrest rates, and risk of violence and violent behaviors. The section also briefly reviews pedestrian safety and motor vehicle accidents. The section concludes with a discussion of firearms, firearm safety, and the prevalence of hate crimes across the state.

Data shared in this section are from 2015 to 2022.

Unintentional injuries and preventable deaths are priority issues for Pennsylvanians with high rates of fatal injuries.

In 2020, in Pennsylvania, there were 12,436 fatal injuries with an estimated healthcare and statistical life cost of \$117 billion.¹ Most fatal injuries were due to unintentional injuries accounting for 9,565 (77.9%) of deaths.

Unintentional injuries are injuries that are not deliberate or done with purpose. These include unintentional poisoning, road traffic injuries, falls, burns, and drowning.

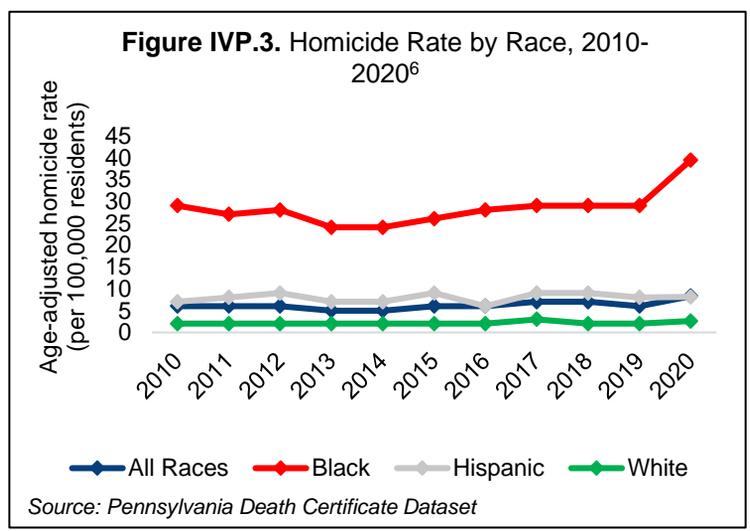
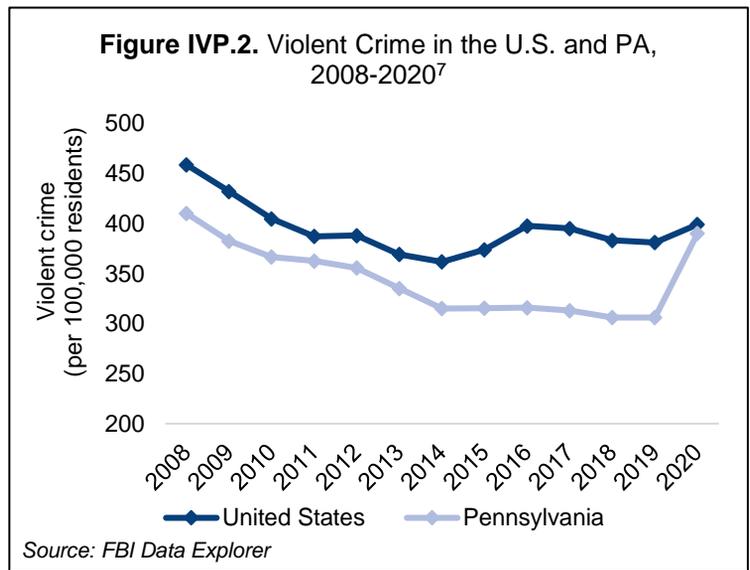
The major causes of unintentional injuries included drug poisoning (50.7%), falls (22.4%), motor vehicle accidents (12.3%), and suffocation (4%). Suicide accounted for 13.6% of deaths and homicides accounted for 8% of fatal deaths.² Due to the strong correlation between suicides and mental health, suicide related deaths are discussed in detail in the mental health section.

Experiences of violence impact quality of life, can have lasting emotional, physical, and financial effects, and may contribute to premature death.^{3,4}

In 2021, Pennsylvania ranked 22nd of 50 states for its violent crime rate (306 per 100,000) (first being the safest state), which includes rapes, robberies, aggravated assaults, and homicides.⁵ During the past five years, Pennsylvania has stayed in the middle quintile for state violent crime rates.

In 2020, a total of 988 homicides occurred in Pennsylvania, 36% increase from 2019. Philadelphia, Montour, Lycoming, Delaware, and Allegheny counties had significantly higher 5-year homicide rates compared to the rest of the state.⁶

The rate of homicides in Pennsylvania was 8.3 per 100,000 residents in 2020 and approximately 15 times higher among Black residents (39.4 per 100,000) compared to white residents (2.6 per 100,000). The disparity was even higher among young Black males in which the rate of homicide among Black males ages 15-19 was about 47 times higher compared white males ages 15-19. Over the past five years, while the rate of homicides among white residents held steady, there was an increase among Black residents.⁶



Violent crime is costly for victims, and the resulting financial burden may compound the negative effects of an already traumatic experience.

Table IVP.1. Victim Compensation by Crime Type, Fiscal Year 2020⁸

Types of crime	Amount paid	% Total
Child sexual abuse	\$ 3,272,118	29.2%
Assault	\$ 3,164,093	28.2%
Homicide	\$ 2,132,964	19.0%
Sexual assault	\$ 1,245,207	11.1%
Fraud/finance crimes	\$ 568,747	5.1%
Robbery	\$ 241,466	2.2%
Other vehicular crimes	\$ 150,258	1.3%
DUI/DWI	\$ 145,486	1.3%
Child physical abuse/neglect	\$ 119,248	1.1%
Burglary	\$ 95,666	0.9%

In fiscal year 2020, the Victims Compensation Assistance Program (VCAP) approved compensation for 6,107 applications. In total, VCAP awarded \$ 11,221,209 for expenses related to approved claims (Table IVP.1).⁸

A stark majority (76%) of approved victim compensation was paid for child sexual abuse, assault, and homicide, highlighting the costly nature of these crimes.

Source: Pennsylvania Commission On Crime And Delinquency

With Pennsylvania’s growing senior population, elder abuse and neglect remain important areas of focus.

Symptoms of elder abuse and neglect may include weight loss, isolation, depression, bruises or broken bones, increased confusion, and unusual withdrawals from any account.⁹ Statewide reports of elder abuse increased by 63% between fiscal year 2015-16 to 2020-21 from 24,413 to 39,820. The average number of cases that were substantiated was 38%, higher than the previous year (36%).¹⁰

In fiscal year 2021-22, 58.3% of the total reports for older adult protective services were due to caregiver or self-neglect.¹¹

Hate crimes are violent or property crimes based in prejudice and serve to terrorize persons holding marginalized identities.

Hate crimes are believed to be under-reported. This could be due to reluctance of victims to report the offense to law enforcement or the reluctance of law enforcement to appropriately classify the offense as a hate crime.¹²

There were a total 91 hate crimes in 2020. Most hate crimes (76%) were committed due to bias against race, ethnicity, or ancestry, followed by bias against religion (16%) and sexual orientation (6.1%).¹³

In 2021, there were 30 known hate groups in Pennsylvania, accounting for approximately 4% of the nation’s 733 active groups.¹⁵

What is the legal definition of a hate crime?

Hate crimes are defined as those committed criminal offenses that are “motivated, in whole or in part, by the offender’s bias(es) against a race, religion, disability, sexual orientation, ethnicity, gender, or gender identity.”¹⁴

Females, people of color, and the elderly are especially vulnerable to experiences of violence, as shown by disproportionately high rates of sexual, domestic, and intimate partner violence.

2021

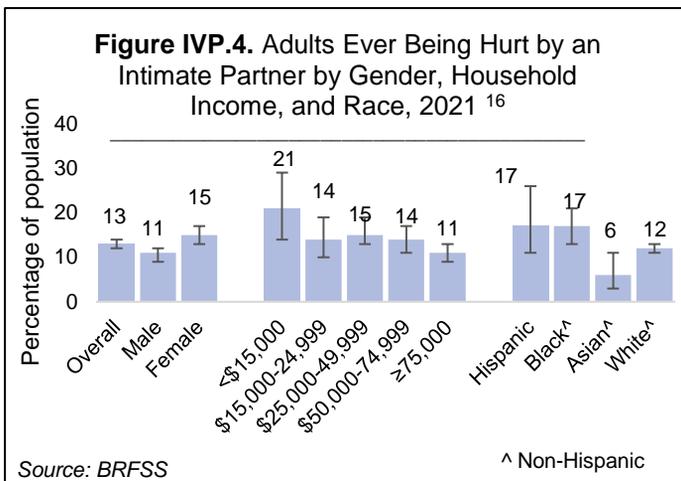
13%

of adults reported ever being hit, slapped, pushed, kicked, or hurt in any way by an intimate partner.¹⁶

2021

6%

of females reported ever experiencing unwanted sex by a current or former intimate partner.¹⁶



- In 2021, about 13% of adults reported being physically hurt by an intimate partner and 6% reported experiencing unwanted sex by a current or former intimate partner. Intimate partner violence was higher among females and low household income brackets (Figure IVP.4).¹⁶
- Between 2013 and 2020, the rate of reported rapes increased from 30 per 100,000 to 33 per 100,000.⁶ In 2015, approximately 4% of adults reported experiencing unwanted sex by a current or former intimate partner, reported higher among females (7%) than males (1%).
- In 2021, 112 victims lost their lives to domestic violence in Pennsylvania. This number includes 70 females and 42 males. Additionally, there were 40 perpetrator deaths. About 56% were killed by a current or former intimate partner; 63% killed with a firearm.¹⁷
- Domestic violence may be underreported due to several reasons including fear, emotional and mental abuse, lack of information, or lack of financial resources. Pennsylvania Coalition Against Domestic Violence report shows that during 2020-2021, about 80,000 survivors were served and over 91,000 hotline calls were answered.¹⁸

“ During COVID our domestic shelter has been full...pretty much brimming over because of the close quarters. So, there is a significant uptick in domestic violence during this time.”
 – Focus group participant

Intimate partner violence is of particular concern for females aged 17 to 24, as later patterns of intimate partner violence may begin through early experiences of relationship abuse during adolescence.¹⁹

- Approximately 10% of high school students reported experiencing sexual violence in the last year.²⁰ Reports included unwanted kissing or touching and being physically forced to have sexual intercourse.²⁰
- Sexual violence was two times higher among students identifying as gay, lesbian, or bisexual (19%) than heterosexual students (9%), and four times higher among females (17%) than males (4%).

2019

10%

of high school students reported experiencing sexual violence at least once in the past year.²⁰

Child maltreatment has lifelong implications. Substantiated reports of child maltreatment were higher in rural than urban areas of Pennsylvania.²¹

“ I can speak for Tioga County. We are completely rural. ...We are geographically dispersed. We are seeing ... poverty, family dysfunction, ...a lot of isolation, lack of services so that people are struggling to get to ... things that they need. So, the frustrations run high, and kids bear the brunt of that with their caregivers being upset about things and ending up in emotional and physical injury.

– Focus group participant

Child abuse and neglect results in huge financial costs. In the United States, the lifetime estimated financial costs associated with just one year of confirmed cases of child maltreatment is approximately \$124 billion.²²

Pennsylvania Child Protective Services received 38,013 reports of child abuse in 2021. Of those reports, 13% (5,036) were substantiated and resulted in 58 fatalities and 136 near fatalities. Most child abuse reports (80%) came from mandated reporters.²¹

2021

1.9

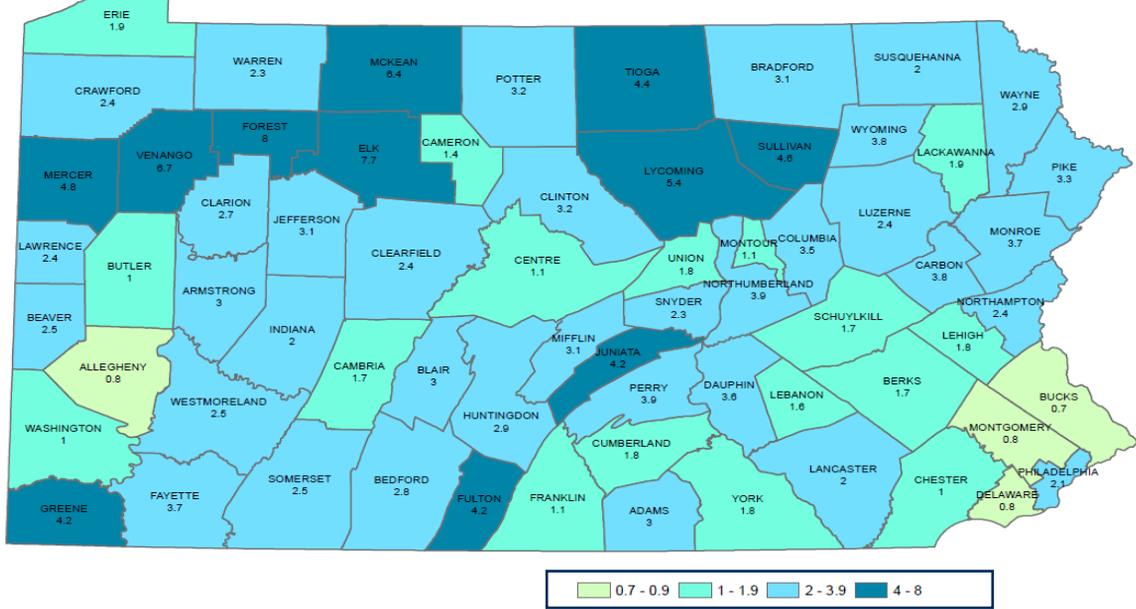
per 1,000 children under the age of 18 experienced child maltreatment.²¹

The most frequently reported type of abuse was sexual abuse (40%), followed by physical abuse/ bodily injury (26%).²¹

There are several risk factors associated with child abuse and neglect, including:²³

- **Parent/Caregiver:** Previous familial abuse, substance misuse, mental health issues, single parenting, young age, low income, low educational attainment
- **Family:** Social isolation, family stress, separation or divorce, violence in the home
- **Community:** Concentrated neighborhood disadvantage, community violence

Figure IVP.5. Substantiated Child Abuse Reports per 1,000 Children, 2021²¹



Source: Pennsylvania Department of Human Services

Youth violence is an adverse childhood experience that is linked with many violent behaviors and poor health outcomes later in life.²⁴

What is youth violence?

Youth violence is defined as the “intentional use of physical force or power to threaten or harm others by young people ages 10-24.”²⁵

- Stakeholders also discussed the effects of intergenerational trauma on families, which often precedes abuse. Child abuse and maltreatment often overlap with domestic violence,²⁷ which highlights the importance of primary prevention efforts in addressing abuse holistically, at the family level and in schools.
- In Pennsylvania there were a total of 13,785 delinquency-related allegations during 2021. This represents an 8.3% decrease from 2020 to 2021, and a 44.4% decrease from 2017. Delinquency related allegations were higher in males and non-Hispanic Black.²⁶
- Stakeholders emphasized the importance of contextualizing violent or criminal activity of youth, as there are numerous risk factors associated with youth violence. Additionally, arrest rates may be further inflated because of systemic racism.²⁴

2019

8%

of high school students did not go to school because they felt unsafe at school or on their way to school at least once in the last month.²⁰

2019

22%

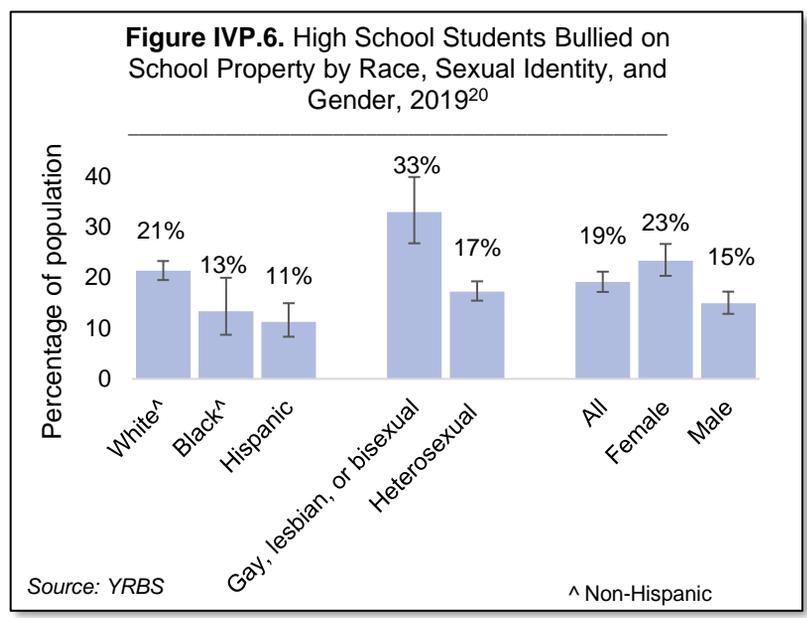
of high school students were in a physical fight at least once in the past year.²⁰

2019

8%

of high school students were threatened or injured with a weapon on school property at least once in the past year.²⁰

- The percent of students who did not go to school because they felt unsafe at school or on their way to school in the last month increased from 5% in 2009 to 8% in 2019.²⁰
- Approximately 19% of high schoolers reported being bullied on school property during the past year.²⁰ Female students were more frequently bullied than male students, as were students who identified as gay, lesbian, or bisexual compared to heterosexual-identifying students (Figure IVP.6).



Firearm-related injuries and deaths remain issues of high priority for the health of Pennsylvanians.

- A Pennsylvania Special Council on gun violence recommended the following focus areas to reduce gun violence²⁸
 - Stopping gun violence before it begins
 - Preventing situations where guns can be used to harm self or others
 - Promoting Trauma-Informed Systems and Expanding Access to Mental Health Supports and Services
 - Supporting effective community-led efforts
 - Enhancing prevention, intervention & response skills
 - Coordinated planning and response
 - Informing better policies and practices

In 2018, firearm-related injuries were the second leading cause of traumatic pediatric death and third leading cause of overall pediatric death in the U.S.²⁹

In 2019, in Pennsylvania, among reviews conducted on deaths occurring in children aged 10 through 21 years, the most frequent causes of deaths were assault, weapon, or person's body part over multiple manner of death categories to include homicides, suicides, and accidents.³⁰

During 2010-2019, the rate of firearm-related deaths in Pennsylvania increased 15% compared to a 17% increase nationwide. Moreover, the rate of firearm-related suicides increased 20% and firearm-related homicides increased 12%.³¹

In 2020, the firearm-related death rate was higher for males (23.9 per 100,000) compared to females (3.0 per 100,000). Across racial and ethnic groups, the rate of death was highest for non-Hispanic Black individuals at 39.2 deaths per 100,000.⁶

2019

13.3

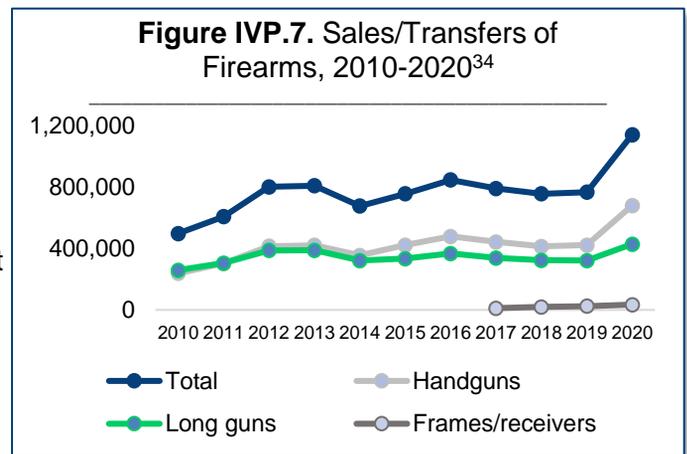
per 100,000 deaths due to firearm-related incidents (age-adjusted rate)⁶

“Guns are really essential in all of this. Guns are obviously a huge factor for homicide and suicide, and they make situations of domestic violence and child abuse turn deadly when they otherwise would not be... to me that feels like something that is crosscutting.”

- Focus group participant

- Approximately 1,141,413 firearms were purchased or transferred in 2020, a 49% increase from 2019. The Pennsylvania Instant Check System processed a total of 1,445,910 background checks, and this number represents a 47.2% increase from 2019.³⁴ Firearm sales have increased in the past decade, with higher jump in 2020 (see Figure IVP.7).
- Firearms were used in 78% of homicides, 42% of robberies, and 25% of aggravated assaults in 2020.³⁴

States with stricter gun laws had fewer pediatric firearm-related deaths.^{32,33} In 2021, Pennsylvania received a B- rating from Giffords Law Center for its gun safety laws. The state ranked 14 of 50 for gun law strength and 31st of 50 for gun deaths.²⁹



Source: Pennsylvania State Police

Ensuring safe walkways and bicycle paths may reduce pedestrian and vehicular deaths.

- In 2021, there were approximately 85.3 billion vehicle-miles traveled on Pennsylvania’s roads and highways. The fatality rate was 1.44 fatalities per hundred million vehicle-miles traveled and was the highest recorded in Pennsylvania since 2005.³⁵
- The consumption of alcohol and drugs as well as driving above the speed limit are major risk factors for traffic crash fatalities. Alcohol-related crashes accounted for approximately 8% of all crashes in 2021 but 25% of all traffic crash fatalities.
- The use of seat belts greatly reduces the risk of traffic crash fatalities. About 50% of all people who died in crashes were not wearing seat belts.
- In 2021, in Pennsylvania:³⁵
 - 1 out of every 50 people was involved in a reportable traffic crash.
 - 1 out of every 10,540 people was fatally injured in a reportable traffic crash.
 - 1 out of every 186 people was injured in a reportable traffic crash.
- Pennsylvania developed the Pennsylvania Walkable Communities Collaborative in 2016 to increase walkability across the state and link residents to their communities.³⁶

This section summarized priority issues related to injury and violence and explored:

- Overall injury and violence in Pennsylvania
- Violent crime
- Child abuse and neglect
- Youth violence
- Firearm-related injuries and deaths

Visit these SHA sections for additional context:



- [Social Determinants of Health, Equity & Racism](#)
- [Mental Health](#)
- [Substance Use](#)
- [Assets](#)

References

1. Centers for Diseases Control and Prevention. Number of Injuries and Associated Costs. WISQARS. Available at: <https://wisqars.cdc.gov/cost/?y=2020&o=MORT&i=0&m=20810&g=00&s=0&u=TOTAL&u=AVG&t=COMBO&t=MED&t=VPSL&a=5Yr&q1=0&q2=199&a1=0&a2=199&r1=NONE&r2=STATE&r3=NONE&r4=NONE&c1=NONE&c2=NONE>. Accessed on October 17, 2022.
2. Centers for Diseases Control and Prevention. Injury Prevention and Control. Fatal Injury Data Visualization Explore. 2021. <https://www.cdc.gov/injury/wisqars/fatal.html>. Accessed October 17, 2022.
3. McCollister KE, French MT, Fang H. The cost of crime to society: New crime-specific estimates for policy and program evaluation. Drug Alcohol Depend. 2010;108(1-2):98-109. doi:10.1016/j.drugalcdep.2009.12.002.
4. Langton L, Truman J. Socio-emotional impact of violent crime. Retrieved from: <https://www.bjs.gov/content/pub/pdf/sivc.pdf>. Published September 2014. Accessed October 9, 2020.
5. Pennsylvania Annual Report. America's Health Rankings. Retrieved from: <https://www.americashealthrankings.org/explore/annual/state/PA>. Accessed March 15, 2023.
6. Pennsylvania Death Certificate Dataset. Pennsylvania Department of Health. Enterprise Data Dissemination Informatics Exchange. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/DeathCntySt.aspx>. Accessed March 13, 2023.
7. Federal Bureau of Investigation. Crime Data Explorer. Retrieved from: <https://cde.ucr.cjis.gov/LATEST/webapp/#/pages/explorer/crime/crime-trend>. Accessed March 14, 2023.
8. Victim Compensation Formula Grant Program - Annual Performance Measures Report. PA Commission On Crime And Delinquency. Retrieved from: <https://ovc.ojp.gov/sites/g/files/xyckuh226/files/media/document/vc-fy-2020-pennsylvania-annual-report.pdf>. Accessed March 13, 2023.

References

9. Signs and Symptoms of Elder Abuse and Neglect. Pennsylvania Office of Victim Service. Retrieved from: <https://pcv.pccd.pa.gov/available-services/Pages/Signs-and-Symptoms-of-Elder-Abuse-and-Neglect.aspx>. Accessed October 12, 2020.
10. Older Adults Protective Services. Pennsylvania Department of Aging. Retrieved from: <https://www.aging.pa.gov/publications/annual-reports/Documents/2020-21%20Protective%20Services%20Annual%20Report.pdf>. Accessed March 14, 2023.
11. Pennsylvania Department of Aging. 2023. Data request.
12. Pennsylvania State Police. Hate Crime Information. Retrieved from: <https://www.psp.pa.gov/Pages/Hate-Crime-Information.aspx>. Accessed March 15, 2023.
13. United States Department of Justice. Retrieved from: <https://www.justice.gov/hatecrimes/state-specific-information/Pennsylvania>. Accessed March 13, 2023.
14. Uniform Crime Reporting (UCR): Hate Crime Statistics. United States Department of Justice, Federal Bureau of Investigation. Retrieved from: <https://www.fbi.gov/services/cjis/ucr/hate-crime>. Accessed October 9, 2020.
15. Hate Map. Southern Poverty Law Center. Retrieved from: <https://www.splcenter.org/hate-map>. Accessed March 14, 2023.
16. Pennsylvania Behavioral Risk Factor Surveillance System (BRFSS). Enterprise Data Dissemination Informatics Exchange. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/BRFSSstate.aspx>. Accessed May 4, 2023.
17. Fatality Report. Pennsylvania Coalition Against Domestic Violence. Retrieved from: https://www.pcadv.org/wp-content/uploads/2021-Fatality-Report_pages.pdf. Accessed March 14, 2023.
18. Pennsylvania Coalition Against Domestic Violence. Annual report FY 2020-2021. Retrieved from: <https://www.pcadv.org/wp-content/uploads/FY21-Annual-Report-web.pdf>. Accessed March 14, 2023.
19. Preventing Teen Dating Violence. Centers for Disease Control and Prevention. Retrieved from: https://www.cdc.gov/violenceprevention/pdf/ipv/TDV-factsheet_2020.pdf. Published 2020. Accessed October 9, 2020.
20. Youth Risk Behavior Survey (YRBS), 2019. Centers for Disease Control and Prevention. Retrieved from: <https://nccd.cdc.gov/Youthonline/App/Default>. Published August 2020. Accessed October 9, 2022.
21. Child Protective Services Annual Report, 2021. Pennsylvania Department of Human Services. Retrieved from: https://www.dhs.pa.gov/docs/OCYF/Documents/2021-CPS-REPORT_FINAL.pdf. Accessed March 13, 2023.
22. Centers for Diseases Control and Prevention. Cost of Child Abuse and Neglect Rival Other Major Public Health Problems. Retrieved from: <https://www.cdc.gov/violenceprevention/childabuseandneglect/EconomicCost.html>. Accessed March 13, 2023.
23. Child Abuse & Neglect: Risk and Protective Factors. Center for Disease Control and Prevention. Retrieved from: <https://www.cdc.gov/violenceprevention/childabuseandneglect/riskprotectivefactors.html>. Published March 2020. Accessed August 2020.
24. Pennsylvania Statewide Health Assessment and Focus Group Convenings, 2020. Pennsylvania Department of Health. Harrisburg, PA.
25. Preventing Youth Violence - Fast Facts. Centers for Disease Control and Prevention. Retrieved from: <https://www.cdc.gov/violenceprevention/youthviolence/fastfact.html>. Updated April 7, 2020. Accessed August 2020.
26. Pennsylvania Juvenile Court Judges' Commission. 2021 Juvenile Court Annual Report. Retrieved from: <https://www.jcjc.pa.gov/Research-Statistics/Disposition%20Reports/2021%20Juvenile%20Court%20Annual%20Report.pdf>. Accessed March 13, 2023.
27. Herrenkohl TI, Sousa C, Tajima EA. Intersection of child abuse and children's exposure to domestic violence. *Trauma Violence Abuse*. 2008 Feb 22; 9(2):84-99.
28. Special Council on Gun Violence: Report of findings, recommendations, & action steps, March 2020. Pennsylvania Commission on Crime and Delinquency. pccd.pa.gov. Retrieved from: <https://www.pccd.pa.gov/criminaljustice/GunViolence/Documents/Special%20Council%20on%20Gun%20Violence%20Report%20of%20Findings%20Recommendations%20Action%20Steps%20-%20March%202020.pdf>. Accessed August 2020.
29. Cunningham RM, Walton MA, Carter PM. The Major Causes of Death in Children and Adolescents in the United States. *N Engl J Med*. 2018 Dec 20;379(25):2468-2475. doi: 10.1056/NEJMs1804754. PMID: 30575483; PMCID: PMC6637963.
30. Child Death Review Annual Report, 2021. Pennsylvania Department of Health. Retrieved from: <https://www.health.pa.gov/topics/Documents/Programs/2021%20CDR%20Annual%20Report.pdf>. Accessed March 13, 2023.
31. Gun Violence in Pennsylvania. everystat.org. Retrieved from: <https://everystat.org/wp-content/uploads/2021/02/Gun-Violence-in-Pennsylvania-2.9.2021.pdf>. Accessed January 4, 2021.
32. Goyal MK, Badolato GM, Patel SJ, Iqbal SF, Parikh K, McCarter R. State Gun Laws and Pediatric Firearm-Related Mortality. *Pediatrics*. 2019 Aug;144(2):e20183283. doi: 10.1542/peds.2018-3283. Epub 2019 Jul 15. Erratum in: *Pediatrics*. 2020 Jan;145(1): PMID: 31308258.
33. Annual Gun Law Scorecard. Giffords Law Center. Retrieved from: <https://giffords.org/lawcenter/resources/scorecard/#PA>. Accessed March 13, 2023.
34. Firearms Annual Reports. Pennsylvania State Police. Retrieved from: <https://www.psp.pa.gov/firearms-information/Pages/Firearms-Annual-Reports.aspx>. Accessed January 19, 2022.
35. Pennsylvania Crash Facts & Statistics. Pennsylvania Department of Transportation. Retrieved from: https://www.penndot.pa.gov/TravelInPA/Safety/Documents/2021_CFB_linked.pdf. Accessed March 20, 2023.
36. Pennsylvania statewide outdoor recreation plan (2020-2024). Pennsylvania Department of Conservation and Natural Resources. Retrieved from: <http://elibrary.dcnr.pa.gov/GetDocument?docId=3223603&DocName=PASCORP2020-2024Final>. Published 2019. Accessed October 13, 2020.



Immunizations and Infectious Diseases

Immunizations and infectious diseases comprise a key public health theme. This section examines vaccination coverage for vaccine-preventable diseases such as measles, mumps, and rubella. It reviews the impacts of communicable diseases such as pertussis and tuberculosis on different populations and reviews rates of human papillomavirus (HPV) and influenza (flu) vaccination. Next, the section details the impact of COVID-19's racial disparities, the state of HIV and AIDS, sexually transmitted infections (STIs), and hepatitis B and C. Finally, this section addresses foodborne illnesses and Lyme disease in Pennsylvania.

Data shared in this section are from 2016 to 2022.

Although vaccinations are a great public health success, Pennsylvania needs to increase vaccination coverage for some populations.

75%

of children born between 2014 and 2017 received the combined seven vaccine series by the age of 24 months.¹

2017

42%

of adults aged 60 and older had ever received the shingles vaccine.²

In 2022, of 50 states, Pennsylvania ranked in 6 in childhood immunizations (children who received all recommended doses of the combined seven-vaccine series by age of 24 months).³

Among children born between 2014 and 2017, 75% received the combined seven vaccine series by the age of 24 months.¹ Table IID.1 shows vaccination coverage by race and ethnicity by the age of 24 months among children born between 2014 and 2017.

Some Pennsylvanians may not receive vaccines for religious or cultural reasons, philosophical objections, or due to misinformation about safety. Other reasons can include cost, poor insurance coverage, transportation challenges, language barriers, and lack of time for appointments.⁴

“ *A lot of well care is being put off; can we catch everyone up before we see outbreaks of vaccine-preventable diseases? We know from other countries and other situations in this country, that when immunization rates decrease, the vaccine-preventable diseases do reoccur.*

- Focus group participant

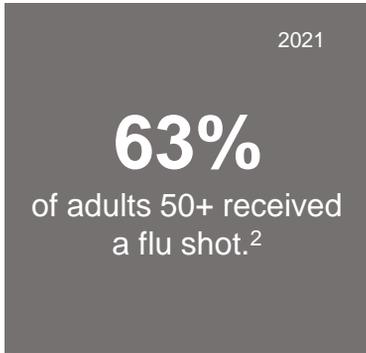
Table IID.1. Vaccination Coverage by Age 24 Months among Children Born 2014-2017, Pennsylvania¹

	All (%)	Non-Hispanic White (%)	Black (%)	Hispanic (%)	Other, Multiracial (%)
4 doses of tetanus, diphtheria & acellular pertussis (DTaP)	84	85	75	84	89
3 doses of polio	93	93	91	96	92
1 dose of measles, mumps & rubella (MMR)	93	93	92	95	95
3 doses of hepatitis B	92	92	90	94	89
1 does of varicella (chickenpox)	92	92	90	95	94
Combined seven vaccine series	75	76	64	76	76

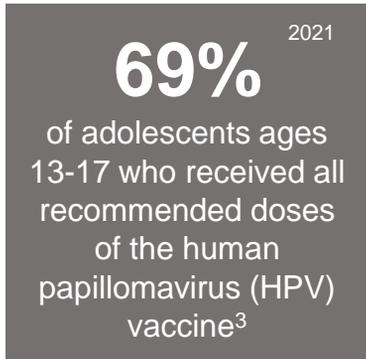
Source: Centers for Diseases Control and Prevention

“ We know that, in most communities, flu vaccination coverage is less than 50%. That is one of the biggest challenges that we face year after year. This year will be even more challenging with COVID thrown in the equation.”

– Focus group participant



Influenza (flu) is a respiratory illness caused by viruses that can manifest mild to severe symptoms resulting in hospitalization or even death.⁵ In 2021, 63% of adults 50+ received a flu shot. Flu vaccination varied from 58% among people with less than high school education to 70% among people with a college degree. Flu vaccination was lower among people with lower income. Pennsylvania ranked 12 among the states in flu vaccination among adults.³



HPV is a vaccine-preventable virus that can lead to six types of cancers: cervix, vagina, vulva, penis, anus and back of the throat (oropharyngeal).⁶ CDC recommends HPV vaccines at age 11 or 12 years. In 2021, 69% of adolescents ages 13-17 had received the recommended doses of HPV vaccine.

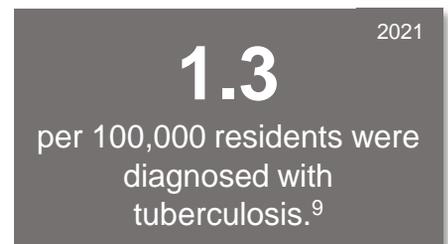
Pennsylvania ranked 11 in the recommended doses of the HPV vaccine (ages 13-17).³

Stakeholders suggested that immunization levels in the state can be improved through a more robust state registry.

The Pennsylvania Statewide Immunization Information System (PA-SIIS) is a registry that aims to reduce vaccine-preventable diseases through accurate management and reporting of vaccination data. It is a web-based system available to all health care providers and staff, but participation is voluntary.⁷

There are still cases of pertussis, measles, mumps, and tuberculosis in Pennsylvania.

- Pertussis, or whooping cough, is a highly contagious vaccine-preventable disease.⁸ From 2019 to 2021, there were a total of 1,129 new pertussis cases in Pennsylvania. Infants under one year old have the highest rates of Pertussis.⁹
- There were 17 reported confirmed measles cases and 204 confirmed mumps cases in 2019. 10-year (2010-2019) average was 4.4 cases per year for measles and 40.4 cases per year for mumps.¹⁰
- There were 166 tuberculosis cases in Pennsylvania in 2021. The disease disproportionately affected Black (2.8 per 100,000) and Hispanic (1.6 per 100,000) residents compared to white (0.4 per 100,000).⁹

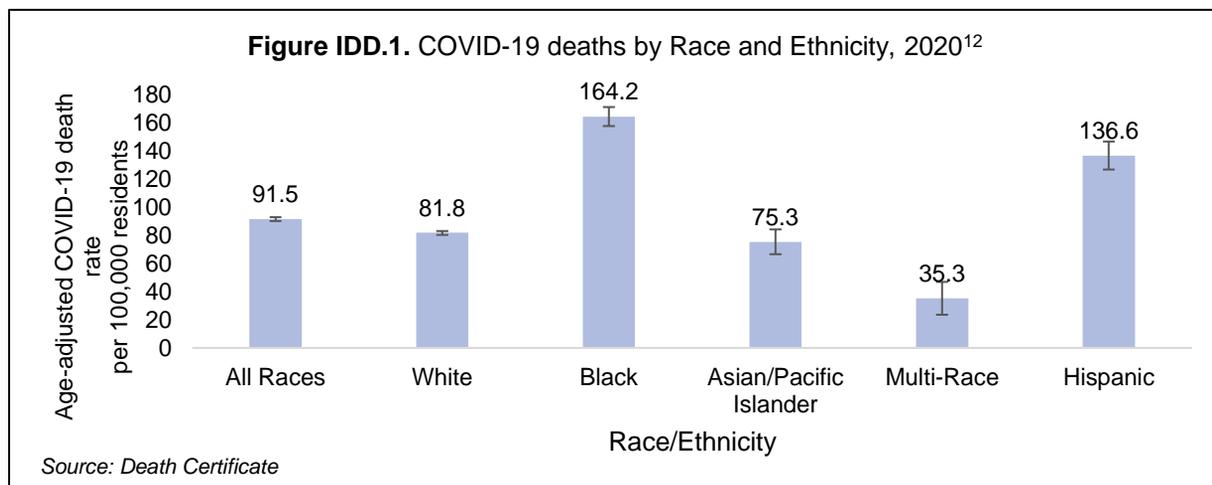


Amidst the coronavirus pandemic, Pennsylvania is focused on the disparate impact of the virus across racial and ethnic populations.

“Populations that experience challenges related to poverty—such as problems with water, adequate food supply, housing, and whether they can appropriately socially distance when somebody in the home is sick—are probably more impacted from infectious diseases. Those are all things that contribute to infectious diseases running through poorer populations more quickly ... than they would in other populations”

- Focus group participant

- The COVID-19 pandemic highlighted underlying, long-standing health system gaps and social inequities affecting racial and ethnic minorities.
- As of June 2023, about 28% of the Pennsylvania population had been infected with the virus and 50,517 Pennsylvanians died from COVID-19 throughout the pandemic. About 66% of the population was fully vaccinated. Based on the reported race, 52% of white, 47% of Black, 59% of Asian/Pacific Islander, and 26% of Native Americans were fully vaccinated and race was unknown for 7.1%.¹¹ Vaccine misinformation was a major challenge across the nation and the state.
- In 2020, COVID-19 was the third leading cause of death accounting for 11% of all deaths. The age-adjusted death rate was 91.5 per 100,000. Black and Hispanic residents were more likely to die from COVID-19 compared to white residents. The five counties with the highest COVID-19 death rates were Juniata, Mifflin, Northumberland, Philadelphia, and Delaware.¹²



- The COVID-19 pandemic placed a significant financial burden on Pennsylvania hospitals. Based on the PHC4 report, the total COVID-19 related expenses and lost revenue reported by Pennsylvania hospitals and health systems between Jan 2020 and June 2022 was more than \$7.8 billion.¹³
- The COVID-19 pandemic also impacted the insurance status of Pennsylvania residents. In 2020, 3% of adults reported losing their health insurance due to the pandemic since March 1, 2020. A higher percentage of non-Hispanic Black (7%) and Hispanic (7%) residents lost their health insurance compared to white residents (2%). Moreover, a higher percentage of residents with income <\$15,000 (5%) lost their health insurance compared to people with income >\$75,000.²

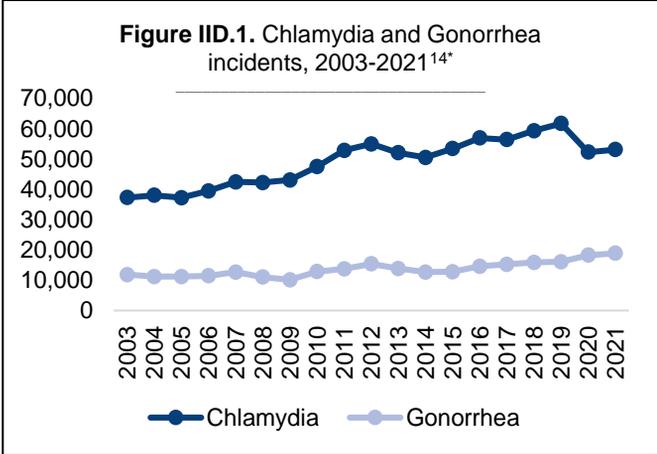
- Nationwide emergency visit rates for mental health conditions, suicide attempts, all drug and opioid overdoses, intimate partner violence, and child abuse and neglect increased during the COVID-19 pandemic.¹⁴ The pandemic may have affected mental health through loneliness, financial instability, illness, grief, and other pathways. Furthermore, it is crucial to acknowledge that older adults face a heightened vulnerability to social isolation, which was exacerbated by the COVID-19 pandemic, including social distancing measures.
- Data demonstrated a significant rise in unemployment in the state since the onset of the pandemic. The unemployment rate, which stood at 4.7% in February 2020, reached its highest point at 16.1% in April 2020 and then fell to 6.6% by November 2020.¹⁵ Moreover, based on the 2020 BRFSS survey, 27% of Pennsylvanians experienced permanent or temporary job loss (or decrease in work hours) due to the COVID-19 pandemic.⁴ This highlights the challenges faced by the state in recovering from the impact of the pandemic on its workforce.
- Individuals with cardiovascular diseases, chronic lung diseases, obesity, diabetes, chronic kidney disease, or any combination of these comorbidities are at increased risk of COVID-19 severity compared to people without these conditions. Racial and ethnic minority groups with these conditions are at an even higher risk for severe COVID-19 illness.¹⁶ A study conducted in the University of Pennsylvania Health System showed that Black race was associated with more severe disease at admission, higher rates of comorbidities, and residing in a low-income zip code compared to whites.¹⁷
- The COVID-19 pandemic exacerbated the existing crisis of affordable housing, adding a burden to low-income families. A report by Pennsylvania Budget and Policy Center found that the pandemic worsened the affordable rental housing problem Pennsylvania faced prior to the pandemic.¹⁸
- Alongside the COVID-19 pandemic, Pennsylvania experienced a multitude of changes in diseases and behaviors in 2020. In 2020, there was a slight increase in causes of death related to diabetes, Alzheimer's, heart diseases, homicides, mental and behavioral disorders, and Parkinson's disease.¹² However, there was also a slight decrease in the reported incidence of communicable diseases during the same period.⁹ Moreover, there was a significant decline in childhood lead testing and cancer incidence reports, particularly in the initial months of the pandemic. Chronic drinking, which is defined as consuming an average of two or more drinks every day in the past 30 days, increases in 2020.² These trends highlight the complex impact of the pandemic on various health aspects in the state.

Foodborne diseases pose health hazards to Pennsylvanians.

- Reports of foodborne illnesses caused by *Campylobacter*, *Salmonella*, and *Escherichia coli* (*E. coli*) are routinely monitored by Pennsylvania Department of Health.
- *Campylobacteriosis* is one of the most common causes of bacterial diarrhea. In 2021, in Pennsylvania, there were 20 *Campylobacter* infections per 100,000 people, which is higher than the HP2030 goal of 10.9 per 100,000.^{9,19}
- *Salmonella* is often found in undercooked meat, raw vegetables, and unpasteurized milk, and can cause diarrhea or vomiting.¹⁹ In 2021, there were 1,453 cases (11.2 per 100,000) of *Salmonellosis* reported just below the HP2030 goal of 11.5 per 100,000.^{9,19}
- *E. coli* is a group of bacteria that causes severe bloody diarrhea, vomiting, and abdominal cramps.²⁰ In 2021, there were 3.3 *E. coli* infections per 100,000 people, which is lower than the HP2030 goal of 3.7 per 100,000.^{9,19}

Pennsylvanians continue to prioritize addressing HIV and STIs.

- The annual number of new diagnoses of HIV infection continued to decrease since the mid-1990s. In 2021, 886 new HIV infections were diagnosed compared to 1,386 in 2011, a 36%. However, new HIV diagnoses increased by 15% from 2020. An estimated 40,600 persons diagnosed with HIV in Pennsylvania were alive at year-end 2020. Disparities exist in who were impacted by the disease. The predominant mode of transmission of HIV remains men who have sex with men, with disproportionate impacts seen in individuals aged 25 to 34 and the minority population, primarily Black, African Americans, and Hispanic.²¹
- Between 2003 and 2021, both primary and secondary syphilis diagnoses increased by 700%. Figure IID.1 shows a 43% increase in chlamydia, and a 59% increase in gonorrhea from 2003 to 2021. Disparities by race and ethnicity were evident: compared to white, Black individuals were more likely to be diagnosed with syphilis (six times), gonorrhea (12 times), and chlamydia (seven times). Similarly, compared to the overall population, Hispanic residents were more likely to be diagnosed with syphilis and chlamydia.²²



Source: Pennsylvania Department of Health, Bureau of Communicable Diseases

Pennsylvania faces a high burden of Hepatitis B and Hepatitis C.

- Hepatitis B is a vaccine-preventable liver infection that can lead to serious, even life-threatening, health issues like cirrhosis or liver cancer.²³ Only an estimated 30% of adults aged ≥19 years in the U.S. are vaccinated for hepatitis B.²⁴
- In Pennsylvania, there are approximately 1,000 new Hepatitis B infections reported each year – but many others remain undiagnosed. Approximately four in every ten acute hepatitis B infections in Pennsylvania are due to injection drug use.²⁵
- In 2019, in Pennsylvania, the incidence of acute hepatitis B was 0.7 per 100,000, compared to the national rate of 1.0 per 100,000.²⁶
- As of 2017, an estimated 50,000 Pennsylvanians were chronically infected with hepatitis B and over 200,000 were chronically infected with hepatitis C.²⁷
- Hepatitis C can result in serious health problems, including cirrhosis and liver cancer. The CDC recommends one-time hepatitis C testing of all adults (aged 18 and older) and all pregnant women during every pregnancy. CDC also recommends routine testing for individuals with ongoing risk factors, such as people who inject drugs and share equipment, and people who have received maintenance hemodialysis.²⁸
- In 2020, in Pennsylvania, the incidence of acute hepatitis C was 1.2 per 100,000, 12 times higher than the HP2030 goal of 0.1 per 100,000.²⁹
- In 2022, the Department of Health created the Viral Hepatitis Elimination (VHE) plan with Long-term and short-term goals to document what needs to be accomplished in Pennsylvania to eliminate viral hepatitis.²⁷

*Note: 36% of race and 58% of ethnicity data is unknown for STIs. The percentage was calculated among those whose race and ethnicity was known"

Pennsylvania continues to be among the top states for incidence of Lyme disease.⁹

- Pennsylvania is among the top five states for Lyme disease. Lyme disease is a bacterial infection spread by tick bites and caused approximately 2,900 cases in 2021, but this is likely underreported.⁹ Most Lyme cases in Pennsylvania occur in the late spring and summer months. To prevent Lyme diseases, people should use insect repellent and wear tick safe clothing when spending time outdoors.³⁰

This section summarized priority issues related to immunizations and infectious diseases and explored:

- Routine immunizations, especially among children
- Vaccine-preventable diseases
- Vaccination coverage for flu and HPV
- Social determinants of health
- HIV and AIDS, STIs, and hepatitis B and C
- Foodborne illnesses
- Lyme disease

Visit these SHA sections for additional context:



- [Social Determinants of Health, Equity & Racism](#)
- [Mental health](#)
- [Assets](#)

References

1. Centers for Diseases Control and Prevention. Vaccination Coverage among Young Children (0-35 Months). 2022. Available at: <https://www.cdc.gov/vaccines/imz-managers/coverage/childvaxview/interactive-reports/index.html>. Accessed March 14, 2023.
2. Pennsylvania Behavioral Risk Factor Surveillance System (BRFSS). Enterprise Data Dissemination Informatics Exchange. Retrieved from <https://www.phaim1.health.pa.gov/EDD/WebForms/BRFSSstate.aspx>. Accessed October 17, 2023..
3. America's Health Rankings, United Health Foundation. Retrieved from: <https://www.americashealthrankings.org/explore/annual/state/PA>. Accessed March 15, 2023.
4. Pennsylvania Department of Health. 2020. Pennsylvania Statewide Health Assessment and Focus Group Convenings. Harrisburg, PA.
5. Influenza (Flu). Centers for Disease Control and Prevention (CDC). Retrieved from: <https://www.cdc.gov/flu/about/index.html>. Accessed March 15, 2023.
6. Human Papillomavirus (HPV). Centers for Disease Control and Prevention (CDC). Retrieved from: <https://www.cdc.gov/hpv/parents/about-hpv.html>. Reviewed April 29, 2019. Accessed March 15, 2023.
7. PA-SIIS FAQ. Pennsylvania Department of Health. <https://www.health.pa.gov/topics/Reporting-Registries/PA-SIIS/Pages/FAQ.aspx>. Accessed September 28, 2020.
8. Pertussis (Whooping Cough). Centers for Diseases Control and Prevention (CDC). Retrieved from: <https://www.cdc.gov/pertussis/index.html>. Accessed September 28, 2020.
9. Communicable Diseases. Enterprise Data Dissemination Informatics Exchange. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/CommDisSt.aspx>. Accessed October 23, 2023..
10. Pennsylvania National Electronic Disease Surveillance System (PA-NEDSS). Data request August 27, 2020.
11. Pennsylvania Department of Health. COVID-19 Data for Pennsylvania. Retrieved from: <https://www.health.pa.gov/topics/disease/coronavirus/Pages/Cases.aspx>. Accessed March 16, 2023.
12. Pennsylvania Death Certificate Dataset. Pennsylvania Department of Health. Enterprise Data Dissemination Informatics Exchange. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/DeathCntySt.aspx>. Accessed March 13, 2023.
13. COVID-19 Disaster Emergency Report, A Pennsylvania report on the effect of the COVID-19 disaster emergency on hospitals and health care facilities in the Commonwealth, PHC4. November 2022. Retrieved from: <https://www.phc4.org/wp-content/uploads/historical-report-assets/finreport/112922/docs/finreport112922.pdf>. Accessed October 12, 2023.
14. Holland KM, Jones C, Vivolo-Kantor AM, et al. Trends in US Emergency Department Visits for Mental Health, Overdose, and Violence Outcomes Before and During the COVID-19 Pandemic. JAMA Psychiatry. 2021 Apr 1;78(4):372-379.
15. Yilmaz A, Hermene A. Impact of the COVID-19 pandemic on Pennsylvania and its healthcare system. Health Sci Rep. 2022 April 22;5(3):e615.
16. Fitero A, Bungau SG, Tit DM, et al. Comorbidities, Associated Diseases, and Risk Assessment in COVID-19-A Systematic Review. Int J Clin Pract. 2022 October 31;2022:1571826.
17. Shaw PA, Yang JB, Mowery DL, Schriver ER, Mahoney KB, Bar KJ, et al. (2022) Determinants of hospital outcomes for patients with COVID-19 in the University of Pennsylvania Health System. PLoS ONE 17(5): e0268528.
18. Keystone Research Center and PA Budget and Policy Center. Housing Affordability in Pennsylvania During and After the COVID-19 Pandemic. 2022. Retrieved from: https://krc-pbpc.org/wp-content/uploads/2022_HousingReport-2.pdf. Accessed October 10, 2023.
19. Safe food handling. Healthy People 2030. <https://health.gov/healthypeople/objectives-and-data/browse-objectives/foodborne-illness>. Accessed March 16, 2023.

References

20. Disease Fact Sheets. Pennsylvania Department of Health.. Retrieved from: <https://www.health.pa.gov/topics/disease/Pages/Foodborne-Illness.aspx>. Accessed October 13, 2020.
21. Pennsylvania Department of Health, Bureau of Epidemiology. 2021 Annual HIV surveillance Summary Report. Retrieved from: <https://www.health.pa.gov/topics/Documents/Programs/HIV/2021%20Annual%20HIV%20Surveillance%20Report.pdf>. Accessed March 15, 2023.
22. Sexually transmitted diseases. Enterprise Data Dissemination Informatics Exchange. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/STDSt.aspx>. Accessed March 15, 2023.
23. Centers for Diseases Control and Prevention. 2021. Retrieved from: <https://www.cdc.gov/hepatitis/hbv/index.htm>. Accessed December 9, 2021.
24. Weng MK, Doshani M, Khan MA, et al. Universal Hepatitis B Vaccination in Adults Aged 19–59 Years: Updated Recommendations of the Advisory Committee on Immunization Practices — United States, 2022. *MMWR Morb Mortal Wkly Rep* 2022;71:477–483.
25. National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention. Centers for Disease Control and Prevention. Retrieved from: <https://www.cdc.gov/nchstp/atlas/>. Accessed March 16, 2023.
26. Data courtesy of the Pennsylvania Department of Health and Philadelphia Department of Public Health Viral Hepatitis Program - through Pennsylvania Hepatitis B Foundation.
27. Pennsylvania Department of Health. Pennsylvania Viral Hepatitis Elimination Plan. 2022. Retrieved from: <https://www.health.pa.gov/topics/Documents/Diseases%20and%20Conditions/PA%20Hep%20Elim%20Plan%20Mar%202022.pdf>. Accessed May 1, 2023.
28. Viral Hepatitis. Centers for Disease Control and Prevention. cdc.gov. Retrieved from: <https://www.cdc.gov/hepatitis/hcv/index.htm>. Accessed September 25, 2020.
29. Immunization and Infectious Diseases. Healthy People 2030. Pennsylvania Department of Health. Retrieved from: <https://www.health.pa.gov/topics/HealthStatistics/HealthyPeople/Documents/current/state/immunization-and-infectious-diseases.aspx>. Accessed March 16, 2023.
30. Pennsylvania Department of Health. Lyme Diseases. Retrieved from: <https://www.health.pa.gov/topics/disease/Vectorborne%20Diseases/Pages/Lyme.aspx>. Accessed March 16, 2023.



Environmental Health

Environmental health is a cross-cutting issue that impacts the lives of Pennsylvanians in many ways. This section provides an overview of environmental justice and equity in Pennsylvania before moving to more specific topics, such as the built environment, air quality, and water quality. It reviews children’s environmental health, occupational health, and climate change. The section concludes with an overview of Pennsylvania’s current status on global climate change initiatives emphasizing the state’s 2021 Climate Action Plan and future considerations.

Data shared in this section are from 2014 to 2021.

Environmental health is interrelated with policy, infrastructure, and structural justice and injustice.

The World Health Organization (WHO) defines environmental health as the physical, chemical, biological, and behavioral factors that impact health, including air and water quality, built environment, and hazardous exposures.¹

Section 27 of the Pennsylvania Constitution includes the Environmental Rights Amendment:

“The people have a right to clean air, pure water, and to the preservation of the natural, scenic, historic and esthetic values of the environment. Pennsylvania’s public natural resources are the common property of all the people, including generations yet to come. As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all the people.”

Stakeholders recognize that environmental health influences access to care and incidence of chronic and infectious disease. Individuals with less control over the quality of their environment are at greater risk of long-term exposure to environmental hazards. Populations at greatest risk to environmental health hazards include the following:²

- Communities of color
- Individuals with lower incomes
- Children
- Pregnant women
- Adults over 65 years of age
- People with lower literacy and limited English proficiency
- People employed in occupations subject to environmental hazards
- People with disabilities
- People who are legally detained or incarcerated

The U.S. Environmental Protection Agency (EPA) stresses the necessity of environmental justice to ensure all persons have equal access to safe environments and decision-making power.³ Populations who are made most vulnerable to environmental inequities are identified as living in “environmental justice areas,” which are census tracts in which at least 20% of residents live in poverty and 30% are a racial minority.⁴

Pennsylvania environmental justice areas maps are available from [DEP’s Office of Environmental Justice](#). Mapping environmental justice areas helps us identify communities that are affected by environmental pollution and related health outcomes, are made socially vulnerable, or have been left out of decision-making that influences the health of their surroundings.

Real estate redlining, a form of structural racism that began in the 1930s, labeled neighborhoods with high percentages of people of color as ‘high risk’ resulting in banks not lending money to people to start businesses, buy homes, and do needed home repairs.⁵ This and other unjust municipal infrastructure policies and decisions contributed to residential segregation, often leaving communities of color with more socioeconomic and home-related health challenges that they do not have the resources to mitigate.

The Pennsylvania Department of Health developed an [Environmental Health Indicators Map](#), which seeks to display where natural and manmade environmental hazards occur, who lives in those areas, and residents’ health status. This map helps to provide context about overlapping environmental hazards and social and health vulnerabilities.

Stakeholders emphasized addressing structural racism and systemic inequities as key to improving air quality, water quality, and home health problems, such as lead, pests, asbestos, and crowding.²

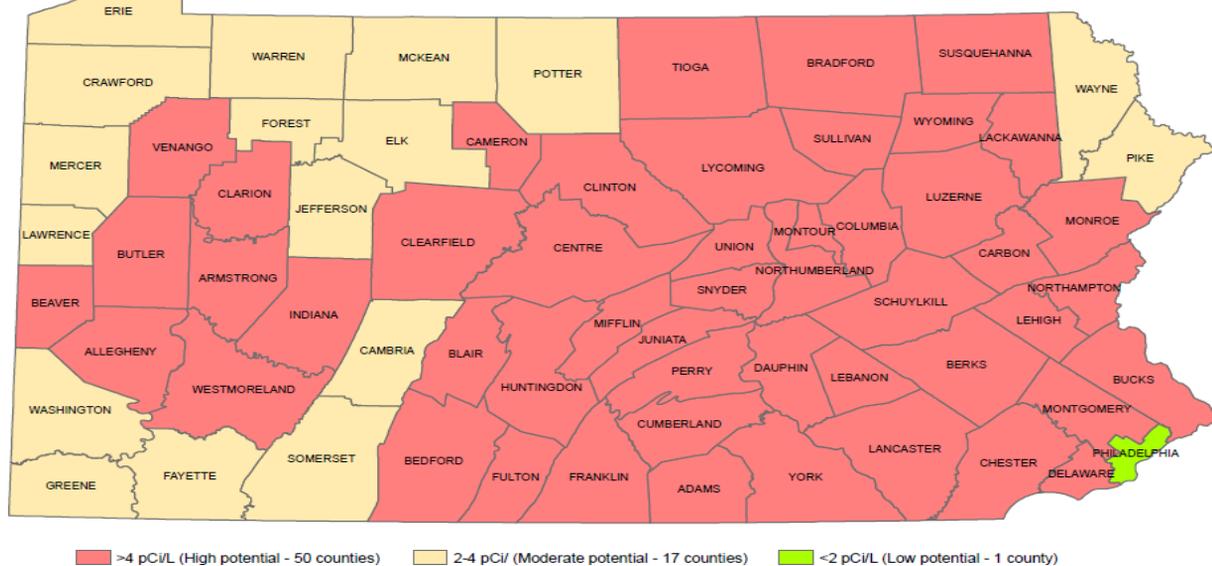
Older housing stock – In 2021, 28% of homes in Pennsylvania are at risk for lead exposure, compared to the national average of 17%. Houses built before 1978 have an elevated risk for lead exposure. The use of lead-based paint was banned in 1978, therefore houses built after this year have reduced risk of lead exposure.⁶ Pennsylvania counties with the highest proportion of older homes include Philadelphia (85%), Delaware and Cambria (79% each), and McKean (78%).⁷ Stakeholders noted environmental health risks, such as home lead exposure, can take years to manifest.

“ We’ve been talking about social determinants of health for a decade and we need to chip away at it. Poverty, racism, that is what is leading us down this path and that is what we need to address.”

– Focus group participant

Radon – Radon, a radioactive gas found in homes and the environment, is the second leading cause of lung cancer after smoking. Exposure to radon levels above four pCi/L (picocuries per liter), increases risk of lung cancer.⁸ Most counties in Pennsylvania have a predicted average indoor radon screening level above the recommended level.

Figure EH.2. Radon Zones in Pennsylvania Counties, 2020⁹



Community-level exposures – EPA’s National Priorities List (NPL), also known as the Superfund List, tracks sites that released or might release hazardous substances. This list prioritizes sites for EPA’s Superfund Cleanup Remedial program. As of 2023, Pennsylvania has 90 active sites, two proposed NPL sites, and 35 deleted sites (i.e., EPA determines that no further response is required to protect human health or the environment). Superfund sites can include contaminants such as lead, asbestos, and radiation which can lead to cancer, birth defects, and other serious health issues. Some groups of people, such as children, pregnant women, and older adults may be at particular risk.¹⁰

⁹The number of houses built between 1950 and 1978 is not directly reported by ACS. To calculate the number of houses built before 1978, 80% of the number of houses built between 1970-1979 were added to the number of houses built before 1970.

Having access to safe recreational spaces is another key component of healthy living environments.

Obesity in Pennsylvania is projected to increase from 33% in 2021 to 50% by 2030.¹¹ Stakeholders discussed how access to safe recreational spaces may impact childhood and adult obesity, particularly among those who rely on these spaces for physical activity, and cited risk factors such as neighborhood safety and gun violence as potential barriers.²

Access to greenspace and outdoor recreation benefits people physically and mentally and is needed for all, especially children and older adults, including those in long-term care. While over half of Pennsylvanians reported having access to trailheads within 15 minutes (69%) and walking access to parks (52%), there were noted racial disparities in access. About 41% of Black residents cited transportation issues as being the main barrier to visiting state parks.¹² The [Outdoor Recreation Access in Pennsylvania, Pursuing a Goal of Recreation for All](#), developed by the Pennsylvania Department of Conservation and Natural Resources (DCNR), identifies areas which do and do not have access to green, recreational space within ten minutes.

“ I just wanted to stress, once again, structural racism and residential segregation. These may have been mentioned...access to safe outdoor recreational places which kind of gets at the obesity and then also kind of taps into urban gun violence, and then walkability. And somehow, they are all intertwined with poverty.”

– Focus group participant

Air quality varies widely by geographic location, affected by proximity to diverse sources, weather, and climate change.

One of Pennsylvania's greatest environmental health challenges is elevated air pollution levels, which can lead to adverse human health conditions, including cardiovascular, respiratory, and reproductive problems. Nationally, in 2022, Pennsylvania ranked 41 of 50 states, among the worst for the general public's exposure to fine particulate matter (PM_{2.5}, smaller than 2.5 micrometers).¹³

In 2019, approximately 61.2% of Pennsylvania residents were residing in counties that met the National Ambient Air Quality Standard (NAAQS) for PM_{2.5}. This percentage reflects a notable increase from 43.5% in 2014, which further improved to 58% in 2018.¹⁴ These figures demonstrate the positive progress made in ensuring a healthier environment for the residents of Pennsylvania.

Air Quality Index (AQI) is a measure of how clean or polluted the air is. In 2020, the state-wide average of the 90th percentile AQI value was 55. In 1980, the same AQI metric was 130.¹⁵

The total cancer risk per million people related to air toxic compounds was last recorded as 31.7 both in Pennsylvania and the U.S. based on a 2014 EPA National Air Toxics Assessment report.¹⁶ There was wide variation within Pennsylvania, with the recent highest reported emission levels in Lehigh County attributable to corporate manufacturing emissions of large amounts of ethylene oxide.¹⁶

What does the Air Quality Index (AQI) measure?¹⁷

0 - 50	51 - 100	101 - 150	151 - 200	201 - 300	301+
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The AQI is a composite measure of air pollution (lead, ozone, particle pollution, SO₂, NO₂, and CO) in which higher values equate to higher pollution levels. Values at or below 100 are considered “satisfactory,” while values above 100 are considered “unhealthy.”

Access to safe drinking water is essential to promoting the health of Pennsylvanians and preventing waterborne disease outbreaks.

2021

98%

of community water systems complied with health-based standards.¹⁸

Between 2010 and 2020, Pennsylvania had 43 waterborne disease outbreaks that resulted in 387 illnesses, 179 hospitalizations, and 18 deaths.²⁰

Water fluoridation helps prevent tooth decay. In 2020, only 61% of residents were served by optimally fluoridated community water systems.¹⁹

2020

61%

of residents served by optimally fluoridated community water systems.¹⁹

In 2020, 26% of Pennsylvanians used a private well as their main source of drinking water.²¹

Unregulated water systems, such as private wells, are not monitored by the EPA and there are no federal or state requirements for private well water testing, siting, or construction.²²

Well water testing and treatment can be expensive and may not be consistently performed; there are also potential gaps in knowledge about the importance of testing and how to do it, which may lead to contamination and increased health risks.²³

Children are especially more vulnerable to consequences of poor environmental public health.

Childhood lead poisoning – Children are more likely to be exposed to lead and endure the health consequences that accompany exposure. There are many long-term, irreversible consequences of childhood lead poisoning, including neurological deficits, learning and behavioral problems, hearing and speech problems, and developmental delays.²⁴

In 2020, 17.6% of children under the age six (148,432) were tested for lead. Of those, 2.9% had a blood lead level greater than five µg/dL. Non-Hispanic Black (5.7%) and Hispanic (3.4%) children were more likely to have elevated blood lead levels compared to non-Hispanic white children (2.1%).²⁵ In 2021, CDC lowered the blood lead reference value from 5.0 to 3.5 µg/dL, and in January 2022, the Pennsylvania Department of Health adopted the updated reference value.

Secondhand smoke among children – Children exposed to secondhand smoke are at risk of adverse health conditions such as, middle ear infections, respiratory problems, and sudden infant death syndrome.²⁶ Based on the 2020-2021 National Survey of Children's Health, in Pennsylvania, 16% of children lived with someone who smoked.²⁷

Environmental health in schools – Pennsylvania public school code Act 39 of 2018 encourages all schools to test and report elevated lead levels in drinking water to the Pennsylvania Department of Education. While Pennsylvania schools are not required to test for lead in drinking water, schools that opt out of lead testing must facilitate a discussion about lead-based issues facing the school at a public meeting once a year.²⁸ In 2020, DEP conducted a total of 125,399 radon tests in households, businesses, or schools. Approximately 30% of the tests detected levels of radon exceeding four pCi/L.²⁹

Stakeholders discussed the need for mandatory testing and reporting to the state on environmental hazards in schools.

Work is an important social determinant of health.

Occupational health and safety – A safe and healthy workplace is important to reduce work-related injuries and accidents, and exposure to harmful substances. In 2019, there were 1,100 work-related pneumoconiosis hospitalizations, 154 fatal injuries, and about 137,000 workers experienced non-fatal work-related injuries and illnesses. Table EH.1 shows the count and rate of occupational injuries and hospitalizations.³⁰

Transportation incidents and contact with objects and equipment accounted for 61% of all workplace fatalities in the state.

In 2021, most of the work-related fatalities were among males (91%) and people who are non-Hispanic white (79%).³¹

Table EH.1. Work related injuries and illnesses, 2019³⁰

Occupational condition	Count	Rate
Non-fatal work-related injuries and illnesses	137,000	3,200 per 100,000 full-time equivalent (FTEs)
Work-related injury hospitalizations	4,282	69 per 100,000 employed persons
Fatal work-related injuries	154	3 per 100,000 FTEs
Pneumoconiosis hospitalizations	1,100	104 per 100,000 FTEs

Increasing greenhouse gas emissions and resulting climate change is an issue of global concern with widespread and devastating consequences.

The greatest climate hazards facing Pennsylvania over the next century are precipitation, flooding, and extreme heat.

Pennsylvania is already experiencing the effects of climate change including increased average annual temperature and more frequent and intense extreme heat events, increased average rainfall, heavier rain events, more frequent drought events, increased tidal flooding in the Delaware Estuary coastal zone, decreased water levels, increased water erosion, and higher water temperatures at Lake Erie.³³

More intense rain events with heavy precipitation pose both direct (physical safety risks, limited access to critical services, mental health impacts) and indirect (via economic instability and infrastructure failures) health risks.

Some populations, including the homeless, low-income residents, renters, and communities of color are likely to be disproportionately affected.

In Pennsylvania, the number of heat-related hospitalizations in 2020 decreased to 206, down from 243 in 2019. Over the years, there have been fluctuations in the trend of heat-related hospitalizations, with the lowest recorded in 2000 at 116 hospitalizations, and the highest occurring in 2011 with 387 hospitalizations.³⁴ These figures highlight the varying impact of heat-related incidents and the importance of continued efforts to mitigate their effects on public health.

29% / 24%
 29% of greenhouse gas emissions were from nonrenewable electricity generation and 24% were from transportation.³²

+1.8°
 Temperatures in Pennsylvania increased 1.8°F in the last century and is expected to warm another 5.9°F by 2050.³²

+10%
 Precipitation has increased roughly 10% in the last century and is expected to increase an additional 8% by 2050.³⁵

Current regulations and legislation have set the stage for future health improvement opportunities.

No state has met the United Nation's Sustainable Development Goals, and none are currently on track to achieve them by 2030. Pennsylvania ranks 29 among the 50 states in the progress towards achieving all Sustainable Development Goals. These global targets, agreed upon by all 193 member countries for economic, social, and environmental justice, were agreed upon at the national level, but local action is needed for their achievement.³⁶

Per the [2021 Pennsylvania Climate Action Plan](#), Pennsylvania seeks to reduce greenhouse gases (GHG) 26% by 2025 and 80% by 2050. Strategies to reduce GHG emissions are included in the [plan](#).²²

Climate interventions, such as those presented in the Climate Action Plan cannot undo the damage already done, but they can mitigate future hazards while improving resilience in the face of socio-environmental change.

Pennsylvania also has an [Emergency Operations Plan](#) Emergency Operations Plan that is prepared, exercised, and maintained by the Pennsylvania Emergency Management Agency and partners in emergency preparedness efforts. It outlines procedures and responsibilities that are employed in event of a disaster or emergency.³⁷

Unconventional oil and natural gas development, commonly known as fracking, are often located near residential areas. Living near fracking sites is cause for concerns of water, air, and soil quality and adverse physical and mental health outcomes.³⁸ A voluntary registry for collecting oil and natural gas production-related health concerns gives residents participation in data collection on the impacts of this industry.

This section summarized priority issues related to environmental health and explored:

- Environmental justice
- Built environment hazards and exposures
- Air quality
- Water quality
- Climate change
- Pennsylvania policy landscape for environmental health

Visit these SHA sections for additional context:



- [Social Determinants of Health, Equity & Racism](#)
- [Assets](#)

1. Environmental Health Overview. Office of Disease Prevention and Health Promotion. Retrieved from: <https://www.healthypeople.gov/2020/topics-objectives/topic/environmental-health>. Accessed October 13, 2020.
2. Pennsylvania Statewide Health Assessment and Focus Group Convenings, 2020. Pennsylvania Department of Health. Harrisburg, PA.
3. Environmental Justice. Environmental Protection Agency. Retrieved from: <https://www.epa.gov/environmentaljustice#:~:text=Environmental%20justice%20is%20the%20fair,laws%2C%20regulations%2C%20and%20policies>. Accessed October 13, 2020.
4. PA Environmental Justice Areas. Pennsylvania Department of Environmental Protection. Retrieved from: <https://www.dep.pa.gov/PublicParticipation/OfficeofEnvironmentalJustice/Pages/PA-Environmental-Justice-Areas.aspx>. Accessed October 13, 2020.
5. Redlining and Neighborhood Health. National Community Reinvestment Collation. Retrieved from: <https://ncrc.org/holc-health/>. Accessed October 13, 2020.
6. Housing with lead risk. America's Health Rankings, United Health Foundation. Retrieved from: https://www.americashealthrankings.org/explore/health-of-women-and-children/measure/housing_leadrisk/state/PA. Accessed March 13, 2023.
7. U.S. Census Bureau. American Community Survey 5-Year Estimate (2017-2021), Tables B25034 [Data file]. Retrieved from: [https://data.census.gov/table?t=Year+Structure+Built&q=040XX00US42\\$0500000&tid=ACSDT5Y2021.B25034](https://data.census.gov/table?t=Year+Structure+Built&q=040XX00US42$0500000&tid=ACSDT5Y2021.B25034). Accessed March 21, 2023..
8. Fact Sheet: Health effects of radon. Pennsylvania Department of Environmental Protection. Retrieved from: <http://www.depgreenport.state.pa.us/elibrary/GetDocument?docId=1449416&DocName=HEALTH%20EFFECTS%20OF%20RADON.PDF%20%20%3cspan%20style%3D%22color:blue%3b%22%3e%28NEW%29%3c/span%3e%204/19/2021>. Published April 2019. Accessed October 13, 2020.
9. EPA Map of Radon Zones including State Radon Information and Contacts. Environmental Protection Agency. Retrieved from: <https://www.epa.gov/radon/epa-map-radon-zones-and-supplemental-information>. Accessed October 13, 2020.
10. US Environmental Protection Agency. Superfund. Available at: <https://www.epa.gov/superfund>. Accessed March 21, 2023.
11. Ward ZJ, Bleich SN, Cradock AL, et al. Projected U.S. state-level prevalence of adult obesity and severe obesity. *N Engl J Med*. 2019;381:2440–50. DOI: 10.1056/NEJMsa1909301.
12. Pennsylvania statewide outdoor recreation plan (2020-2024). Pennsylvania Department of Conservation and Natural Resources. Retrieved from: <http://elibrary.dcnr.pa.gov/GetDocument?docId=3223603&DocName=PASCORP2020-2024Final>. Published 2019. Accessed October 13, 2020.
13. Air Pollution. America's Health Rankings, United Health Foundation.. Retrieved from: <https://www.americashealthrankings.org/explore/annual/measure/air/state/PA>. Accessed March 13, 2023.
14. Pennsylvania Department of Health. Enterprise Data Dissemination Informatics Exchange. Air Quality. Available at: <https://www.phaim1.health.pa.gov/EDD/WebForms/AirQualitySt.aspx>. Accessed march 22, 2023.
15. Air Quality Index Report. Environmental Protection Agency. 2021. Retrieved from: <https://www.epa.gov/outdoor-air-quality-data/air-quality-index-report>. Accessed February 15, 2022.
16. National Air Toxics Assessment: National cancer risk by pollutant, 2014. Environmental Protection Agency. Retrieved from: <https://www.epa.gov/national-air-toxics-assessment/2014-nata-assessment-results#nationwide>. Published 2018. Accessed October 14, 2020.
17. AirNow. Air Quality Index (AQI) Basics. 2022. Retrieved from: <https://www.airnow.gov/aqi/aqi-basics/>. Accessed January 21, 2022.
18. Pennsylvania Public Water System Compliance Report, 2021. Pennsylvania Department of Environmental Protection. Retrieved from: https://files.dep.state.pa.us/Water/BSDW/DrinkingWaterManagement/PublicDrinkingWater/PA_DEP_2021_Annual_Compliance_Report_Final.pdf. Accessed March 22, 2023.
19. Pennsylvania Department of Health. Healthy People 2030. Available at: <https://www.health.pa.gov/topics/HealthStatistics/HealthyPeople/Documents/current/state/oh-11-percent-of-population-served-by-optimally-fluoridated-community-water-systems.aspx>. Accessed March 22, 2023.
20. CDC National Outbreak Reporting System (NORS), Waterborne outbreaks 2010-2020 in Pennsylvania. Centers for Disease Control and Prevention (CDC). Retrieved from: <https://wwwn.cdc.gov/norsdashboard/>. Accessed March 22, 2023.
21. Pennsylvania Behavioral Risk Factor Surveillance System (BRFSS). Enterprise Data Dissemination Informatics Exchange. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/BRFSSstate.aspx>. Accessed March 23, 2023
22. Unregulated Drinking Water Systems. National Conference of State Legislatures. Retrieved from: <https://www.ncsl.org/research/environment-and-natural-resources/unregulated-drinking-water-systems.aspx>. Published February 2018. Accessed October 14, 2020.
23. DeSimone LA, Hamilton PA, Gilliom RJ. Quality of water from domestic wells in principal aquifers of the United States, 1991-2004. <https://pubs.usgs.gov/circ/circ1332/>. Published March 20, 2009. Updated November 2009. Accessed October 14, 2020.
24. Centers for Disease Control and Prevention (CDC). Childhood Lead Poisoning Prevention. 2021. Retrieved from: <https://www.cdc.gov/nceh/lead/default.htm>. Accessed January 27, 2022.
25. Childhood Lead Surveillance Annual Report, 2020. Pennsylvania Department of Health. Retrieved from: <https://www.health.pa.gov/topics/Documents/Environmental%20Health/2020%20Childhood%20Lead%20Surveillance%20Annual%20Report.pdf>. Published on January 2020. Accessed March 22, 2023.
26. Health Effects of Secondhand Smoke. Centers for Disease Control and Prevention (CDC). Retrieved from: [https://www.cdc.gov/tobacco/data_statistics/fact_sheets/secondhand_smoke/health_effects/index.htm#:~:text=There%20is%20no%20risk%2Dfree,infant%20death%20syndrome%20\(SIDS\)](https://www.cdc.gov/tobacco/data_statistics/fact_sheets/secondhand_smoke/health_effects/index.htm#:~:text=There%20is%20no%20risk%2Dfree,infant%20death%20syndrome%20(SIDS).). Updated February 27, 2020. Accessed October 13, 2020.
27. National Survey of Children's Health (NSCH). Data Resource Center for Child & Adolescent Health. Retrieved from: <https://www.childhealthdata.org/browse/survey/results?q=9517&r=40&r2=1>. Accessed March 20, 2023.

References

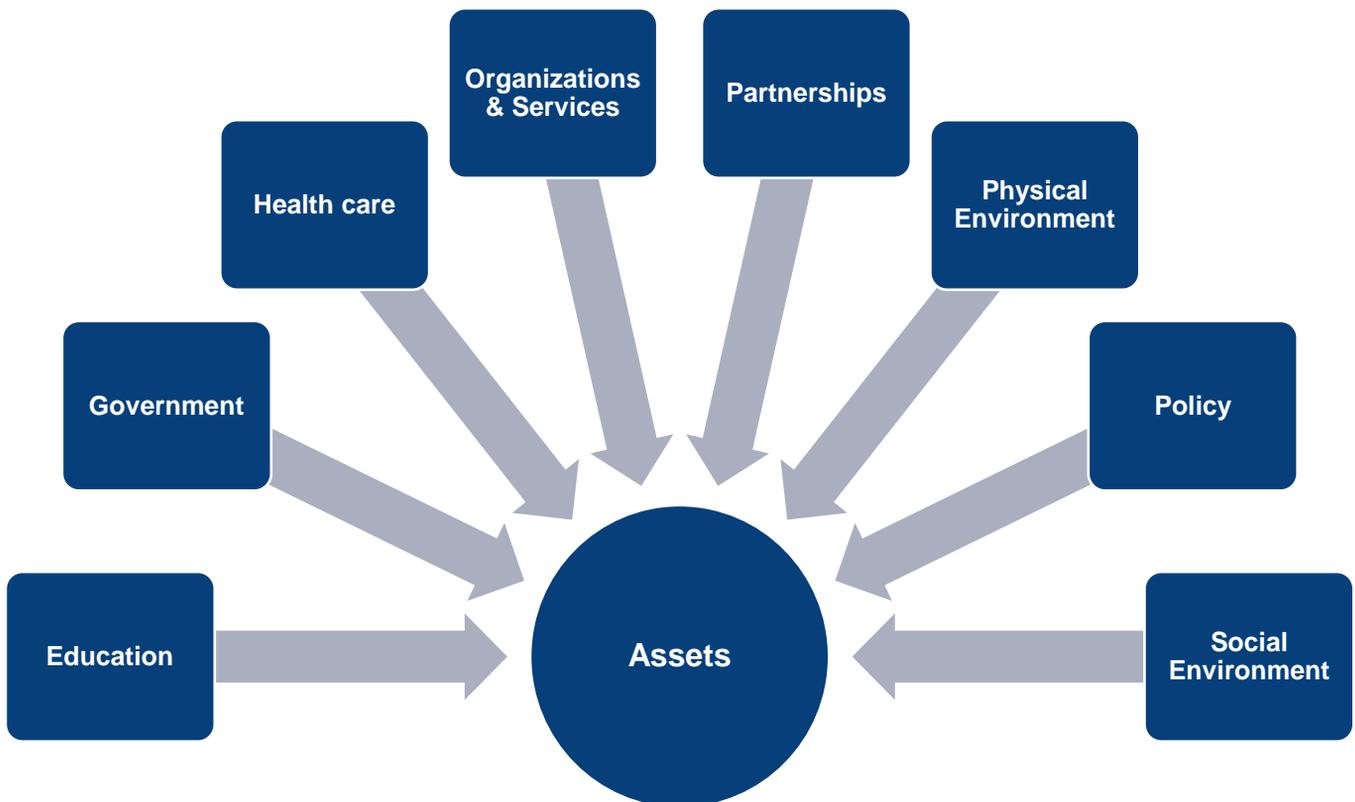
28. Lead in drinking water, information for schools. Pennsylvania Department of Education. Retrieved from: <https://www.education.pa.gov/Schools/safeschools/resources/Pages/Lead-in-Drinking-Water.aspx>. Accessed March 22, 2023.
29. Pennsylvania Department of Environmental Protection. Data request. 2021.
30. Pennsylvania Department of Health. Environmental health Division. 2021. Data request.
31. U.S. Bureau of Labor Statistics. Fatal Work Injuries in Pennsylvania — 2019. Available at: https://www.bls.gov/regions/mid-atlantic/news-release/fatalworkinjuries_pennsylvania.htm. Accessed December 1, 2021.
32. Pennsylvania Climate Action Plan, 2021. Pennsylvania Department of Environmental Protection. Retrieved from: <https://www.dep.pa.gov/Citizens/climate/Pages/PA-Climate-Action-Plan.aspx>. Accessed March 2023.
33. Pennsylvania Climate Impacts Assessment 2021. Available at: https://files.dep.state.pa.us/Energy/Office%20of%20Energy%20and%20Technology/OETDPortalFiles/Climate%20Change%20Advisory%20Committee/2021/2-23-21/2021_Impacts_Assessment_Final_2-09-21_clean.pdf. Accessed October 15, 2021.
34. National Environmental Public Health Tracking Network. Available at: <https://ephtracking.cdc.gov/DataExplorer/>. Accessed March 2023.
35. Department of Environmental Protection. Climate Change. Available at: <https://www.dep.pa.gov/Citizens/climate/Pages/default.aspx#:~:text=In%20Pennsylvania%2C%20our%20climate%20has,amount%20of%20precipitation%2C%20on%20average>. Accessed March 22, 2023.
36. Sustainable Development Report of the United States. Sustainable Development Solutions Network. Retrieved from: <https://sdgusa-data.netlify.app/#/SDG/13>. Accessed January 21, 2022.
37. Commonwealth Emergency Operations Plan. 2021. Retrieved from: <https://www.pema.pa.gov/Preparedness/Planning/Documents/Commonwealth-Emergency-Operations-Plan.pdf>. Accessed May 2, 2023.
38. Oil and Natural Gas Production Health Concerns. Pennsylvania Department of Health. Retrieved from: <https://www.health.pa.gov/topics/envirohealth/Pages/OilGas.aspx>. Accessed October 14, 2020.

XII. Assets in Pennsylvania

There are many strengths and opportunities within Pennsylvania, positioning the state to address gaps and barriers to health. Pennsylvania has a strong public health and health care infrastructure, with many successful programs and other resources that can be leveraged to improve health, which is further detailed in this section.

- Throughout the SHA process, public health stakeholders and community residents identified assets and resources at local and state levels.
- Top community strengths cited by poll respondents include parks and recreational spaces, availability of fresh food, good schools, and safety.
- The assets shared here, while not exhaustive, demonstrate many resources in Pennsylvania that can be built upon to support health and improve quality of life.
- It is important to note that these assets may not be equally distributed across the state and throughout all communities. Pennsylvania will strive to distribute and activate assets equitably.
- The below image shows the types of assets identified by stakeholders, and the following page details these assets by category.

Types of Assets Identified by Stakeholders



Education

- Higher education
- Preschools and childcare
- Public education (K-12)

Government

- Emergency preparedness
- Local government agencies and public health infrastructure *
- State government leadership (i.e. governor, secretary of health)
- State government entities' focus on underserved populations, collaboration, progressiveness, quality, infrastructure, and diversity within *

Health care

- Academic research centers
- Community health workers *
- Community-led visiting nurse programs
- Federally qualified health centers and other public clinics
- Health care and hospital systems (e.g. quality and supply) *
- Health information exchanges
- Local providers and health care systems (e.g. quality and supply) *
- Managed care organizations
- Medical education (e.g. medical schools, teaching hospitals, health care training programs)
- Mental health services and workforce
- Mobile units
- School-based health centers
- Students in health-related fields
- Telemedicine/telehealth *

Physical Environment

- Affordable housing
- Air quality and monitoring
- Clean fuel Initiatives
- Local agriculture *
- Natural lands
- Natural resources
- Outdoor recreation *
- [Potential funding to clear lead from drinking water in schools and day cares](#)
- Transportation
- Walkability

* Refers to most frequently mentioned assets

Partnerships

- Coalitions
- Community-based partners *
- Cross-sector collaborations at local, regional, and state levels *
- Resource networks
- Stakeholders

Organizations & Services

- 211 (service linking residents to local resources)
- Advocacy organizations and community activists
- Childcare services (e.g. after-school and early-childhood programs)
- Community-based organizations *
- Evidence-based programs (e.g. availability of and training in)
- Faith-based organizations
- First responders (i.e. EMS, police, fire) and mental health support and training for 1st responders
- Food banks *
- Harm reduction efforts
- Local review boards
- Professional associations (e.g., physician associations)
- Recreation services
- Regional tobacco cessation programs
- Senior centers
- Social services *

Policy

- Affordable Care Act
- Focus on social determinants of health
- Data collection efforts
- Medicaid
- Strategic implementation plans and strategic funding

Social Environment

- Arts and culture *
- Community characteristics (e.g. cohesion, support, stability, permanency, diversity) *
- Engaged residents and leaders
- Schools as community hubs

XIII. Next Steps

This SHA reviews a broad range of indicators of health and conditions to describe health in Pennsylvania and the factors contributing to disparate health outcomes. This SHA explores social determinants of health and health equity and eight health themes:

- Access to Care
- Substance Use
- Chronic Diseases
- Mental Health
- Maternal and Infant Health
- Injury and Violence Prevention
- Immunizations and Infectious Diseases
- Environmental Health

The assessment is the first in a series of steps to improve the health of Pennsylvanians. This SHA is intended to be used to foster discussion, promote ongoing and expanded data analysis, support local health improvement interventions, and inform the SHIP.

The State Health Improvement Plan used these findings to collaboratively select priority health issues and develop intervention strategies to effect change in Pennsylvania.

No single person or organization can address all the health and health equity concerns described in this broad assessment. However, working in partnership, especially by addressing equitable and upstream needs, will lead to necessary change.

Learn more about public health improvement planning, including how to participate, by contacting: RA-SHA@pa.gov

The Pennsylvania Department of Health and the Healthy Pennsylvania Partnership intend for this assessment and the subsequent improvement plan to shape specific, service and system-level actions to improve equity in health conditions and outcomes across Pennsylvania.

XIV. Appendices

- A. Leading Causes of Death by Age Group
- B. Leading Causes of Death by Race and Ethnicity
- C. Methods
- D. Data Indicator Index

Appendix A: Leading Causes of Death by Age Group

Table XII.1. Leading Causes of Death by Age Group, and Number of Deaths, 2020

Rank	0-4 age group	5-9 age group	10-14 age group	15-19 age group	20-24 age group	25-44 age group	45-64 age group	65+ age group
1	Perinatal conditions, 381	Accidents, 20	Accidents, 34	Accidents, 127	Accidents, 365	Accidents, 3,091	Cancer, 6,227	Heart disease, 27,439
2	Congenital malformations, 139	Cancer, 19	Suicide, 17	Homicide, 117	Drug-induced deaths, 239	Drug-induced deaths, 2,681	Heart disease, 4,855	Cancer, 21,050
3	Accidents, 77	Homicide, 10	Cancer, 11	Suicide, 56	Homicide, 161	Suicide, 544	Accidents, 2,680	COVID-19, 14,627
4	Homicide, 27	Congenital malformations, ND	Homicide, ND	Drug-induced deaths, 46	Suicide, 122	Cancer, 531	Drug-induced deaths, 1,971	Mental and behavioral disorders, 8,599
5	Cancer, 20	Digestive system, ND	Drug-induced deaths, ND	Cancer, 18	Cancer, 31	Heart disease, 523	COVID-19, 1,790	Cerebrovascular diseases, 6,143
6	Infectious and parasitic diseases, 19	Chronic lower respiratory diseases, ND	Heart disease, ND	Heart disease, 15	Heart disease, 28	Homicide (assault), 500	Digestive system, 1,437	Chronic lower respiratory diseases, 5,232
7	Heart disease, 12	Influenza and pneumonia, ND	Congenital malformations, ND	COVID-19, ND	Diabetes mellitus, 11	Digestive system, 244	Diabetes, 942	Alzheimer's disease, 4,4,493
8	Drug-induced deaths, 11	Genitourinary system, ND	Chronic lower respiratory diseases, ND	Epilepsy, ND	Congenital malformations, ND	COVID-19, 167	Atherosclerotic cardiovascular disease, 926	Genitourinary system, 3,548
9	Digestive system, 10	Heart disease, ND	Digestive system, ND	Mental and behavioral disorders, ND	COVID-19, ND	Liver disease, chronic and cirrhosis, 132	Chronic lower respiratory diseases, 847	Digestive system, 3,363
10	Influenza and pneumonia, ND	Infectious and parasitic diseases, ND	Epilepsy, ND	Chronic lower respiratory diseases, ND	Digestive system, ND	Diabetes mellitus, 123	Liver disease, chronic and cirrhosis, 756	Diabetes mellitus, 3,165
All deaths	870	77	105	408	827	6,911	25,063	121,288

*ND= Data Not Displayed. When death count is less than 10, data are not displayed.

Pennsylvania Death Certificate Dataset, 2020. Pennsylvania Department of Health. Enterprise Data Dissemination Informatics Exchange. Health.pa.gov. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/DeathCntySt.aspx>. Accessed May 17, 2023.

Appendix B: Leading Causes of Death by Race and Ethnicity

Table XII.2. Leading Causes of Death by Race and Ethnicity, and Number of Deaths, 2020

Rank	White	Black	Asian/Pacific Islander	Multi-Race	Hispanic
1	Heart diseases, 28,484	Heart disease, 3,584	Cancer, 329	Accidents, 62	COVID-19, 722
2	Cancer, 24,326	Cancer, 2,701	COVID-19, 278	Drug-induced deaths, 49	Cancer, 621
3	COVID-19, 13,403	COVID-19, 2,315	Heart disease, 276	Heart disease, 48	Heart disease, 585
4	Mental and behavioral disorders, 8,291	Accidents, 1,351	Cerebrovascular diseases, 109	Cancer, 40	Accidents, 583
5	Accidents, 7,604	Drug-induced deaths, 955	Mental and behavioral disorders, 67	COVID-19, 35	Drug-induced deaths, 405
6	Cerebrovascular diseases, 5,948	Cerebrovascular diseases, 711	Accidents, 62	Diabetes mellitus, 16	Cerebrovascular diseases, 186
7	Chronic lower respiratory diseases, 5,563	Homicide (assault), 647	Diabetes mellitus, 50	Homicide (assault), 13	Digestive system, 164
8	Digestive system, 4,457	Mental and behavioral disorders, 632	Infectious and parasitic diseases, 44	Mental and behavioral disorders, 13	Diabetes mellitus, 160
9	Alzheimer's disease, 4,175	Diabetes mellitus, 566	Genitourinary system, 39	Digestive system, 12	Mental and behavioral disorders, 139
10	Drug-induced deaths, 3,904	Infectious and parasitic diseases, 501	Digestive system, 38	Chronic lower respiratory diseases, 10	Infectious and parasitic diseases, 129
All deaths	133,122	17,102	1,613	353	4,315

*ND= Data Not Displayed. When death count is less than 10, data are not displayed.

Pennsylvania Death Certificate Dataset, 2020. Pennsylvania Department of Health. Enterprise Data Dissemination Informatics Exchange. Health.pa.gov. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/DeathCntySt.aspx>. Accessed May 17, 2023.

Appendix C: Methods

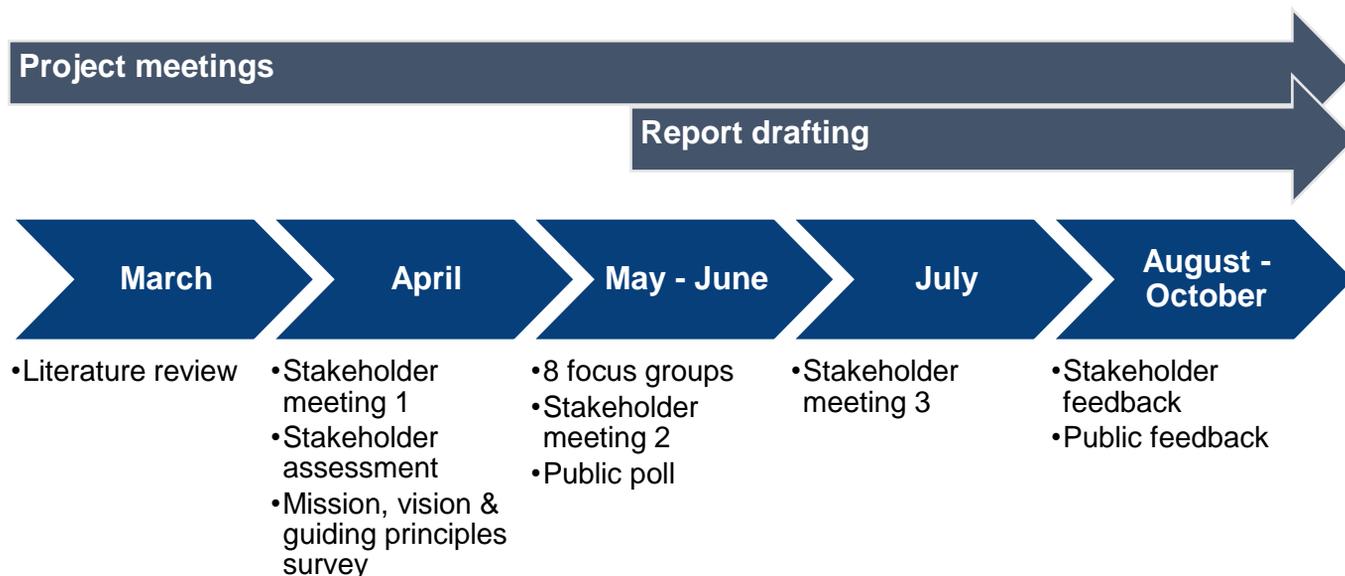
Pennsylvania State Health Assessment Process

The Pennsylvania Department of Health contracted with the Research & Evaluation Group at the Public Health Management Corporation (PHMC) and Bloom Planning and partnered with the HPP to develop this SHA. These stakeholders have participated in identifying key areas of focus and priority issues, selecting and suggesting relevant indicators and data sources, and describing impacts on populations.

This section provides an in-depth description of the methods used to compile the SHA, including:

- Public Health Accreditation Board (PHAB) guidance
- Stakeholder engagement
- Literature review
- Mission, vision, and guiding principles
- Stakeholder assessment
- Public poll
- Indicator selection

Timeline



PHAB Guidance

The PHAB Standards and Measures Version 1.5¹ was reviewed to determine best practices and results that would meet PHAB SHA requirements. The PHAB standards guided the inclusion of clear descriptions of the state's health with areas of improvement, factors contributing to statewide challenges, and existing resources to addressing such challenges. The standards also directed the appropriate dissemination of findings and outlined the collaborative process. Overall, the PHAB standards guided the SHA process and served as a touchpoint to ensure a comprehensive assessment was performed.

This project utilized the Community Health Assessment Toolkit.² This toolkit provides nine steps for conducting a health assessment, illustrated in the image below. Steps one through six were referenced throughout the planning and writing of the SHA report.



Guidance from HPP stakeholders was essential to the SHA’s development. At the process outset, the HPP was comprised of 144 partners; this number grew to 227 over the course of the work. These partners were from health care and public health sectors across the state. Stakeholder engagement in the SHA process occurred in three ways:

- Large stakeholder group: All participants in the HPP supported the identification of themes, key health issues, indicators, assets, and other useful input.
- DOH stakeholder group: This group consisted of department staff who supported the development of the SHA.
- Project group: This group consisted of Pennsylvania DOH staff, PHMC project staff, and Bloom Planning advisors. The project group authored the SHA and managed all meetings, data collection, and data analysis.

Large stakeholder group participation is itemized below. Meetings were conducted virtually due to the COVID-19 pandemic. Weekly project meetings occurred with the project group and core stakeholder group to manage project tasks.

Table XXII.2. Large Stakeholder Group Participation

Activity	Purpose	Date
Stakeholder meeting 1	Kick-off SHA; review mission, vision, guiding principles for the HPP; share literature findings; discuss SHA visuals	4/1/2020
Stakeholder assessment	Gather input on key health issues, populations made vulnerable, assets & indicator selection criteria	4/6/2020
Mission, vision & guiding principles survey	Refine mission, vision & guiding principles	5/21-26/2020
Eight focus groups	Contextualize key themes, health issues, assets, social determinants of health (SDOH) & populations facing challenges	4/28-5/8/2020
Stakeholder meeting 2	Refine indicators for substance use, mental health, access to care & chronic diseases; establish SDOH & equity as organizing framework	5/27/2020
Stakeholder meeting 3	Refine indicators for maternal & infant health, injury & violence prevention, environmental health & immunizations, infectious diseases; discuss SDOH & equity as organizing framework	7/29/2020

The project group completed a literature review of 14 state and local health assessments. A total of eight SHAs were selected based on geographic and demographic similarity to Pennsylvania (Minnesota, Washington, Illinois, Oregon, Ohio, Colorado, Massachusetts, and Vermont). Six Community Health Assessments (CHA) were gathered from local county health departments when available (Allegheny, Chester, Erie, and Philadelphia) and from hospitals conducting Community Health Needs Assessments (CHNAs) when CHAs were unavailable from the local health departments (Wilkes-Barre and Montgomery).

From each report, primary health topic areas or “themes,” key health issues, and indicators were catalogued and compiled into a single dataset, organized by geographic area, report type (i.e., SHA vs. CHA vs. CHNA), and theme category. Themes, key health issues, and indicators were aligned with the national HP2030³ topics and objectives.

The 12 most frequently occurring themes to appear across all reports were condensed into nine topics: chronic disease, access to care, maternal and infant health, social determinants of health (SDOH), mental health, injury and violence prevention, environmental health, substance use, and immunizations and infectious diseases. These themes formed the core content of this SHA. Additionally, 1,073 health indicators identified during the literature review were analyzed and grouped into key health issues within each theme. These key health issues provided a foundation for topics to explore in the SHA process.

Mission, Vision & Guiding Principles Development

As part of the 2020 SHA, the project group and the HPP engaged in a visioning process to develop a vision, a mission, and guiding principles. The process included the following steps:

1. The project group aggregated SHA reports from eight states and reviewed the vision, mission, and guiding principles detailed in each report.
2. The project group used example statements from other SHAs and prior internal visioning efforts to create draft vision, mission, and guiding principles.
3. During stakeholder meetings, participants reflected on and suggested refinements to the draft vision content.
4. The project team leveraged meeting participants’ suggestions to develop two versions of the vision, mission, and each guiding principle.
5. The HPP selected a vision, a mission, and guiding principles through a statewide survey of feedback on the two versions.

Stakeholder Assessment

Members of the HPP completed an assessment designed to gather input on pressing public health needs in Pennsylvania. Following the April stakeholder meeting, participants received an email invitation to complete the online assessment via SurveyGizmo. A total of 146 members received the invitation and 77 completed the assessment.

The assessment included open- and close-ended questions on respondents’ occupational affiliation, vision for the SHA report, populations made most vulnerable to health problems, criteria for selecting data to be included in the SHA, local and statewide assets, and prioritizing of health issues within the eight themes and in consideration of the SDOH. Respondents’ feedback was used to prioritize information to include in the SHA.

Focus Groups

Virtual focus groups for each theme were conducted during April and May 2020. SDOH and equity were addressed in each of the focus groups, as a framework through which all themes were reviewed. The focus groups were conducted with 68 stakeholders from across the state representing various nonprofit organizations, government agencies, community organizations, universities, and health care centers and facilities. Prior to each focus group, stakeholders were invited to choose the theme(s) to which they wanted to contribute their expertise. Each focus group gathered input on challenges and barriers experienced by communities across the state related to the theme at hand, resources and assets within communities, and implications of SDOH.

Public Poll

A public poll was conducted to better understand the greatest health needs of Pennsylvania residents and to identify priority health issues for the SHA report. The poll was conducted among volunteers across the state, between May 4, 2020, and May 11, 2020. A total of 2,000 individuals from 66 of Pennsylvania's 67 counties participated with age, sex, race, and ethnicity of participants balanced to demographics of the state. The poll was conducted online through the SurveyGizmo platform. The poll consisted of mostly close-ended questions related to personal health, health equity, and community health concerns and assets, with one open-ended question included.

Issues and Indicator Selection

Stakeholder assessment data were analyzed to identify respondents' perceptions of priority health issues within each of the eight themes (maternal and infant health, chronic disease, substance use, access to care, mental health, environmental health, infectious diseases, and injury and violence prevention) plus the overarching framework of SDOH and equity. In the assessment, participants ranked health issues on their perceived degree of importance, from one (not that important; does not need to be addressed immediately) to four (very important; needs attention immediately). Mean scores were calculated for each health issue. Issues with higher mean scores were selected in each theme and considered priority issues (generally, those issues with a mean of 3.5 or higher). Additional health issues were incorporated based on a review of qualitative data from the stakeholder assessment, the public poll, and the focus groups. A total of 47 priority health issues were identified across themes.

From the literature review, corresponding indicators for these health issues were identified. Members of the project group inventoried each indicator by data values, data sources, and availability of national and subgroup data. To establish inclusion priorities, indicators were scored by two independent topic experts across a set of criteria. Criteria included whether the indicator 1) is a leading health indicator for 2020 or 2030, 2) impacts multiple health issues, 3) represents the issue well, 4) is severe or high in magnitude, 5) has trend data available, and 6) can be analyzed by subgroups. Scores from the two raters were averaged, and higher scoring indicators within each health issue were selected. Reviewers' preliminary indicators were selected for review with stakeholders with consideration of each themes full picture of indicators.

During the second and third large stakeholder meetings, HPP members worked in groups to review the indicators by theme. Participants discussed priority populations, indicator refinement, and potential data sources. Pennsylvania DOH and the PHMC team reviewed stakeholder feedback on indicators, in concert with additional research on the potential for subgroup analysis, to select final indicators for inclusion.

1. Standards and Measures, Version 1.5. Public Health Accreditation Board. Published December 2013. <https://phaboard.org/wp-content/uploads/SM-Version-1.5-Board-adopted-FINAL-01-24-2014.docx.pdf>. Accessed April 2020.
2. Community Health Assessment Toolkit. Association for Community Health Improvement. Published 2017. <https://www.healthycommunities.org/resources/community-health-assessment-toolkit>. Accessed February 2020.
3. US Department of Health and Human Services. Healthy People 2030. Retrieved from: <https://health.gov/healthypeople/objectives-and-data/browse-objectives>. Accessed March 30, 2023.

Appendix D: Data Indicator Index

Theme Key

Access to Care (AC)	31	Maternal and Infant Health (MIH)	59
Substance Use (SU)	38	Injury and Violence Prevention (IVP)	67
Chronic Disease (CD)	44	Immunizations and Infectious Disease (IID)	76
Mental Health (MH)	50	Environmental Health (EH)	84

Data Indicators (listed in alphabetical order)

Accidents	74	Colonoscopy	53
Air pollution ranking	87	Consumption of daily fruits and vegetables	54
Air quality index	87	Contraception use	62
Alcohol use disorder	39	Co-occurring mental health and substance-use disorders	41
Alcohol use, pregnant women	64	COPD.	53
Alcohol use, youth	55	COVID-19	79
Alzheimer's disease	52	Dentists	33
Arthritis	52	Dentists who accept Medicaid	33
Asthma	53	Diabetes	52
Binge drinking	39	Domestic violence	70
Blood lead level	88	Drug overdose	40
Breastfeeding	65	Early and adequate prenatal care	61
Bullied on school property, youth	72	Elder abuse	69
Campylobacteriosis	80	Electronic vapor products, youth	55
Cancer deaths	53	EMTs/paramedics rate	33
Cancer screenings	53	Environmental Justice Areas	85
Cardiovascular disease	51	Fair or poor general health	49
Child maltreatment rate	71	Fatal injuries	68
Chlamydia	81		

Data Indicators (listed in alphabetical order)

Feeling sad or hopeless, youth	47	Marijuana use	39
Felt unsafe at school or going to school, youth	72	Maternal mortality	60
Firearm sales/transfers	73	Maternity care desert	63
Firearm-related death rate	73	Measles cases	78
Flu shot, older adults	78	Mental health providers ratio.. . . .	48
Fluoridated drinking water	88	Mumps cases	78
Gonorrhea	81	National Priorities List (NPL) sites . .	86
Gun safety laws ranking	73	Neonatal Abstinence Syndrome	64
Hate crimes	69	No personal health care provider . . .	33
Health professional shortage areas	34	Nurse practitioners' rate	33
Heart attack	52	Obesity, adults	56
Hepatitis B	81	Opioid use	41
Hepatitis C	81	Opioid among pregnant women	64
High blood pressure	52	Pertussis cases	78
HIV new cases	81	Physical activity	54
Homicide rate	68	Poor mental health days	45
Houses built before 1978	86	Postpartum depression	62
HPV vaccination	78	Pre-pregnancy anxiety	62
Illicit drug use	39	Pre-pregnancy depression	62
Immunization	77	Prescription drug use	55
Infant mortality	60	Preterm birth	60
Inhalants, youth	55	Primary care physicians in direct practice rate	34
Intimate partner violence	70	Private well water use	88
Kidney Disease	52	Proximity to greenspace	87
Low birthweight	60	Radon	86
Lyme disease	82	Rape	70
Major depressive episodes	46	Registered nurses' rate	33
Mammogram	53	Safe drinking water	88

Salmonellosis	80
Secondhand smoke	88
Severe maternal morbidity	60
Shingles vaccination	77
Smoking adults	56
Smoking pregnant women	64
Smoking youth	55
Stroke	52
Substance use disorder	39
Suicide	45
Suicide attempts, youth	47
Syphilis	81
Tuberculosis	78
Unable to see doctor due to cost	32
Uninsured rate	32
Violent crime	68
Visited a dentist in the past year	33