

The State of Our Health:

A Statewide Health Assessment of Pennsylvania

January 2021



pennsylvania
DEPARTMENT OF HEALTH

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I. Letter from the Secretary of Health



November 18, 2020

I am pleased to introduce this 2020 Pennsylvania Health Assessment. Developed by the Healthy Pennsylvania Partnership, a collaboration of private and public partners dedicated to improving the health of Pennsylvanians, this assessment is a key resource for public health. The information found here points to specific health challenges in Pennsylvania and by doing so, indicates where the largest improvements can be made.

As a strategic review of the health challenges our people face, the 2020 Pennsylvania Health Assessment demonstrates the many ways that health has been impacted by social determinants such as income, education, and housing. You will find health disparities in rates of chronic disease, infant and maternal mortality, substance use, violence, sexually transmitted infections, and many others. The 2020 Pennsylvania Health Assessment is a critical step toward examining inequities by race and ethnicity, socio-economic status, gender, age, education, sexual orientation, geography, and disability, so that we can work together for change.

You will also find the assets of the state itemized. Our strengths can equip us to meet the challenges of today and tomorrow if we are willing to examine existing systems and consider where changes, even significant ones, are needed.

As this 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 racially motivated violence and death to broader shared awareness. While the COVID-19 pandemic has brought health inequities into sharp focus, we know that these inequities long predated these current and ongoing crises.

We encourage you to reference and borrow from this assessment for your organization's work to improve health and advance health equity. The assessment may be particularly helpful to organizations preparing local community health assessments and it will be used to inform the next Healthy Pennsylvania Partnership State Health Improvement Plan.

On behalf of the department, I want to thank our public and private partners across the commonwealth for collaborating to create this assessment. I also wish to thank all department 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 blue ink, appearing to read "Rachel L. Levine MD".

Rachel L. Levine, MD
Secretary of Health

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 have collaborated to identify health priorities, evaluate data, provide insight, and review methods and content of the report. We would like to acknowledge and thank the following individuals and organizations for their time and invaluable contributions to this project.

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Allegheny County Health Department	Penn State Harrisburg
Allentown Health Bureau	Penn State Health
Alzheimer's Association	Penn State University Office of Medical Innovation
American Lung Association	Pennsylvania Academy of Family Physicians
Asociación Puertorriqueños en Marcha	Pennsylvania Academy of Nutrition and Dietetics
Bethlehem Health Bureau	Pennsylvania Association of Community Health Centers
Black Women's Health Alliance	Pennsylvania Association of County Administrators of Mental Health and Developmental Services
Community Data Roundtable	Pennsylvania Chapter of the American Academy of Pediatrics
Council on Chemical Abuse	Pennsylvania Coalition Against Domestic Violence
Dental Lifeline Network	Pennsylvania Coalition for Oral Health
Devereux Children's Behavioral Health Center	Pennsylvania Coalition of Medical Assistance MCOs
Erie County Department of Health	Pennsylvania Department of Conservation and Natural Resources
Greene County Human Services	Pennsylvania Department of Drug and Alcohol Programs
Harrisburg Area YMCA	Pennsylvania Department of Education
Harrisburg University of Science and Technology	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
Montgomery County Office of Drug and Alcohol	Pennsylvania Office of Rural Health

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



III. Executive Summary

This State Health Assessment is organized to provide information on social determinants of health, health equity, and health factors, and then focus specifically on eight health themes, as well as the populations impacted in each theme. Highlights from each of these are summarized below.

Demographics and Social Determinants

- Pennsylvania's population has become increasingly diverse with in 2019, 82% white, 12% black, 4% Asian, and 2% who identified as multi-racial or another race. It is also an aging population, with 19% of the population age 65 and over.
- Educational achievement varied by race and ethnicity, with, in 2019, rural counties and black and Hispanic populations less likely to have college degrees.
- Poverty impacts health opportunities and affected Pennsylvanians disparately, with higher rates in 2019 among black and Hispanic populations as well as rural counties.
- There were 759 age-adjusted deaths per 100,000 residents in 2018 with most of the deaths among those aged 65 and over. The 5 leading causes of death were heart diseases, cancer, accidents, cerebrovascular diseases, and chronic lower respiratory diseases.
- Adverse Childhood Experiences (ACEs) are associated with many health problems. In 2019, 50% of Pennsylvania adults reported to have experienced one or more adverse childhood experiences, with non-Hispanic blacks and Hispanics being disproportionately affected.

Access to Care

- Among adults under 65 in 2018, about 7% were uninsured, 16% did not have a personal health care provider, and 10% needed to see a doctor in the past year but were unable due to cost.
- Non-Hispanic black adults were less likely to have health care insurance and more unable to see a doctor due to cost than white adults. Hispanics were less likely to have insurance, more unable to see a doctor due to cost, and more likely to not have a personal health care provider than non-Hispanic white adults.
- In 2018, there were approximately 85 primary care physicians per 100,000 residents. Millions of Pennsylvanians lived in Health Professional Shortage Areas. There were fewer primary care doctors, dentists, mental health providers, and nurse practitioners in rural Pennsylvania compared to urban areas.
- Individuals with disabilities have additional challenges to access health care. About 26% of Pennsylvanians reported having one or more disabilities.

Substance Use

- Substance use is one of the biggest challenges in Pennsylvania, with the use of opioids a pronounced burden. In 2018, the state ranked 47 among 50 states in drug-induced deaths.
- About 17% of adults binge drank, 10% used illicit drugs, and 7% had a substance use disorder. Lesbian, gay or bisexual adults had a high prevalence of binge drinking.

- Among high school students in 2019, 7% used cigarettes, 24% used electronic vapor products, and 20% used marijuana. Non-Hispanic whites were more likely than non-Hispanic black or Hispanic students to vape.
- Access to substance-use treatment is another challenge, and 6% of individuals needed but did not receive treatment for substance use at a specialty facility.

Chronic Diseases

- Obesity is a known risk factor for many chronic diseases, and in 2019, it affected 33% of adults in Pennsylvania. Non-Hispanic black adults had a higher prevalence of obesity of 44%.
- While tobacco use has declined, it remains a leading risk factor for chronic diseases. Prevalence of smoking was higher among gay, lesbian and bisexual individuals, those with lower household incomes, and those with lower educational status.
- Older Pennsylvanians, which account for 20% of the population, have a high prevalence of diabetes, COPD, stroke, arthritis, and Alzheimer's disease.
- In 2015-2017, nearly 1 in 2 Pennsylvania residents will at some point receive a cancer diagnosis, and approximately 20% will die of cancer. Black residents were less likely to be diagnosed early and more likely than whites to die of cancer.
- Physical activity and diet are major risk factors for chronic diseases. In 2019, 49% of adults did not participate in the recommended amount of physical exercise and 10% of adults consumed five or more servings of fruits and/or vegetables daily.

Mental Health

- Adults in Pennsylvania suffered from frequent mental distress, defined as not good mental health in 14 or more days in the past month, and was experienced by 14% of adults in 2019.
- The rate of suicides increased over the past decade, and in 2018, there were 2,017 Pennsylvanians who lost their lives to suicide. By race, the highest rates were among whites.
- Among high school students, in 2019, 35% felt sad or hopeless, and 8% reported to have attempted suicide. Hispanic youth (42%) and sexual minority youth (62%) were even more likely to have reported feeling sad or hopeless.

Maternal and Infant Health

- Maternal mortality and infant deaths were higher among blacks than their white counterparts.
- In 2016-2018, 12% of females smoked and 7% consumed alcohol during their last three months of pregnancy.
- Early and adequate prenatal care is important for the health of the mother and to reduce newborn risks. In 2018, 2% of females who gave birth did not receive prenatal care. Black females were about 4 times as likely not to receive prenatal care compared to whites.
- There were 1,833 neonatal abstinence syndrome (NAS) related newborn hospital stays in 2018. NAS was highest among white babies, those from rural counties and from families with lower household incomes.

Injury and Violence Prevention

- In 2018, the rate of fatal accidents in Pennsylvania, at 61.7 per 100,000, was higher than the national rate of 48.0 per 100,000. These accidents included poisoning (including drug overdoses), falls, and transportation accidents.
- Violent crime in Pennsylvania decreased from 400 per 100,000 in 2008 to 306 per 100,000 residents in 2018. While the homicide rate among white residents held steady at 2 per 100,000, the rate among blacks increased to 29 per 100,000.
- Approximately 10% of high school students reported experiencing sexual violence in the last year. The prevalence rate was about 2 times higher among students identifying as gay/lesbian/bisexual (19%) than heterosexual students (9%), and four times higher among females (17%) than males (4%).

Immunization and Infectious Diseases

- About 70% of children age 19 to 35 months were up-to-date with required immunizations.
- Among adults aged 16 to 64, 33% had a flu shot in 2018.
- Of youth aged 13 to 17, 62% of girls and 46% of boys had the recommended doses of HPV vaccine in 2018.
- Between 2003 and 2018, syphilis increased by close to 400%, chlamydia increased by 59% and gonorrhea increased by 34%. Black and Hispanic individuals were more likely to be diagnosed with syphilis, gonorrhea, and chlamydia.
- Pennsylvania continues to be among the top states for incidence of Lyme disease, with the number of cases more than doubling in the past 15 years. In 2018, 30% of Lyme disease cases in the US were in Pennsylvania.

Environmental Health

- In 2019, Pennsylvania ranked 47 of 50 states for the percentage of housing stock at risk for lead exposure. About 4% of tested children had a blood-lead level greater than 5µg/dL, with black and Hispanic children being at greater risk.
- In 2020, Pennsylvania ranked among the top states in the National Priorities List (Superfund sites), with 91 sites in danger of releasing hazardous substances.
- Air pollution is one of the greatest health challenges in Pennsylvania. The state ranked 47 of 50 states for the general public's exposure to acceptable levels of particulate matter.
- Rising heat poses a threat for the entire state, as well as globally. In Pennsylvania, in 2015, 32% of greenhouse gas emissions were from energy production, and 24% were from industrial fuel consumption.
- Approximately 56% of residents were served by community water systems that had optimally fluoridated water.

IV. 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, behaviors, social circumstances, environment, medical care, and stress.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 are⁴:

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 this 2020 Pennsylvania State Health Assessment (SHA). A health assessment 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 report to reflect where the needs are greatest. The process of developing the report 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 report 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.

Additionally, citations are provided throughout to support additional investigation.

When statistics were referenced from a scientific sample survey with a known uncertainty, that level of uncertainty is presented with 95% confidence intervals (I). These confidence intervals represent the range in which the result will be found 95 times if 100 samples are taken of the same population group.

The maps present information that is available at the county level. If the data has small numbers, usually less than 5, then data is withheld and indicated by being left white.

The HPP's next steps will be to select priority health issues and develop a State Health Improvement Plan to effect change in Pennsylvania. Please consider participating in the HPP so that you can help impact the health issues identified here by contacting RA-ship@pa.gov.

References

1. World Health Organization Constitution. World Health Organization. who.int. Retrieved from: <https://www.who.int/about/who-we-are/constitution>. Accessed: September 14, 2020.
2. McGovern L, Miller G, and Hughes-Cromwick P. Health Policy Brief: The Relative Contribution of Multiple Determinants to Health Outcomes. Health Affairs. Published: August 21, 2014. Retrieved from: https://www.colorado.gov/pacific/sites/default/files/Health%20Affairs%20Multiple%20Determinants%20to%20Health%20Outcomes_1.pdf. Accessed September 14, 2020.
3. CDC Foundation What is Public Health. cdcfoundation.org. 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. cdc.gov. Retrieved from: <https://www.ncbi.nlm.nih.gov/books/NBK218218/>.

V. 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 3 initiatives: the State Health Assessment (SHA), the State Health Improvement Plan (SHIP); and the Health Improvement Partnership Program.

- 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 partnership 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 **Health Improvement Partnership Program** provides a quarterly newsletter to health improvement partnerships in communities throughout the commonwealth. The newsletter highlights partner and Department of Health programs, statistics, conferences, grant opportunities, and workshops.

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, data, 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.

VI. Our Process

This page summarizes the multi-part SHA process informed by diverse stakeholders and constituents from across the state. The SHA was completed between January and December 2020.

Phase 1

- Determine themes and overarching framework by reviewing state and local health assessments and community health needs assessments. Identify diverse stakeholders who will participate.

Phase 2

- Identify and describe key issues within themes through the stakeholder assessment, focus groups, and public poll.

Phase 3

- Select core data points that represent health issues by researching and scoring approximately 350 indicators.

Phase 4

- Integrate findings and develop SHA report in collaboration with stakeholders.

Phase 5

- Share the SHA report with Pennsylvania residents and stakeholders and collect feedback.

Instruments

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

Stakeholder assessment: Seventy-seven members of the HPP completed an assessment regarding a vision for the partnership, describing vulnerable populations, criteria for selecting data indicators, local and statewide assets, pressing health issues within 8 themes (pictured on the next page), and social determinants of health.

Focus groups: Sixty-eight stakeholders across 8 theme-based focus groups discussed priority health issues, vulnerable populations, assets, needs, and social determinants of health.

Public poll: Two thousand residents from across Pennsylvania were invited via a panel sample to answer an online poll about their health needs and community concerns.

Indicator scoring: Indicators associated with priority health issues were researched and scored by 2 independent coders using a matrix of criteria.

Stakeholder meetings: Three stakeholder meetings were held to assist with the development of the SHA. Stakeholders provided input on visual elements of the SHA, methods of report dissemination, selection of indicators, and context surrounding the key health issues.

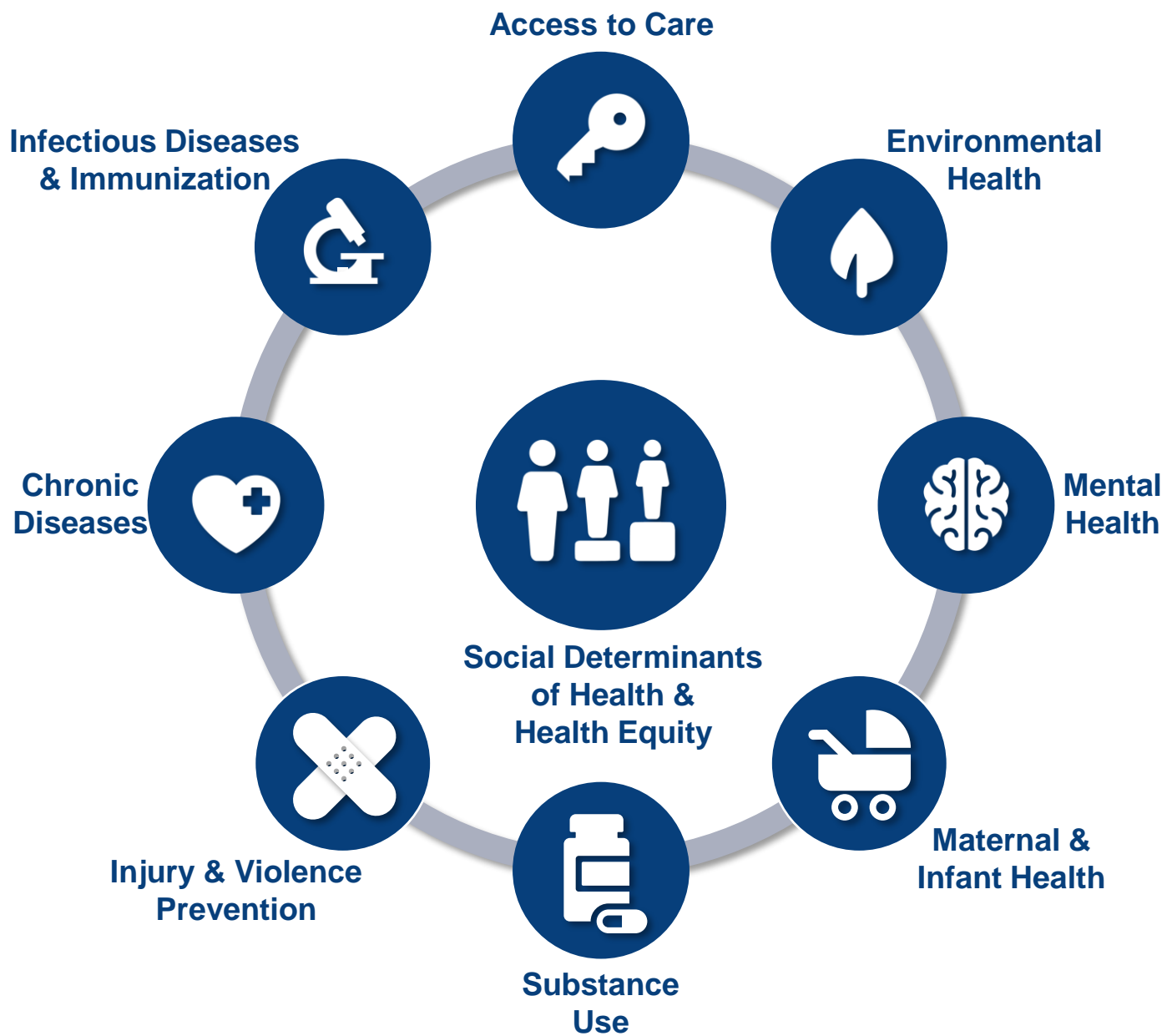
Report feedback survey: Both stakeholders and the public were invited to review the SHA and offer feedback. Their input was reviewed and integrated into this SHA.



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

VII. SHA Themes

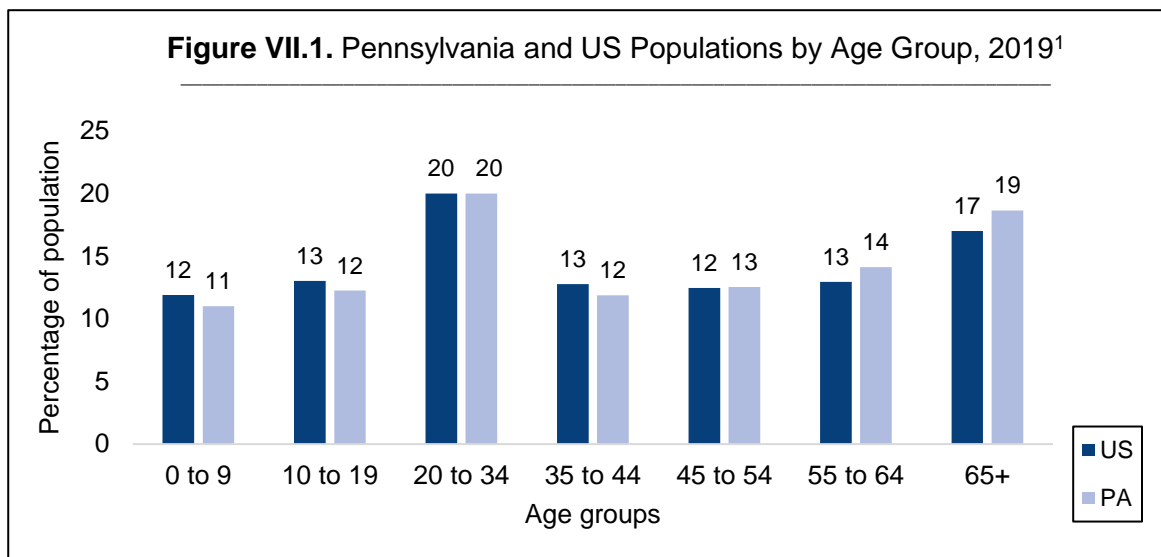
The themes presented in this SHA were based on the review of other state and local health assessments and community health needs assessments. The literature review included cataloguing all themes, sub-issues, and indicators included in these reports and aligning them with Healthy People 2020 topics, objectives, and leading health indicators. The most common themes appearing in the literature review formed the core content of this SHA.



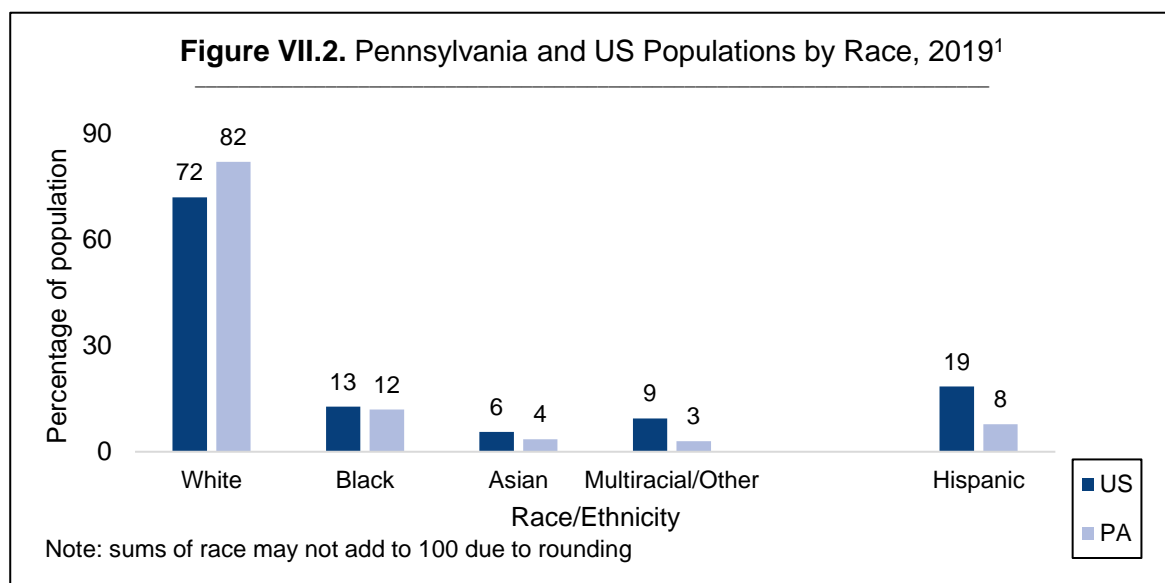
VIII. Who are Pennsylvanians?

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

- As shown in Figure VII.1, in 2019, about one-quarter of Pennsylvanians were under the age of 20 and one-third were 55 and older.
- In 2019, Pennsylvania had a larger proportion of its population aged 65 and older (18.7%) than the US overall (16.5%).¹
- Pennsylvania's older population grew between 2010 and 2019. The age groups 65 to 69 and 70 to 74 grew by 34% and 43% respectively.¹



Pennsylvania has a racially and ethnically diverse population. One in five Pennsylvania residents, in 2019, identified as black, Asian, multiracial, or “other.” Eight percent identify as Hispanic or Latinx.¹



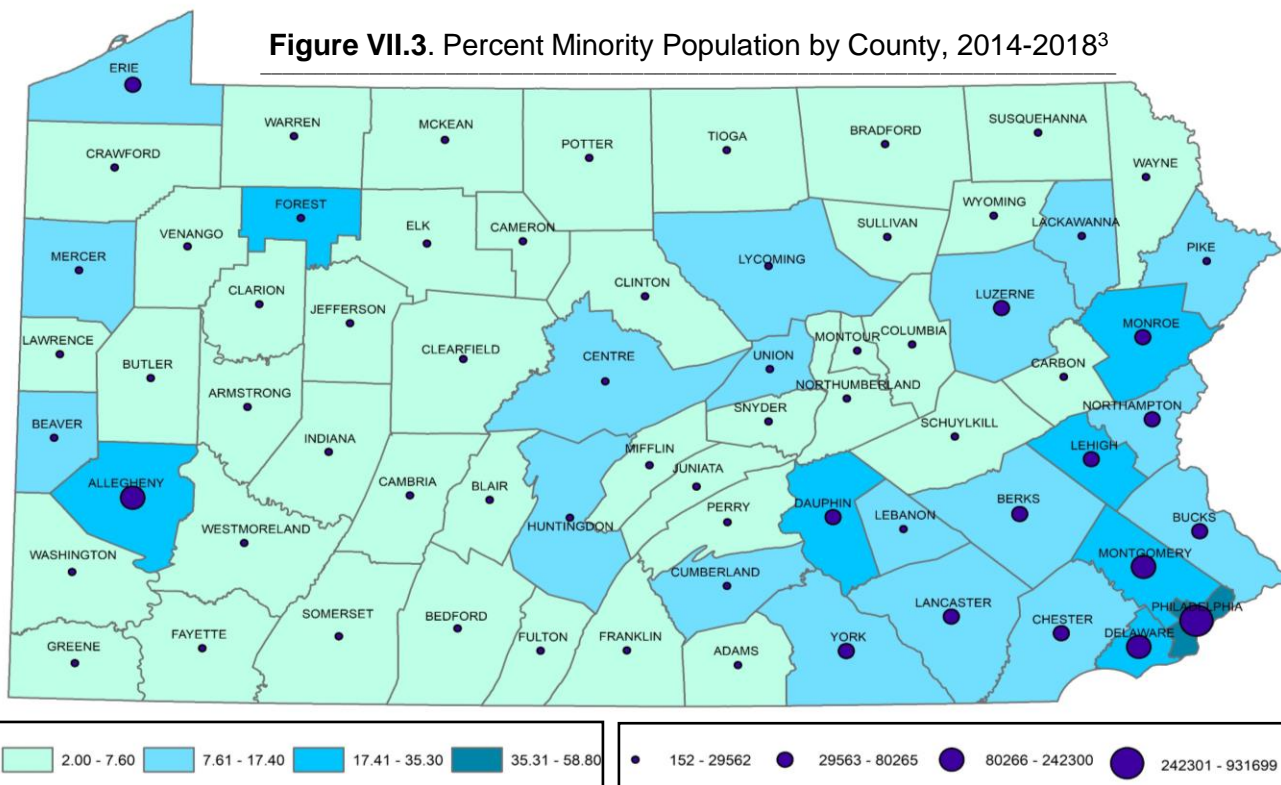
Overall, Pennsylvania's population grew by 0.8% between 2010 and 2019. The population of white residents showed minor growth (0.4%), while Asian/Pacific Islander and Hispanic populations were the fastest growing.¹

Table VII.1. Pennsylvania Population Change by Race and Ethnicity²

	2010	2019	Percent Change
White	10,406,288	10,447,062	0.4%
Black	1,377,689	1,540,092	11.8%
Hispanic	719,660	1,000,150	39%
Asian/Pacific Islander	352,741	491,871	39.4%
Total	12,702,379	12,801,989	0.8%

Minority populations ranged from 2% in Elk County to 59% in Philadelphia County (Figure VII.3). Allegheny, Montgomery, Lehigh, Monroe, Dauphin, Delaware, Forest, and Philadelphia counties have the largest minority populations.³

Figure VII.3. Percent Minority Population by County, 2014-2018³



Languages. Below are the commonly spoken languages at home in Pennsylvania (other than English):⁴

- Spanish (5.2%)
- Chinese (including Mandarin and Cantonese) (0.8%)
- Yiddish, Pennsylvania Dutch, or other West Germanic languages (0.6%)
- German (0.3%)
- Russian (0.3%)
- Arabic (0.3%)
- Vietnamese (0.3%)
- French (including Cajun) (0.3%)
- Italian (0.3%)
- Korean (0.2%)

About 12% of Pennsylvanians speak languages other than English at home, and about 3% of households have limited English proficiency.

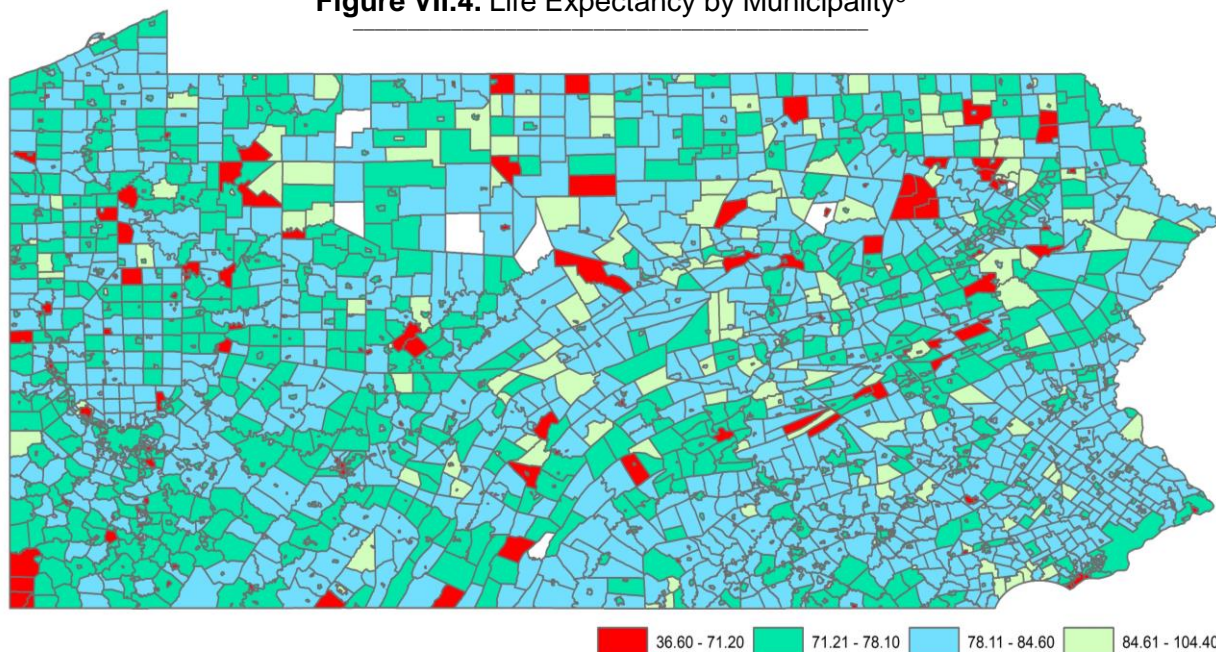
Gender. As of 2019, Pennsylvania had a total of 12,801,989 residents. Of these, 49% (6,274,361) identified as males and 51% (6,527,628) identified as females (note: no other options were available).¹

Sexual Identity. In 2018, 5% of the adult population identified as lesbian, gay, or bisexual, and under 1% identified as transgender.⁵

Population Density. Pennsylvania's area is 44,743 square miles, with a population density of approximately 284 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 (284). By this definition, of Pennsylvania's 67 counties, 48 are rural and 19 are urban. About one-third of residents live in rural counties.⁶

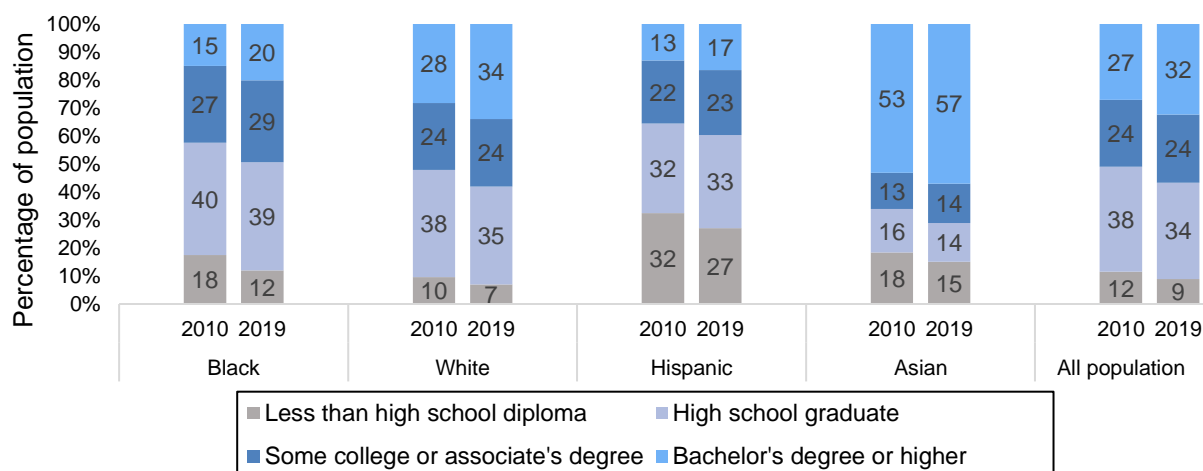
Life Expectancy. In 2018, Pennsylvanians' average life expectancy was 78.3, ranging from 75.0-82.9 across counties.⁷ The map below shows life expectancy by municipalities.

Figure VII.4. Life Expectancy by Municipality⁸



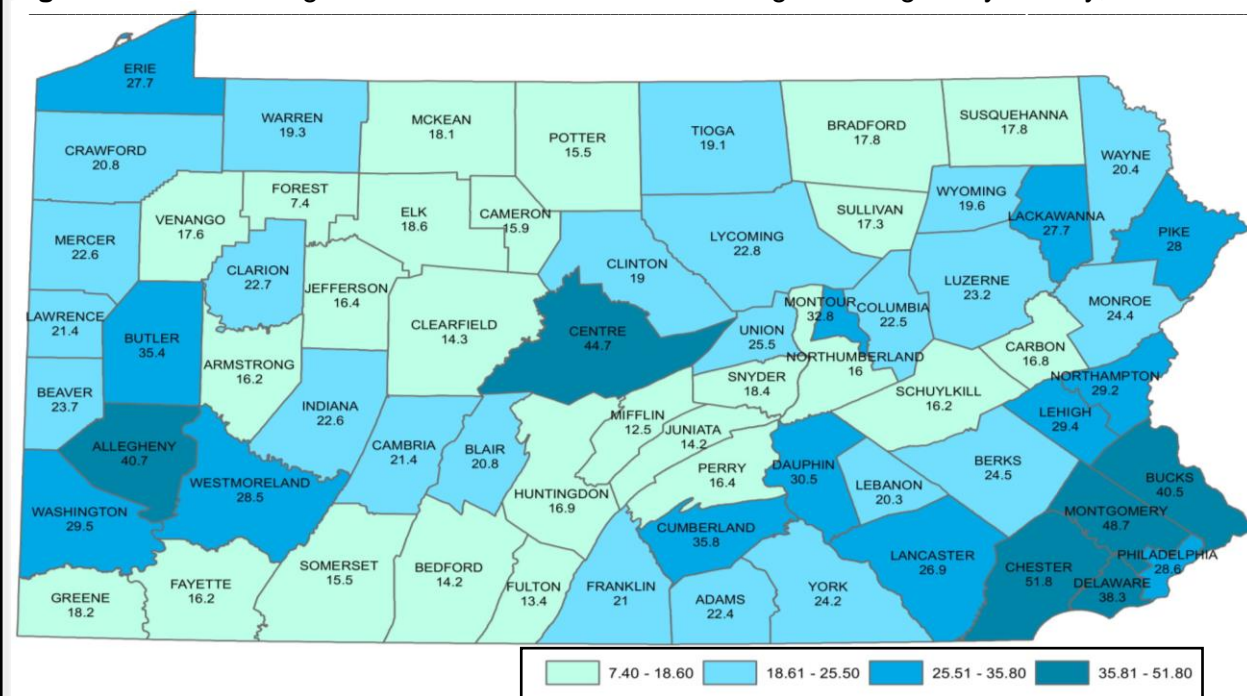
As of 2019, nearly 30% of Pennsylvania residents had a bachelor's degree or higher, yet 10% had not completed high school. The percentage of people having a bachelor's degree or higher increased between 2010 and 2019, whereas the percentage of people who are high school graduates or the equivalent decreased in all race and ethnic groups.

Figure VII.5. Educational Attainment for Population 25 Years and Over by Race and Ethnicity, 2019⁹



As shown in Figure VII.6, in recent years, the percentage of adults age 25 and older with a bachelor's degree or higher varied greatly by county. Chester, Montgomery, Centre, Allegheny, and Bucks counties had the highest percentages of adults age 25 and older with a bachelor's degree or higher.

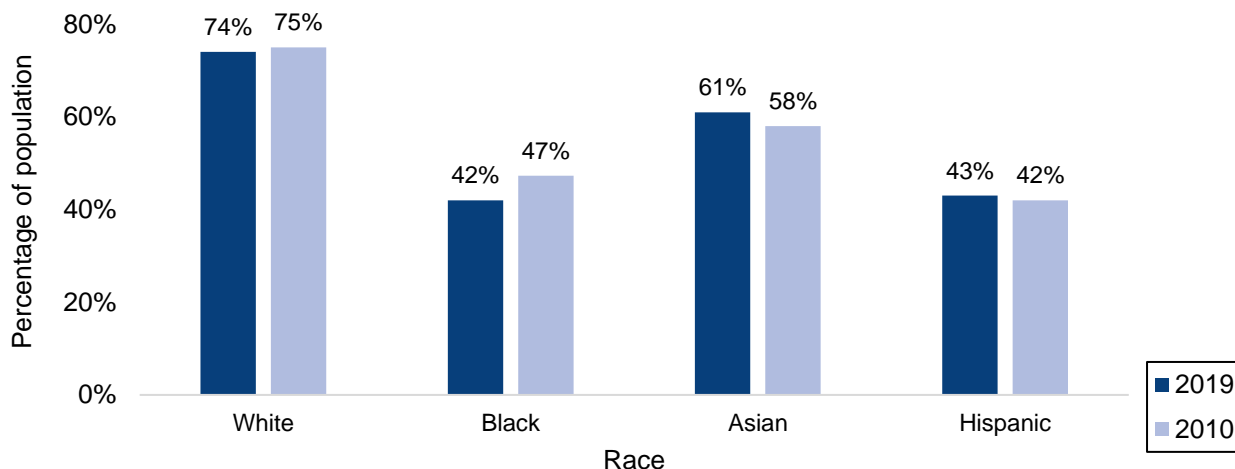
Figure VII.6. Percentage of Adults 25+ With Bachelor's Degree or Higher by County, 2014-2018¹⁰



As of 2019, there were about 5 million housing units in Pennsylvania. Home ownership was lower among minority residents compared to their white counterparts. The percentage of black Pennsylvanians who owned homes decreased between 2010 and 2019.¹¹

In 2019, median gross rent was \$951, while nationwide it was \$1,097. Median gross rent increased by 29% between 2010 and 2019 in Pennsylvania.¹²

Figure VII.7. Home Ownership by Race in Pennsylvania, 2010 and 2019¹¹



Housing, Employment, and Income



69% of housing units were owner occupied¹³

2019



4% of adults were unemployed¹⁴

2019



28% of households earned less than \$35,000¹⁵

2019



16% of families with children lived below poverty¹⁶

2019

Identifying and ranking the leading causes of death by age group build understanding of the magnitude of diseases and inform development of age-specific interventions.

Death Rates

In Pennsylvania in 2018, there was a total of 134,645 deaths with 77% occurring among those age 65 and over. The age-adjusted death rate was 759.4 per 100,000 residents and has not changed from 2010 to 2018.¹⁶

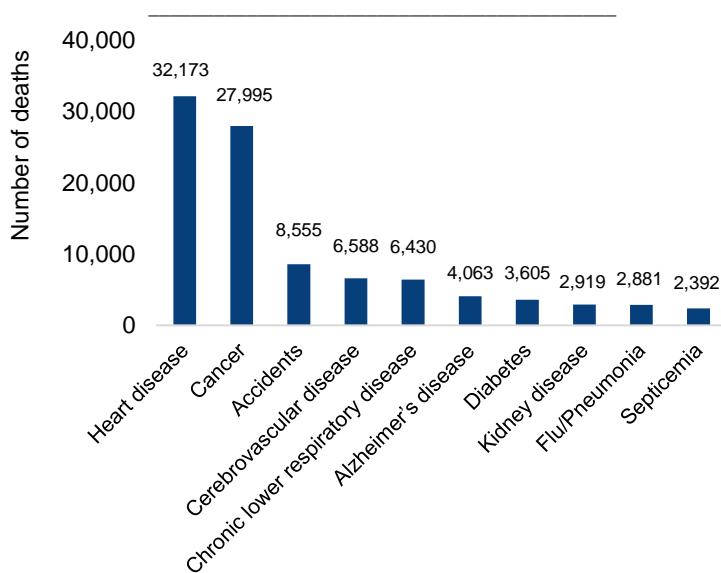
There were geographic and racial and ethnic disparities in the overall age-adjusted death rate in Pennsylvania. In 2018, across the counties, the age-adjusted death rate ranged from 552.8 per 100,000 residents in Centre County to 954.6 per 100,000 residents in Wyoming County. The age-adjusted death rate was also higher among black residents (896.8 per 100,000) compared to white residents (741.5 per 100,000). Deaths were higher among males in all age groups except among the age group 80 years and over.¹⁷

In 2017, Pennsylvania's age-adjusted death rate was higher than the US average for heart disease, cancer, accidents, kidney diseases, septicemia, and drug overdoses.¹⁸

Causes of Death (for more, see Appendix A. Leading Causes of Death)

- In 2018, the top 2 causes of death were heart disease and cancer (Figure VII.8).
- Accidents, drug-induced deaths, suicide, and homicide were among the top leading causes of death for those age 20 to 44 in 2018 (see Appendix A). Cancer, heart disease, mental and behavioral disorders, chronic lower respiratory diseases, and cerebrovascular diseases were the top 5 leading causes of death for those age 75 and over.¹⁷
- Premature deaths are measured by the number of years of potential life lost before age 75 per 100,000 population. Premature deaths in Pennsylvania increased by 16% between 2016 and 2019.¹⁹

Figure VII.8. Ten Leading Causes of Death in Pennsylvania, 2018¹⁷



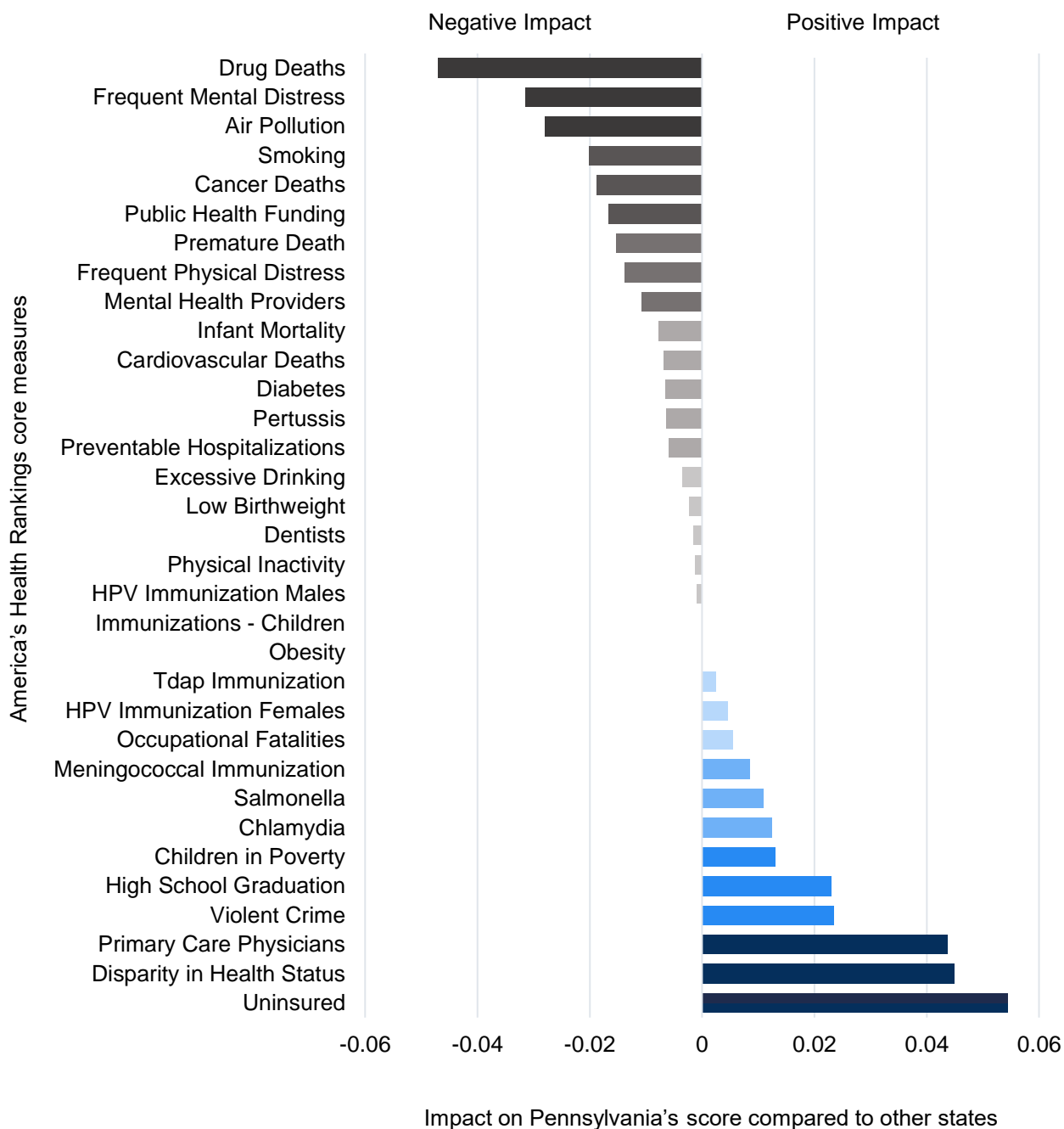
Overall Challenges and Strengths

Based on America's Health Rankings composite measure, Pennsylvania ranked 28 among all states in its overall health status.¹⁹

- Pennsylvania's top strengths included a low percentage of uninsured people, a high rate of primary care physicians, and high immunization coverage among adolescents.
- Top challenges included high levels of air pollution, high prevalence of frequent mental distress, and high drug-related death rates.¹⁹

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. Those that are in the top of the rankings are the positive impact measures, and those that fall in the lower half of states have negative impact on the overall ranking. The higher or lower impacts will come from being higher or lower among states. Overall, Pennsylvania ranked 28 in 2019.

Figure VII.9. America's Health Rankings Core Measures Impact in Pennsylvania, 2019¹⁹



References

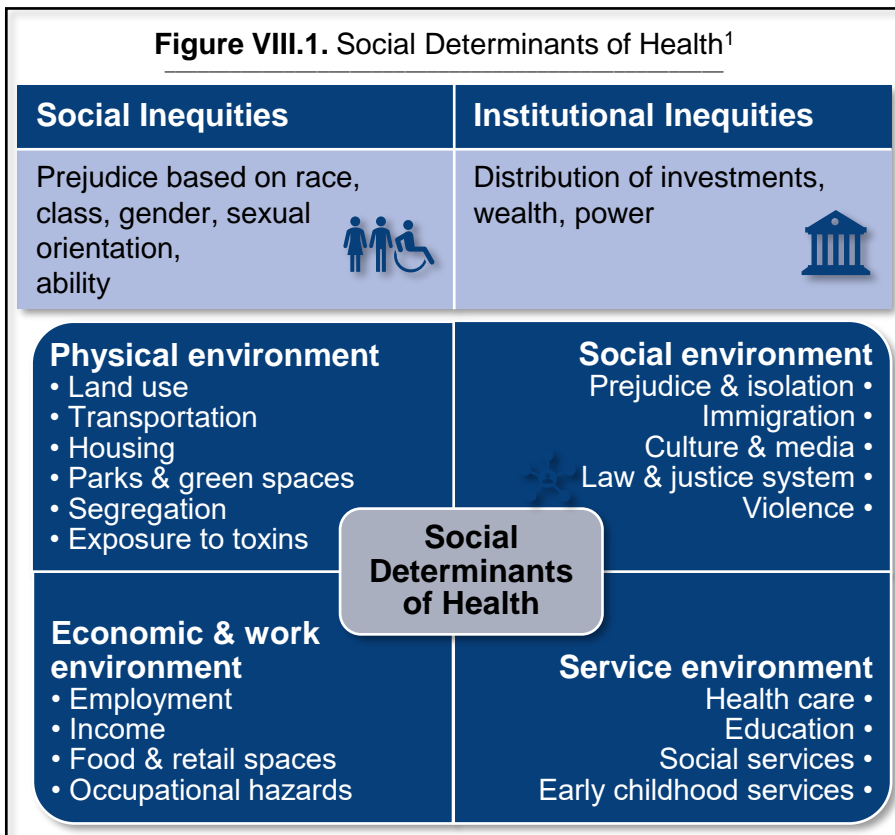
1. U.S. Census Bureau, 2019. Population and Housing Unit Estimates Tables and Annual Estimates of the Resident Population for Selected Age Groups by Sex: April 1, 2010 to July 1, 2019. census.gov. Retrieved from: <https://www.census.gov/programs-surveys/popest/data/tables.html>. Accessed October 14, 2020.
2. Population Demographics, 2019. Enterprise Data Dissemination Informatics Exchange. health.pa.gov. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/PopCntySt.aspx>. Accessed November 12, 2020.
3. U.S. Census Bureau. American Community Survey 5-Year Estimate (2014-2018), Tables B02001 [Data file]. census.gov. Retrieved from: https://data.census.gov/cedsci/table?text=B02001&y=2018&layer=VT_2018_050_00_PY_D1&cid=B02001_001E&q=0400000US42.050000&tid=A_CSDT5Y2018.B02001&hidePreview=false&vintage=2018. Accessed September 10, 2020
4. U.S. Census Bureau, 2019. American Community Survey 1-Year Estimate, Tables B16001 and B16002 [Data file]. www.census.gov. Accessed August 24, 2020.
5. Pennsylvania Behavioral Risk Factor Surveillance System (BRFSS), 2018. Enterprise Data Dissemination Informatics Exchange. health.pa.gov. Retrieved from <https://www.phaim1.health.pa.gov/EDD/WebForms/BRFSSstate.aspx>. Accessed August 24, 2020.
6. The Center for Rural Pennsylvania. Rural/Urban PA. rural.palegislature.us. Retrieved from: https://www.rural.palegislature.us/rural_urban.html Accessed July15, 2020.
7. County Health Rankings, 2020. countyhealthrankings.org. Retrieved from: <https://www.countyhealthrankings.org/app/pennsylvania/2020/measure/outcomes/147/data>. Accessed July15, 2020.
8. Pennsylvania Department of Health, Division of Health Informatics. Data request. September 23, 2020.
9. U.S. Census Bureau, 2019. American Community Survey 1-Year Estimate, Tables C15002B, C15002H, and C15002I [Data file]. www.census.gov. Accessed August 24, 2020.
10. U.S. Census Bureau. American Community Survey 5-Year Estimate (2014-2018), Tables B15003 [Data file]. census.gov. Retrieved from: https://data.census.gov/cedsci/table?text=B15003&y=2018&layer=VT_2018_050_00_PY_D1&cid=B15003_001E&q=0400000US42.050000&tid=A_CSDT5Y2018.B15003&hidePreview=false&vintage=2018. Accessed August 24, 2020.
11. U.S. Census Bureau, 2019. American Community Survey 1-Year Estimate, Tables B25003B, B25003D, B25003H and B25003I [Data file]. www.census.gov. Accessed August 24, 2020.
12. U.S. Census Bureau, 2019. American Community Survey 1-Year Estimate, Tables B25064 [Data file]. census.gov. Retrieved from: https://data.census.gov/cedsci/table?text=B25064&q=0100000US_0400000US42&tid=ACSDT1Y2019.B25064&hidePreview=false. Accessed August 24, 2020.
13. U.S. Census Bureau, 2019. Quick facts, Pennsylvania. census.gov. Retrieved from: <https://www.census.gov/quickfacts/fact/table/PA/BZA010218>. Accessed September 14, 2020.
14. 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.
15. U.S. Census Bureau, 2019. American Community Survey 5-Year Estimate, Table B19001. census.gov. Retrieved from: <https://data.census.gov/cedsci/table?text=B19001&q=0400000US42&tid=ACSDT1Y2019.B19001&hidePreview=false>. Accessed October 14, 2020.
16. U.S. Census Bureau. (2019). Pennsylvania. census.gov. retrieved from: <https://data.census.gov/cedsci/profile?q=0400000US42>. Accessed October 14, 2020.
17. Pennsylvania Death Certificate Dataset, 2018. Enterprise Data Dissemination Informatics Exchange. health.pa.gov. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/DeathCntySt.aspx>. Accessed October 14, 2020.
18. Stats of the State of Pennsylvania. CDC/National Center for Health Statistics. cdc.gov. Retrieved from: <https://www.cdc.gov/nchs/pressroom/states/pennsylvania/pennsylvania.htm>. Accessed October 14, 2020.
19. Pennsylvania Annual Report, 2019. America's Health Rankings. americashealthrankings.org. Retrieved from: <https://www.americashealthrankings.org/explore/annual/measure/Overall/state/PA>. Accessed October 14, 2020.

IX. Social Determinants of Health and Health Equity



Health disparities persist throughout Pennsylvania and the nation, and COVID-19 has underscored and magnified this reality. 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 the social determinants of health. Figure VIII.1 outlines examples of the social determinants that cause these harms. Some of these inequities are demonstrated in this section.

Figure VIII.1. Social Determinants of Health¹



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, without assuming all need the same supports 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..”

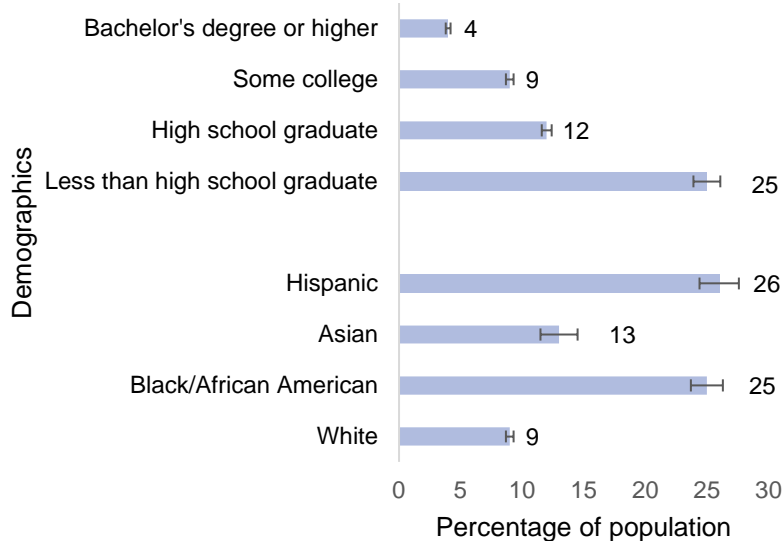
– The Centers for Disease Control and Prevention²

Social determinants of health, including education, socioeconomic status, social supports, access to services, systemic racism and oppression, racial segregation, housing, and the built environment have contributed to different health outcomes for Pennsylvanians. Below are a small number of selected examples of disparities found throughout this report.

- 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
- Black Pennsylvanians had higher rates of death due to heart diseases, cancers, cerebrovascular diseases, diabetes, infectious and parasitic diseases, homicide, kidney diseases, and septicemia.⁵
- Gay, lesbian, and 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.⁶
- Compared to white residents, black Pennsylvanians had higher rates of infant mortality, maternal mortality, low birth weight babies, teen births, and having no prenatal care.³
- Compared to non-Hispanic whites, 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
- Hispanic residents were more likely than whites to die from homicides and be diagnosed with chlamydia, gonorrhea, and tuberculosis.^{5,7,8}
- Rural counties in Pennsylvania had fewer physicians and dentists compared to urban counties. On the contrary, rural counties had lower percentages of babies born with low birth weight and fewer overdose deaths compared to urban counties.⁹
- Those 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.”

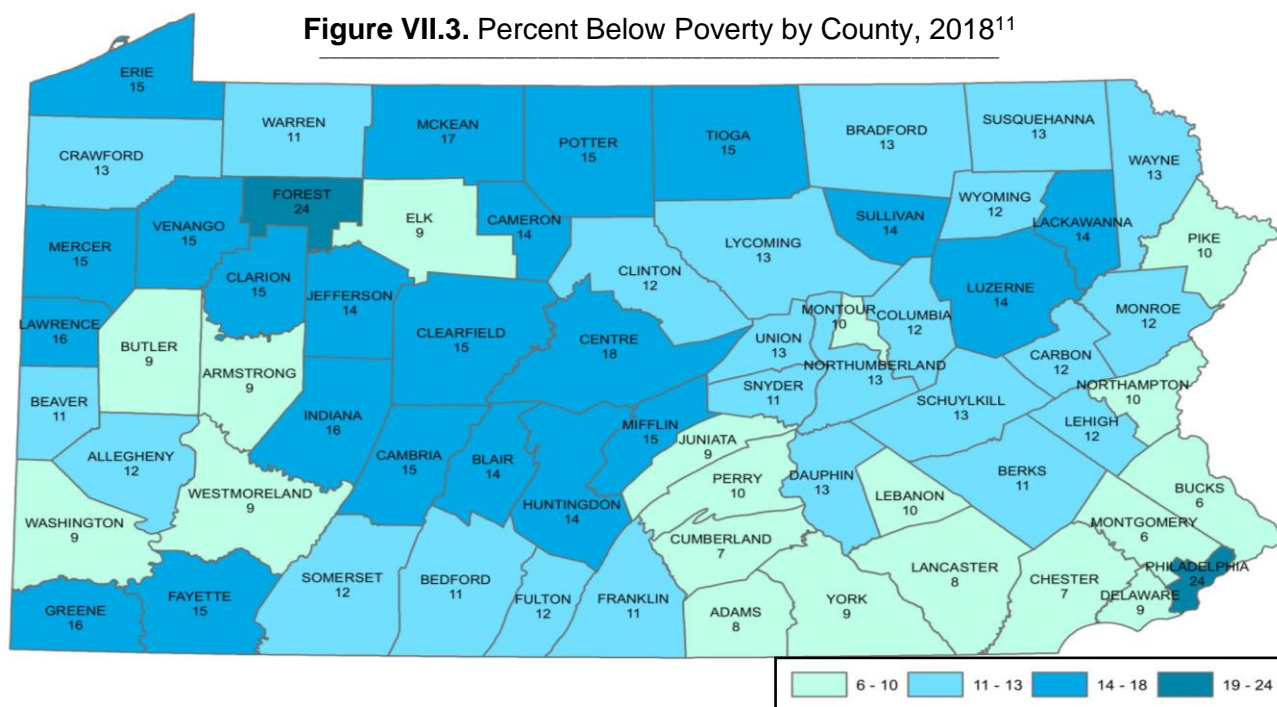
- Secretary of Health Rachel L Levine



- As illustrated in Figure VIII.2, poverty disproportionately impacts minorities and those with lower levels of education.
- Overall, 12% of Pennsylvanians lived below poverty.¹⁰
- Black and Hispanic Pennsylvania households were about three times as likely to live in poverty compared to white households.⁹
- Lack of educational attainment is a driving force of poverty and unemployment.
- Individuals and families may be above the poverty threshold and still struggle financially.

As shown in Figure VIII.3, the percent of people living below poverty ranged from 6% in Bucks County to 24% in Philadelphia County.¹¹

Figure VII.3. Percent Below Poverty by County, 2018¹¹



These disparities are compounded for members of minority groups. Fewer black (74%) and Hispanic (72%) students graduated with a regular diploma within 4 years of starting ninth grade compared to white students (91%).¹²

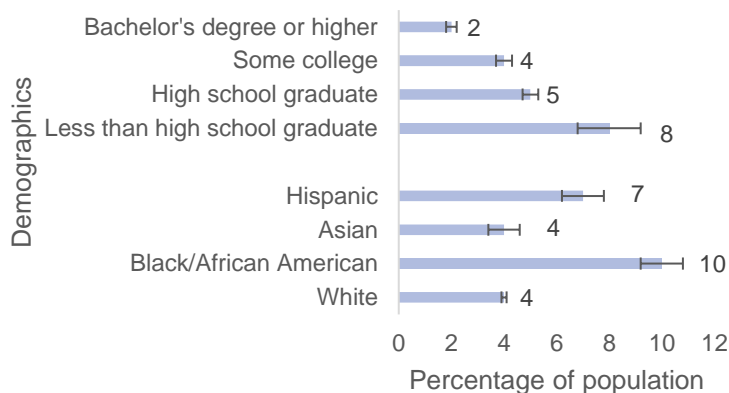
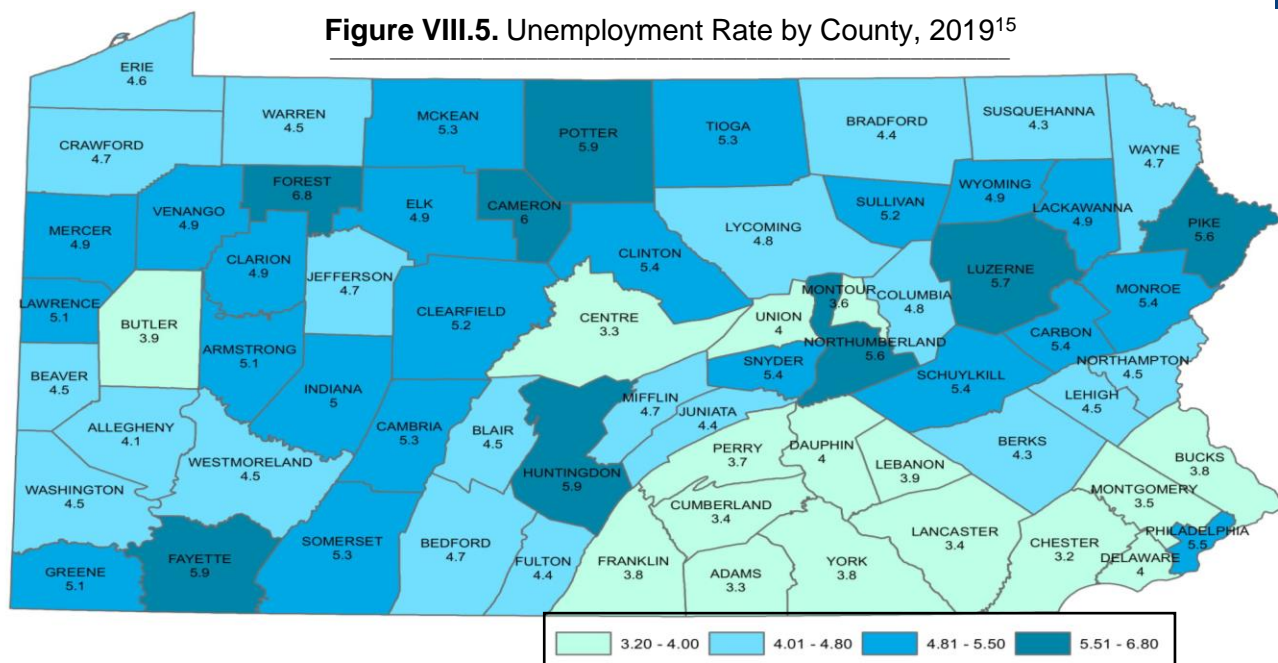


Figure VIII.5. Unemployment Rate by County, 2019¹⁵



Philadelphia

Making Ends Meet

Public Assistance

Additional social determinants include childhood experiences. Adverse Childhood Experiences (ACEs) include emotional abuse, physical abuse, sexual abuse, intimate partner violence, household substance abuse, household mental illness, parental separation or divorce, and incarcerated household member.²³

These ACEs have been associated with health problems that can include obesity, diabetes, depression, suicide attempts, STDs, heart disease, cancer, stroke, COPD, and broken bones. ACEs have been shown to affect health behaviors including tobacco use, alcohol use, and drug use, and ACEs can impact life potential through reduced education achievement and lost time from work.²⁴

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.²³

- In a 2019 survey, an estimated 50% of Pennsylvania adults reported having experienced one or more adverse childhood experiences.²³
- In Pennsylvania, an ACE of concern is paternal incarceration. Black, non-Hispanic adults and Hispanic adults were 3 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 white, non-Hispanic adults.²³
- Black non-Hispanic adults and Hispanic adults were about 2 times more likely to have had the childhood experience of 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. barhii.org. 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. Health Equity. Pennsylvania Department of Health. health.pa.gov. 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.
4. Pennsylvania Behavioral Risk Factor Surveillance System (BRFSS). Enterprise Data Dissemination Informatics Exchange. health.pa.gov. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/BRFSSState.aspx>. Accessed October 15, 2020.
5. Pennsylvania Death Certificate Dataset, 2018. Enterprise Data Dissemination Informatics Exchange. health.pa.gov. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/DeathCntySt.aspx>. Accessed October 15, 2020.
6. Youth Risk Behavioral Survey (YRBS), 2019. Centers for Diseases Control and Prevention (CDC). cdc.gov. Retrieved from: <https://nccd.cdc.gov/youthonline/App/Results.aspx?LID=PA>. Accessed October 15, 2020.
7. Sexually transmitted diseases, 2018. Enterprise Data Dissemination Informatics Exchange. health.pa.gov. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/STDSt.aspx>. Accessed September 24, 2020.
8. Communicable Diseases, 2018. Enterprise Data Dissemination Informatics Exchange. health.pa.gov. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/CommDisSt.aspx>. Accessed September 24, 2020.
9. Demographics, Quick Facts. The Center for Rural Pennsylvania. rural.palegislature.us. Retrieved from: https://www.rural.palegislature.us/demographics_about_rural_pa.html. Accessed July 15, 2020.
10. U.S. Census Bureau, 2019. American Community Survey 1-Year Estimate, Tables S1701 [Data file]. census.gov. Retrieved from: <https://data.census.gov/cedsci/table?text=S1701&q=0400000US42&tid=ACSST1Y2019.S1701&hidePreview=false>. Accessed October 15, 2020.
11. U.S. Census Bureau, 2018. Small Area Income and Poverty Estimates. census.gov. Retrieved from: <https://www.census.gov/data-tools/demo/saipe/#/>. Accessed July 15, 2020.
12. Pennsylvania Department of Education, 2018. Cohort Graduation Rate. education.pa.gov. Retrieved from: <https://www.education.pa.gov/DataAndReporting/CohortGradRate/Pages/default.aspx>. Accessed July 16, 2020.
13. U.S. Census Bureau, 2019. American Community Survey 1-Year Estimate, Tables S2301 [Data file]. census.gov. Retrieved from: <https://data.census.gov/cedsci/table?text=S2301&q=0400000US42&tid=ACSST1Y2019.S2301&hidePreview=false>. Accessed October 15, 2020.
14. Pennsylvania Statewide Health Assessment Poll and Focus Groups, 2020. Pennsylvania Department of Health. Harrisburg, PA.
15. Local Area Unemployment Statistics (LAUS), 2019. Pennsylvania Department of Labor and Industry. Center for Workforce Information and Analysis. (LAUS) [Data file]. paworkstats.geosolinc. Retrieved from: <https://www.workstats.dli.pa.gov/Research/Pages/default.aspx>. Accessed July 17, 2020.
16. United States Census Bureau, 2019. QuickFacts Philadelphia city, Pennsylvania. census.gov. Retrieved from: <https://www.census.gov/quickfacts/fact/table/philadelphiacitypennsylvania/PST045219#>. Accessed October 15, 2020.
17. U.S. Census Bureau, 2019. American Community Survey 1-Year Estimate, Tables B09010 [Data file]. Retrieved from: <https://data.census.gov/cedsci/table?text=B09010&q=0400000US42&tid=ACSDT1Y2019.B09010&hidePreview=false>. Accessed October 15, 2020.
18. 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 2018. Feeding America, 2020.
19. U.S. Census Bureau, 2019. American Community Survey 1-Year Estimate, Tables B25074 [Data file]. census.gov. Retrieved from: <https://data.census.gov/cedsci/table?text=B25074&q=0400000US42&tid=ACSDT1Y2019.B25074&hidePreview=false>. Accessed July 17, 2020.
20. County Health Rankings, 2020. countyhealthrankings.org. Data file. <https://www.countyhealthrankings.org/explore-health-rankings/rankings-data-documentation>. Accessed July 17, 2020.
21. U.S. Department of Housing and Urban Development, 2020. The 2019 Annual Homeless Assessment Report (AHAR). Retrieved from: <https://files.hudexchange.info/resources/documents/2019-AHAR-Part-1.pdf>. Accessed August 12, 2020.
22. HUD 2019 Continuum of Care Homeless Assistance Programs Homeless Populations and Subpopulations. U.S. Department of Housing and Urban Development. 2019. Retrieved from: https://files.hudexchange.info/reports/published/CoC_PopSub_State_PA_2019.pdf. Accessed August 13, 2020.
23. 2019 Adverse Childhood Experiences. Pennsylvania Department of Health. health.pa.gov. Retrieved from: <https://www.health.pa.gov/topics/HealthStatistics/BehavioralStatistics/InjuryStatistics/Documents/ACE%20Report%202019.pdf>. Accessed Nov. 10, 2020.
24. Adverse Childhood Experiences (ACEs). Centers for Diseases Control and Prevention. cdc.gov. Retrieved from: <https://www.cdc.gov/violenceprevention/pdf/preventingACES.pdf>. Accessed October 15, 2020.

X. Implications of Coronavirus (COVID-19)

The 2019 novel coronavirus (COVID-19) causes respiratory illness and can spread from person to person. This virus was first identified during an investigation into an outbreak in Wuhan, China.¹ The COVID-19 pandemic is an event unparalleled in modern times, impacting every part of the world. Pennsylvania has seen an unprecedented burden of COVID-19 and has taken extraordinary measures to save lives and reduce morbidity of the COVID-19 virus.

Because the immediate COVID-19 response overlapped with SHA planning and report development, brief background information is included here for context. COVID-19 response and mitigation continue in Pennsylvania, the nation, and the world at the time of this SHA's publication.

Initial Response

January 2020 – The first confirmed case of COVID-19 in the US was reported in Washington state on January 21, 2020. The Pennsylvania Department of Health (DOH) initiated daily leadership meetings on January 26 to carefully track the disease, prepare a response, and coordinate with federal, local and hospital partners. By January 30, the World Health Organization had declared the virus a global health emergency.

February – The Pennsylvania Emergency Management Agency (PEMA), staffed by Pennsylvania DOH epidemiologists, public health nurses, physicians, logistical, planning and communication supports, Pennsylvania Department of Human Services representatives, and PEMA staff, expanded service hours to closely monitor the spread of the disease and begin containment strategies in furtherance of the state's preparedness plans.

March – Due to the continued spread of the virus throughout the US, PEMA partially activated its Commonwealth Response Coordination Center (CRCC) to provide planning and logistical support for Pennsylvania DOH and to coordinate situational awareness across state agencies and all 67 counties within the commonwealth. On March 6, Pennsylvania recorded its first two cases of COVID-19, and Governor Tom Wolf signed a disaster declaration to ensure the state had the resources and authority to plan the process of containment and mitigation in Pennsylvania.

By mid-March, under guidance from Secretary of Health Rachel L. Levine, Governor Wolf began to temporarily close schools and adult day centers, requesting that non-essential businesses close and county residents limit travel. Bars and restaurants were ordered to cease dine-in operations. He also imposed limited visitation in nursing homes and correctional facilities. Across the commonwealth, non-urgent surgeries and outpatient procedures were suspended. Public health and personal health programming and services adapted and expanded to include virtual opportunities. These and other mitigations would prove to be vital.

Preparedness, Testing, and Contact Tracing

From the beginning of the pandemic, the administration undertook a measured and regional strategy for mitigation and containment, assuring Pennsylvanians they could receive testing and treatment for COVID-19 without any financial burden. Decisions and actions were taken on state, county, and regional bases in coordination with local elected officials, public health experts, and other stakeholders. Throughout the pandemic, the commonwealth closely monitored hospital system capacity through



COVID-19 has been a great reveal of differences.” - Focus group participant

the creation of a public dashboard and built and distributed millions of goods and materials to help health care systems manage the influx of patients.

The commonwealth responded aggressively to the spread of COVID-19, first by working to contain the virus through contact tracing and quarantines for those who were in contact with infected individuals. When sustained community spread was established, the commonwealth moved to mitigation efforts early in the response by issuing orders to close schools and non-life-sustaining businesses and to restrict large gatherings. This decision to respond aggressively and reopen with a risk-adverse approach has proven to be an essential and effective measure to reduce the spread of COVID-19, and ultimately has and will save an unrealized number of Pennsylvanians' lives.

Increased testing capacity has been critical to successfully reopening Pennsylvania, especially as certain regions moved from aggressive mitigation to containment strategies. In April, the Wolf Administration developed an enhanced testing strategy with a focus on three pillars: ensuring testing is accessible for all Pennsylvanians with symptoms of COVID-19; increasing supply and building community capacity; and adapting to the evolving landscape of the virus in data-informed ways.

Contact tracing has been a key to preventing the further spread of COVID-19. Identifying and quarantining close contacts of those infected limits their ability to spread disease should they become infectious and helps to limit community spread. With funding made available through the federal government, the Pennsylvania DOH hired over 1,000 additional contact tracing staff to bolster and diversify the public health workforce, all while keeping Pennsylvanians safe.² To prevent further spread of disease, COVID-19 contacts were encouraged to stay home and maintain social distance (at least 6 feet) from others until 14 days after their last exposure to a person with COVID-19.²

The department recognizes that the COVID-19 pandemic will continue to evolve rapidly as tools, research, and data are improved to protect public health. The Wolf Administration is committed to a data-driven, community-based approach to address COVID-19. As more information becomes available, the administration will continue to refine approaches based on scientific evidence and input from communities.

The department listened to community partners, county and municipal health departments, and local health care leaders to guide a localized strategy. The number of cases in communities was closely monitored to ensure that testing sites were situated appropriately in areas with the greatest need. In Pennsylvania, all major health insurance providers, including medical assistance contractors, have covered medically appropriate laboratory testing for COVID-19. Additionally, the Pennsylvania DOH has performed testing free of charge. The Department of Community and Economic Development worked proactively to seek out FDA-approved testing resources while working closely with Pennsylvania-based private sector partners to develop new testing technology, and PEMA assisted with getting tests distributed to communities.

A Story of People: Those Most at Risk

Every geographic area has a different racial and ethnic composition. Demographic data reported to states to form complete case records revealed an opportunity for improvement. Both nationally and in Pennsylvania, case data has been incomplete in identification of race and ethnicity, limiting abilities to identify populations at greatest risk.³ However, sex and age data is largely complete. For Pennsylvania death reporting, 100% of deaths data included these important demographic details, captured by the electronic death reporting system.⁴

Among adults, the risk for severe illness from COVID-19 increases with age, with older adults at highest risk. Severe illness means the person with COVID-19 may require hospitalization, intensive

care, or a ventilator to help them breathe, or they may even die.⁵ Partially as a result of this increased risk, residents of long-term living facilities have been more impacted by severe COVID-19 than other populations.

CDC has also reported individuals with asthma, hypertension, obesity, diabetes, chronic kidney disease, or any combination of these comorbidities are 1.5 to 5 times more at risk for hospitalization than people without these conditions. Data has shown racial and ethnic minority groups with these conditions are at an even higher risk for severe COVID-19 illness. Social determinants, like racism, socioeconomic factors, and access to health care continue to impact health.⁶

Governor Wolf was among the first governors in the nation to identify the issue of health disparities as they relate to marginalized populations who have been hit hardest by the COVID-19 pandemic. In April, Governor Wolf formed a task force and assigned it with identifying obstacles that cause those disparities and bringing those issues to his attention. The task force was chaired by Lieutenant Governor John Fetterman. The task force has engaged leaders, teachers, medical professionals, and other stakeholders from communities across our commonwealth, and it released a policy recommendations report titled, "Pennsylvania COVID-19 Response Task Force: Health Disparity."⁷

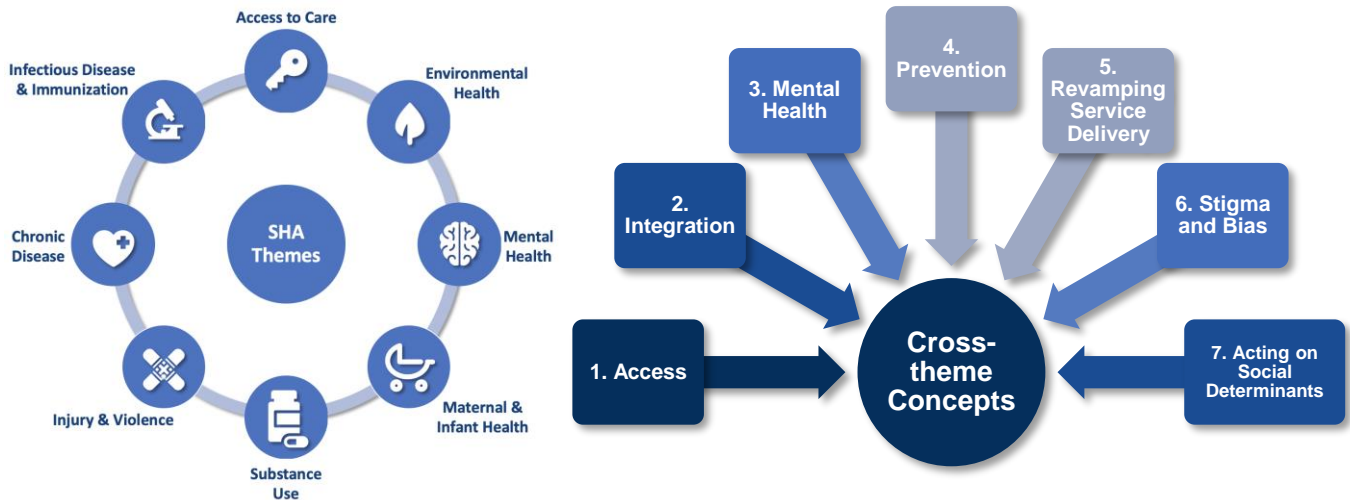
The Pennsylvania DOH implemented a health-equity response team led by the department's Office of Health Equity. The response aligned with Governor Wolf's taskforce and sought to lessen the burden of COVID-19 on vulnerable populations. The team included more than 100 government and community members to assess the state response through a health equity lens and recommended and implemented activities for improvement. Pennsylvania DOH understood that long-standing health disparities were now exacerbated by COVID-19 and that community partners bringing forth methods to address these disparities would prove to be invaluable. Addressing COVID-19 and health disparities through a community partnership and from a health equity standpoint strongly aligned with 2 of the department's core strategies: to maintain and enhance emergency services and public health preparedness; and to promote public health with awareness, prevention, and improvement of outcomes where the need is greatest. The response team developed a recommendations report constituting an aggressive plan to mitigate the negative impacts of COVID-19 among vulnerable populations and to reduce the possibility of unintentional harm, loss of life, suffering, and long-term multi-generational impact.⁸

References

1. Coronavirus disease (COVID-19). World Health Organization. who.int. Retrieved from: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/question-and-answers-hub/q-a-detail/coronavirus-disease-covid-19>. Accessed August 21, 2020.
2. Contact Tracing. Department of Health. Retrieved from: <https://www.health.pa.gov/topics/disease/coronavirus/Pages/Contact-Tracing.aspx>. Published August 19, 2020. Accessed August 21, 2020.
3. CDC COVID Data Tracker. Centers for Disease Control and Prevention. <https://www.cdc.gov/covid-data-tracker/index.html>. Published August 21, 2020. Accessed August 21, 2020.
4. Weekly Report for Deaths Attributed to COVID-19. Department of Health. Retrieved from: <https://www.health.pa.gov/topics/Documents/Diseases%20and%20Conditions/COVID-19%20Death%20Reports/Weekly%20Report%20of%20Deaths%20Attributed%20to%20COVID-19%20--%202020-08-07.pdf>. Published August 7, 2020. Accessed August 21, 2020.
5. Coronavirus 2019 (COVID-19). Centers for Disease Control and Prevention. <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/older-adults.html#:~:text=Risk%20for%20Severe%20Illness%20Increases%20with%20Age&text=The%20greatest%20risk%20for%20severe,as%20having%20underlying%20medical%20conditions>. Accessed November 4, 2020.
6. COVID-19 Associated Hospitalization Related to Underlying Medical Conditions. Centers for Disease Control and Prevention. Retrieved from: <https://www.cdc.gov/coronavirus/2019-ncov/covid-data/investigations-discovery/hospitalization-underlying-medical-conditions.html>. Published August 10, 2020. Accessed August 21, 2020.
7. Pennsylvania COVID-19 Response Task Force: Health Disparity, *Policy Recommendation Report*, Submitted by: Lieutenant Governor John Fetterman, 2020 Jul 22.
8. COVID-19 Health Equity Response Team Recommendations Report, PA DOH, July 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 that emerged. These connections are in addition to social determinants of health, equity, and COVID-19 implications, all 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 several ways, including 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 as well 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 other 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, recognizing 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 then looks at health literacy and provider cultural humility as issues impacting access. Disabled individuals and additional challenges regarding access is further analyzed.

This section includes the following:



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

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

Data shared in this section is primarily from 2017 to 2020; data represents Pennsylvania unless otherwise noted.

2018

7%

of Pennsylvanians under age 65 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.³ Overall, in 2018, 7% of Pennsylvania's population under the age of 65 was uninsured, with most counties in the 5% to 8% range, and Lancaster County at 12% (probably due to a high concentration of Amish community).¹

2019

10%

of adults needed to see a doctor in the past year but were unable due to cost.²

Having health insurance does not necessarily mean that people can access care. Provider acceptance of various insurance plans varies tremendously across the state as does care availability and coverage.

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.

2019

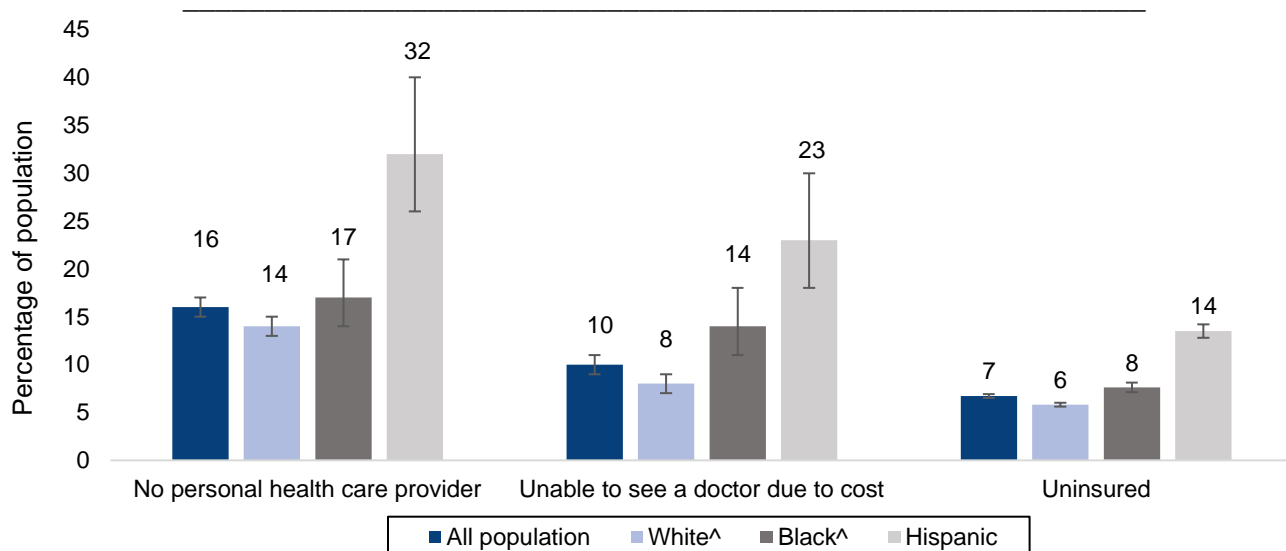
16%

of adults did not have a personal health care provider.²

Educational attainment impacts adults seeking health care. Lower levels of education associated to lower prevalence of seeking a doctor's care. In 2019, 13% of those with less than a high school degree versus 6% of those with a college degree did not see a doctor even though care was needed.²

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.

Figure AC.1. Access to Care Indicators by Race and Ethnicity, 2018, 2019^{1,2}



^ Non-Hispanic

In 2019, there were 4,992 dentists practicing direct patient care who responded to the Pennsylvania relicensure survey. Only 23% of these dentists reported that they accepted Medicaid patients. This ranged from 7% to 66% across counties.⁵

nurse practitioners per
100,000 residents
(US 79 per 100,000)⁷

36

Stakeholders are particularly concerned about rural areas being especially vulnerable to access issues.

Rural areas frequently experience shortages of providers and health care access points, as well as a lack of adequate public transportation.

There were fewer primary care doctors, dentists, mental health providers, and nurse practitioners in rural Pennsylvania compared to urban areas.^{5-7,10}

Telehealth is a growing option to solve some of the barriers to access to care. In Pennsylvania, access to broadband internet subscriptions increased from 81% in 2015 to 89% in 2019.¹¹ Still, older adults and rural residents had lower access to broadband.^{11,12}

“ *The very normal situation of having to wait 6 months to see a psychiatrist. That is the first thing that comes to mind.”*

– Focus group participant

Table AC.1. Pennsylvania Counties with the Least and Most Primary Care Providers per 100,000 Population, 2018⁶

<30	>100
Pike*	Lehigh
Forest*	Philadelphia
Perry*	Dauphin
Juniata*	Allegheny
Susquehanna*	Montgomery
Bedford*	Montour*
* Denotes rural counties	

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. Language barriers can also prevent understanding of medical terms and impede one's ability to navigate care. Providers carry various levels of implicit bias, which impacts their delivery of care.¹³ Stakeholders point out that providers may use stigmatizing language that can alienate patients.¹⁴

The 2020 LGBTQ Health Needs Assessment reported that sexual minorities believed health care providers lack medical expertise related to their health needs. It also found that 1 in 3 of the respondents feared seeking health care services because of past or potential negative reactions from health care providers.¹⁵

Stakeholders also highlighted how complex our health care system is, noting that access is impacted by fear and discomfort and is particularly problematic for patients with lower health literacy.¹⁴

When public poll respondents were asked what barriers prior to COVID-19 led to difficulty seeing a provider regularly, cost of care, lack of time, health insurance challenges, delays, wait times, and fear were mentioned most.¹⁴

“ *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.

2018

26%

of adult Pennsylvanians
had one or more
disability.¹⁶

2018

35%

of black adult
Pennsylvanians had one
or more disability.¹⁶

2010

\$20.5

billion per year was spent
on health care disability
costs in Pennsylvania.¹⁹

- Access to care and delivery of health services to the aging population is challenging for several reasons including transportation, since many rely on family and other care providers to assist in medical visits.¹⁴
- Twenty-six percent 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.¹⁶
- By race and/or ethnicity, 24% of white, 33% of Hispanic, and 35% of black and multi-race Pennsylvanians reported one or more disabilities.¹⁶
- Disabilities increased with age, from 21% of 18-44 year-olds to 39% among those 65 and over.¹⁶
- Many social determinants of health are impacted by having a disability, namely, housing, transportation, and social interactions.¹⁷
- People with disabilities are more likely to also have other risk factors such as obesity, smoking, inactivity, and high blood pressure.¹⁷
- The amount spent per year on disability costs in 2010 represented 29% of total health care expenditures in Pennsylvania.¹⁹

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

- Whole-person care builds upon the notion that health and wellness are not limited simply to physical health and through a more robust integration of care for the whole person, solutions and interventions are strengthened.

“ 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 (shortages, transportation, rural areas)
- Health literacy and cultural competency
- People with disabilities
- Whole-person care

Visit these report sections for additional context:



- [Social Determinants of Health, Equity & Racism](#)
- [COVID-19 Implications](#)
- [Assets](#)

References

1. Small Area Health Insurance Estimates (SAHIE), 2018. United States Census Bureau. Census.gov. Retrieved from: https://www.census.gov/data-tools/demo/sahie/#/?s_statefips=42&s_racecat=3&s_searchtype=s. Accessed September 28, 2020.
2. Pennsylvania Behavioral Risk Factor Surveillance System (BRFSS), 2019. Enterprise Data Dissemination Informatics Exchange. health.pa.gov. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/BRFSSstate.aspx>. Accessed September 23, 2020.
3. 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/>.
4. Pennsylvania Behavioral Risk Factor Surveillance System (BRFSS), 2018. Enterprise Data Dissemination Informatics Exchange. health.pa.gov. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/BRFSSstate.aspx>. Accessed September 23, 2020.
5. Pennsylvania Dentist Health Care Workforce Re-licensure Survey, 2019. Pennsylvania Department of Health. Data request July 10, 2020.
6. Pennsylvania Physician Health Care Workforce Re-licensure Survey, 2018. Pennsylvania Department of Health. Data request July 10, 2020.
7. Area Health Resources Files. United States Department of Health & Human Services, Health Resources and Services Administration (HRSA). Hrsa.gov. Retrieved from: <https://data.hrsa.gov/topics/health-workforce/ahrf>. Updated July 31, 2019. Accessed September 23, 2020.
8. Designated Health Professional Shortage Areas Statistics, 2020. United States Department of Health & Human Services, Health Resources and Services Administration (HRSA). Hrsa.gov. Retrieved from: <https://data.hrsa.gov/Default/GenerateHPSAQuarterlyReport>. Accessed September 2020.
9. Pennsylvania's Designated Medically Underserved Areas/Populations (MUA/P), 2018. Pennsylvania Department of Health. Health.pa.gov. Retrieved from: [https://www.health.pa.gov/topics/Documents/Health%20Planning/Designated%20Medically%20Underserved%20Areas%20-Pop%20\(MUA-P\)%20List.pdf](https://www.health.pa.gov/topics/Documents/Health%20Planning/Designated%20Medically%20Underserved%20Areas%20-Pop%20(MUA-P)%20List.pdf). Accessed November 3, 2020.
10. Mental health providers, 2019. County Health Ranking. countyhealthrankings.org. Retrieved from: https://www.countyhealthrankings.org/sites/default/files/media/document/CHR2020_PA.pdf. Accessed September 30, 2020.
11. Broadband Internet Access. Pennsylvania State Data Center. pasdc.hbg.psu.edu. Retrieved from: https://pasdc.hbg.psu.edu/sdc/pasdc_files/researchbriefs/September_2020.pdf. Accessed September 30, 2020.
12. Broadband Availability and Access in Rural Pennsylvania. Center for Rural Pennsylvania. rural.palegislature.us. Retrieved from: https://www.rural.palegislature.us/broadband/Broadband_Availability_and_Access_in_Rural_Pennsylvania_2019_Report.pdf. Accessed September 30, 2020.
13. 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.
14. Pennsylvania Statewide Health Assessment Poll and Focus Groups, 2020. Pennsylvania Department of Health. Harrisburg, PA.
15. Pennsylvania LGBTQ Health Needs Assessment. 2020. Research & Evaluation Group at Public Health Management Corporation and Bradbury-Sullivan LGBT Community Center. 20Retrieved from: https://www.livehealthpa.com/docs/default-source/toolkits/lgbt/2020_pa_lgbtq_full_report_final_public_distribution.pdf. Accessed December 4, 2020.
16. Disability and Health Data System. Centers for Disease Control and Prevention (CDC). Cdc.gov. Retrieved from: https://www.cdc.gov/ncbddd/disabilityandhealth/dhds/index.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fncbddd%2Fdisabilityandhealth%2Fdhds.html. Reviewed September 16, 2020. Accessed September 23, 2020.
17. Frier A, Barnett F, Devine S, Barker R. Understanding disability and the 'social determinants of health': how does disability affect peoples' social determinants of health?. *Disabil Rehabil*. 2018;40(5):538-547. doi:10.1080/09638288.2016.1258090.
18. Disability and Health Promotion. Centers for Disease Control and Prevention (CDC). Cdc.gov. Retrieved from: <https://www.cdc.gov/ncbddd/disabilityandhealth/impacts/pennsylvania.html>. Reviewed September 16, 2020. Accessed September 23, 2020.
19. Anderson WL, Armour BS, Finkelstein EA, Wiener JM. Estimates of state-level health-care expenditures associated with disability. *Public Health Rep*. 2010;125(1):44-51. doi:10.1177/003335491012500107.



Substance Use

Substance use, which includes the nonmedical use of illicit and legal psychoactive substances, is a major public health challenge in the US and Pennsylvania. This section first presents information about the overall usage of various substances and the prevalence of substance use disorder. It shares rates of drug-induced deaths and emergency-room visits related to opioids. Factors contributing to health challenges and how certain populations are disproportionately impacted by problems with substance use are also discussed. Next, the section explores barriers to treatment for substance use issues, such as cost, lack of long-term recovery programs, and stigma. A discussion of the challenges caused by the separation between mental health and substance use systems is presented. Finally, substance use and prevention efforts among adolescents are explored.

This section includes the following:



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

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

Data shared in this section is from 2016 to 2020; data represents Pennsylvania unless otherwise noted.

Pennsylvania faces a high number of substance use-related hospitalizations.^{1,2} Substance use disorders occur when the recurrent use of alcohol and/or drugs causes clinically significant impairment, including health problems, disability, and failure to meet major responsibilities at work, school, or home.³

1 in 6

2018

adults binge drank in the past month.⁴

10%

2017-2018

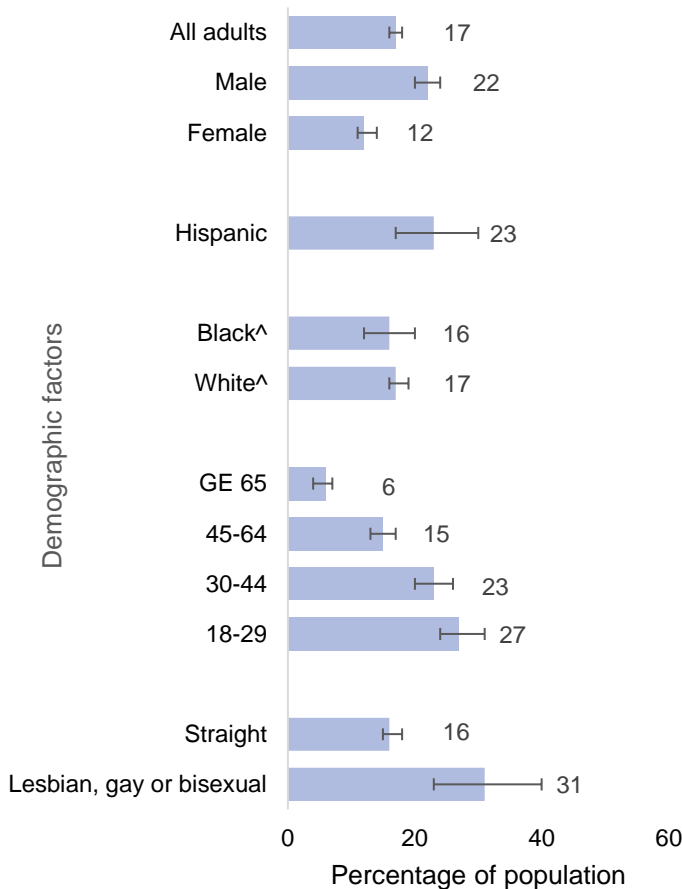
of adults used illicit drugs in the past month.⁵

7%

2017-2018

of individuals had a substance use disorder.⁵

Figure SU.1. Past Month Binge Drinking Among Adults, Pennsylvania, 2018⁴



- Binge drinking, which is the most common form of excessive drinking, is defined as having 5 or more drinks for males and 4 or more drinks for females on 1 occasion.⁴
- Binge drinking was more common among males than females, and individuals identifying as lesbian, gay, or bisexual adults were more likely to report binge drinking than heterosexual adults.⁴
- Pennsylvania ranked 31 among 50 states in excessive drinking.⁶
- The Healthy People 2020 target for past-month illicit drug use is 9%.⁶ In the US, 12% of adults used illicit substances in the past month, compared to 10% in Pennsylvania.⁵
- Compared to other age groups, adults ages 18 to 25 had higher percentage of past-year illicit drug use disorder (7%), alcohol use disorder (11%), and any substance use disorder (16%).⁵
- Because many individuals with substance use disorder remain undiagnosed, these numbers may underestimate true prevalence.

“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.”

^ Non-Hispanic

– Focus group participant

Map of Pennsylvania showing the percentage of the population aged 18 and over who are high school graduates by county. The map uses a color scale to represent different ranges of percentages.

County	Percentage
Allegany	51.3
Armstrong	65.9
Beaver	59.2
Bedford	36
Berks	26.3
Butler	45.9
Cambridge	72.7
Carbon	52
Cecil	45.4
Clearfield	21.3
Clinton	16.2
Columbia	32.2
Crawford	41.1
Cumberland	28.2
Delaware	45.4
Franklin	25.6
Fayette	57.7
Forest	0
Greene	37.8
Harrisburg	42.7
Huntingdon	29.1
Indiana	53.3
Juniata	0
Jefferson	26.1
Lancaster	28.1
Lebanon	16.4
Lehigh	30.6
Luzerne	53.5
Lycoming	27.7
Mechanic	42.7
Monroe	22.6
Montgomery	28.9
Morgan	45.4
Muncie	42.7
Nantuxet	42.7
Northampton	35.3
Northumberland	36.2
Perry	37.3
Pike	42.7
Potter	24.4
Richmond	42.7
Schuylkill	39.5
Snyder	16.9
Somerset	40.5
Sullivan	0
Tioga	26.8
Union	7.4
Warren	8.9
Washington	55.6
Wayne	33.7
Westmoreland	60.4
York	30.9
York	30.9

Legend:

- Insufficient data
- 7.4 - 16.0
- 16.1 - 31.0
- 31.1 - 46.0
- 46.1 - 72.7

2018

- ## Opioid use continues to be a pressing issue.

2018

- ^ Number of deaths due to drug injury [unintentional, suicide, homicide, or undetermined] per 100,000 population, 2015-2017 3-year estimate age-adjusted to mid-year

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.



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

2017-2018

6%

of individuals (12+ years old) needed but did not receive treatment for substance use at a specialty facility.⁵

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 get the treatment they needed, compared to 3% of 12- to 17-year-olds and 5% of those 26 and older.⁵

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

Although mental health and substance use issues can be closely related, people seeking help often must choose which treatment system to enter. In 2018, 23% of adults served through state mental health agencies had co-occurring mental health and substance use disorders.¹²

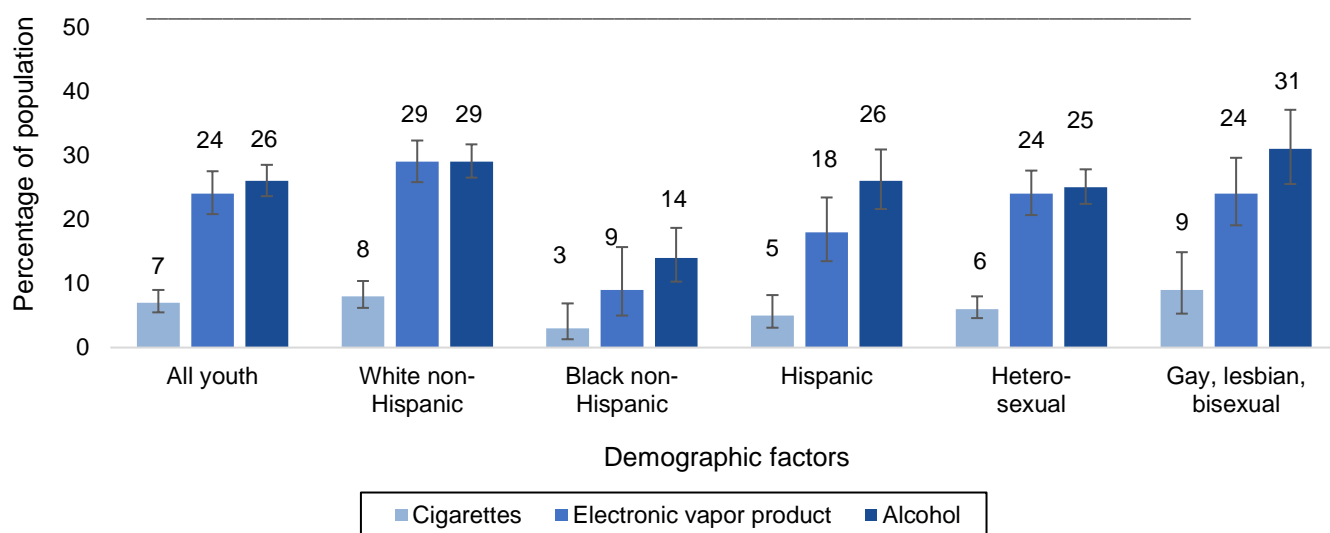
Despite this co-occurrence, communication between mental health and substance use systems is challenging. The treatment and system structures are different, and there are different professional standards regarding knowledge, skills, and abilities in the two fields.¹¹

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

Substance use among high school students is particularly concerning, as it is a risk factor for developing substance-use disorders and impacts physical and mental functioning, which can extend into adulthood.¹³

- In 2019, about 1 in 4 high school students used alcohol at least once in the past month, and 11% binge drank.¹⁴
- Current 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 2019.¹⁴
- Current 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 2019.¹³
- As seen in figure SU.3, non-Hispanic white high school students were more likely to use cigarettes and electronic vapor products compared to black non-Hispanic and Hispanic students.¹⁴
- As for illicit substance use, 20% of high school students used marijuana in the past month (unchanged since 2009), 11% reported ever abusing prescription pain medication, and 6% reported ever using inhalants (a decline since 2009).¹⁴
- Nearly 1 in 5 high school students (20%) were offered, sold, or given an illegal drug on school property in the past year, which has increased since 2009.¹⁴
- Gay, lesbian, and bisexual high school students were more likely to experiment with marijuana, prescription drugs, cocaine, and inhalants compared to heterosexuals.¹⁴

Figure SU.3. High School Students' Use of Cigarettes, Electronic Vapor Products, and Alcohol in Past Month, 2019¹⁴



“ 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

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

- Overall usage of substances and its impact
- Drug-induced 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 report sections for additional context:



- [Social Determinants of Health, Equity & Racism](#)
- [COVID-19 Implications](#)
- [Assets](#)

References

1. Hospital Admissions for Opioid Overdose and Opioid Use Disorder, 2017. PA Health Care Cost Containment Council. Phc4.org. Retrieved from: http://www.phc4.org/reports/researchbriefs/overdoses/usedisorder/17/docs/researchbrief_overdoses_usedisorder17.pdf. Accessed September 24, 2020.
2. Hospitalizations for Opioid Overdose: Three-Year Review. PA Health Care Cost Containment Council. Phc4.org. Retrieved from: http://www.phc4.org/reports/researchbriefs/overdoses/18/docs/researchbrief_overdoses18.pdf. Published September 2019. Accessed September 24, 2020.
3. Mental Health and Substance Use Disorders. Substance Abuse and Mental Health Service Administration. samhsa.gov. Retrieved from: <https://www.samhsa.gov/find-help/disorders>. Accessed November 4, 2020.
4. Pennsylvania Behavioral Risk Factor Surveillance System (BRFSS), 2019. Enterprise Data Dissemination Informatics Exchange. health.pa.gov. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/BRFSSstate.aspx>. Accessed September 23, 2020.
5. Interactive NSDUH State Estimates, 2017-2018. Substance Abuse and Mental Health Data Archive. pdas.samhsa.gov. Retrieved from: <https://pdas.samhsa.gov/saes/state>. Accessed September 24, 2020.
6. Annual Report, Pennsylvania, 2019. America's Health Rankings. Americashealthrankings.org. Retrieved from: <https://www.americashealthrankings.org/explore/annual/measure/Overall/state/PA>. Accessed September 24, 2020.
7. Substance Abuse: Objectives. Healthy People 2020. healthypeople.gov. Retrieved from: <https://www.healthypeople.gov/2020/topics-objectives/topic/substance-abuse/objectives>. Accessed September 24, 2020.
8. Pennsylvania Death Certificate Dataset, 2016-2018. Enterprise Data Dissemination Informatics Exchange. health.pa.gov. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/DeathCntySt.aspx>. Accessed September 24, 2020.
9. Pennsylvania Death Certificate Dataset, 2018. Enterprise Data Dissemination Informatics Exchange. health.pa.gov. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/DeathCntySt.aspx>. Accessed September 24, 2020.
10. Pennsylvania: Opioid-Involved Deaths and Related Harms, 2018. National Institute on Drug Abuse. drugabuse.gov. Retrieved from: <https://www.drugabuse.gov/drug-topics/opioids/opioid-summaries-by-state/pennsylvania-opioid-involved-deaths-related-harms>. Published April 3, 2020. Accessed September 24, 2020.
11. Pennsylvania Statewide Health Assessment and Focus Group Convenings, 2020. Pennsylvania Department of Health. Harrisburg, PA.
12. Pennsylvania 2018 Mental Health National Outcome Measures (NOMS): SAMHSA Uniform Reporting System. Samhsa.gov. Retrieved from: <https://www.samhsa.gov/data/sites/default/files/cbhsq-reports/Pennsylvania-2018.pdf>. Accessed September 24, 2020.
13. Public Health Impact: Substance Use Disorder-Youth. America's Health Rankings. Americashealthrankings.org. Retrieved from: https://www.americashealthrankings.org/explore/health-of-women-and-children/measure/youth_drug/state/U.S. Accessed August 21, 2020.
14. Youth Risk Behavioral Survey (YRBS), 2019. Centers for Diseases Control and Prevention (CDC). cdc.gov. Retrieved from: <https://nccd.cdc.gov/youthonline/App/Results.aspx?LID=PA>. Accessed September 23, 2020.



Chronic Diseases

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

This section includes the following:



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

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

Data shared in this section is from 2016 to 2020; data represents Pennsylvania unless otherwise noted.

Tobacco use, excessive alcohol use, physical inactivity, and poor nutrition are major risk behaviors of chronic diseases.

Other important societal and environmental aspects that vary throughout the state and seriously affect the health of Pennsylvanians include poverty, illiteracy, various types of stigma, unavailability/unaffordability of fresh food, and lack of access to safe places for play and exercise.

The most common cause of death in Pennsylvania was cardiovascular disease. In 2018, 224 deaths per 100,000 due to cardiovascular disease were recorded, varying among counties from 162 per 100,000 residents in Union County to 287 in Schuylkill County (see Figure CD.1).¹

Rural counties were more impacted by chronic diseases with higher death rates due to cancer, heart diseases, and Alzheimer's disease.¹

- Focus group participant

69,643

2018

Pennsylvanians died of cancer or cardiovascular disease.¹

Figure CD.1. Cardiovascular Diseases, Age-adjusted Deaths per 100,000, 2018¹

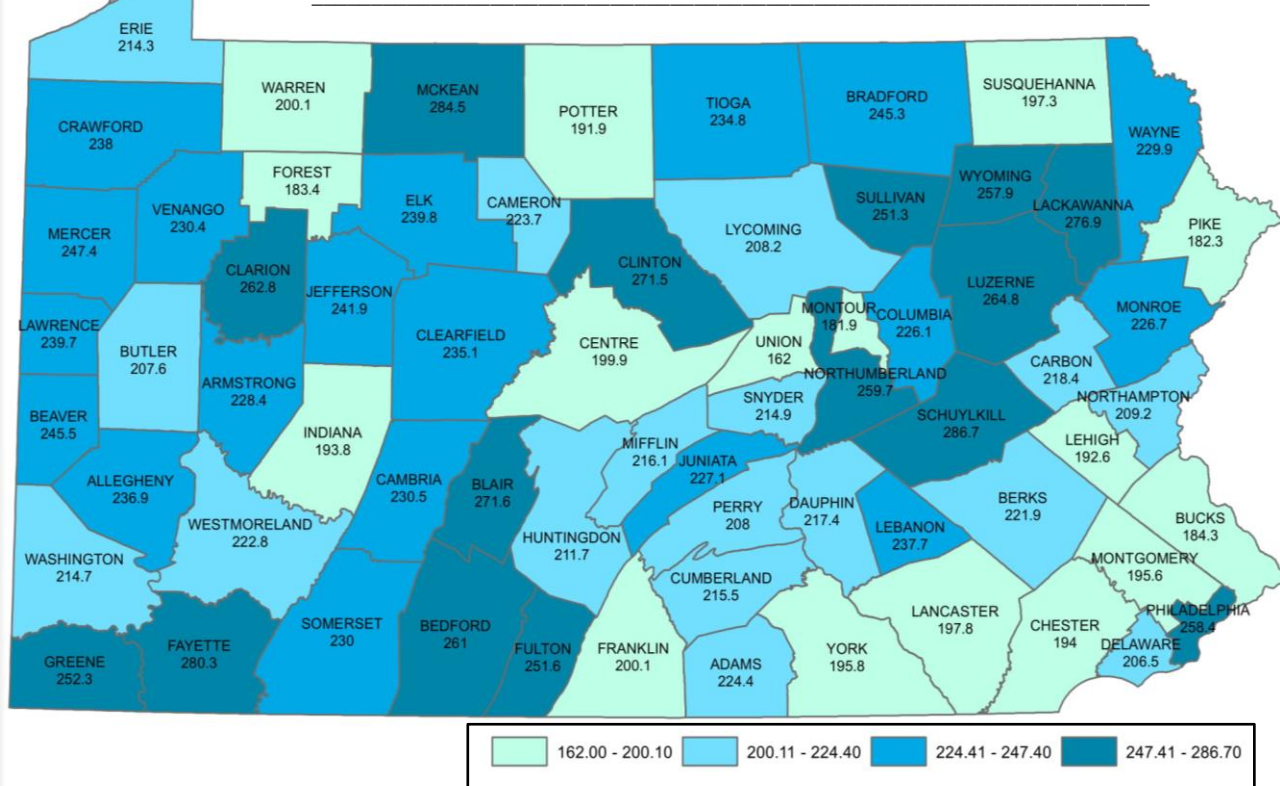
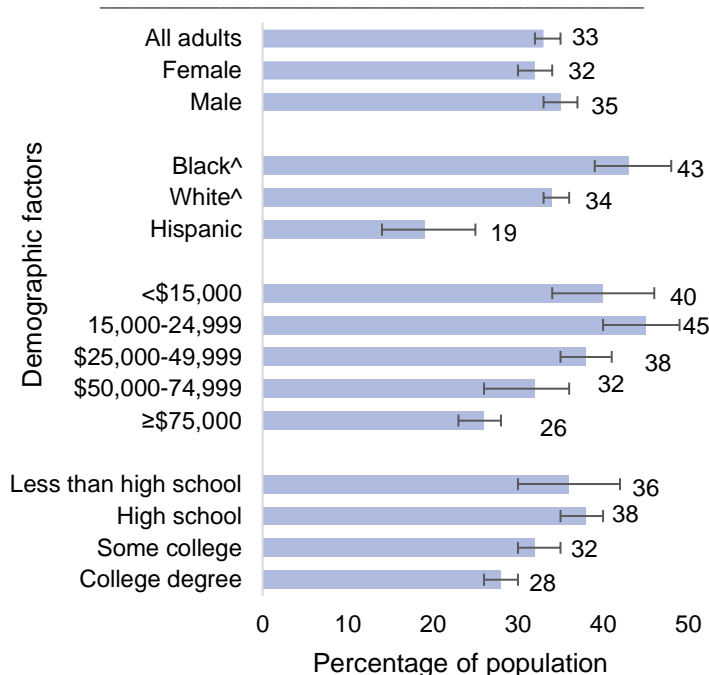


Figure CD.2. Adults Who Have Ever Been Told They Had High Blood Pressure, 2019²



- There were racial disparities in cardiovascular disease deaths. Among white adults the rate was 217 per 100,000, while among black adults the rate was 288 per 100,000.¹
- In 2019, 6% of residents over 35 reported that they had had a heart attack; those with low household income and low educational attainment were at higher risk.²
- In 2019, 33% of adults had ever been told they had high blood pressure.
- Black non-Hispanic adults, those with low household income and low educational attainment were at higher risk (Figure CD.2).²
- Among those with high blood pressure, 81% were taking medication for it.

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

- People age 65 and older and people with lower household income levels were more likely to have diabetes. Sixteen percent of black non-Hispanic adults, 11% of non-Hispanic white adults, and 6% of Hispanic adults had ever been told they have diabetes.²
- Chronic diseases were more prevalent among those 65 and over compared to those 45 to 64, as shown in Table CD.1.

Table CD.1. Prevalence of Chronic Diseases Among Those Age 45 to 64 and 65 or Over

Chronic condition	45-64	65+
Diabetes ²	13%	22%
COPD, emphysema or chronic bronchitis ²	8%	14%
Stroke ²	4%	8%
Arthritis ²	37%	54%
Kidney disease ²	4%	6%

[^] Non-Hispanic

Older Pennsylvanians

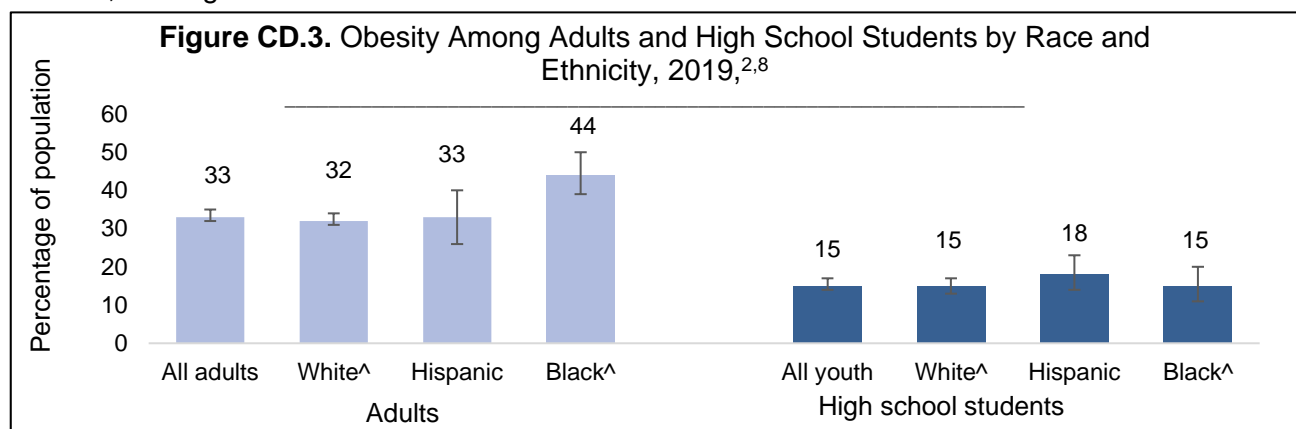
- Roughly 2.4 million people in Pennsylvania are age 65 or older.³
- Chronic diseases are most common among people 65 and older.
- Among those age 65 and older, 280,000 are living with Alzheimer's disease, the sixth leading cause of death.⁴
- 83% of Pennsylvanians with memory problems have at least one chronic condition.⁵

Obesity prevalence continues to increase throughout Pennsylvania. People with obesity have higher rates of depression and receive a lower quality of care, in part due to stigma and discrimination.⁶

Obesity is a known risk factor for developing other serious diseases, such as cardiovascular disease, type 2 diabetes, cancer, osteoarthritis, liver disease, kidney disease, sleep apnea, and depression.⁷ Obesity increased, with high school student prevalence increasing from 12% to 15% between 2009 and 2019, and adult prevalence increasing from 29% to 33% between 2011 and 2019.²

As shown in Figure CD.3, among adults, more non-Hispanic black adults had obesity compared to non-Hispanic white adults. Among non-Hispanic black, Hispanic and non-Hispanic white high school students, the prevalence of obesity was similar.^{2,8}

Stakeholders also noted that reimbursement for obesity treatment varies between private and public insurance, making treatment more difficult for some.



The most common cancers in Pennsylvania are breast cancer, lung cancer, and prostate cancer.⁹

- Based on 2015-2017 data, approximately 1 in 2 Pennsylvania residents will be diagnosed with cancer at some point during their lifetime, and 1 in 5 will die of cancer.⁹
- There were a total of 27,995 cancer deaths (156 deaths per 100,000 residents) in Pennsylvania in 2018. By county, the age-adjusted rate of all cancer deaths ranged from 114 deaths per 100,000 residents in Centre County to 230 deaths per 100,000 residents in Cameron County.¹
- Black residents were less likely to be diagnosed early and more likely to die of cancer than whites. The age-adjusted cancer death rate was 183 per 100,000 residents for blacks and 154 per 100,000 residents for whites. Among Hispanic residents, the rate was 113 per 100,000.^{1,9}

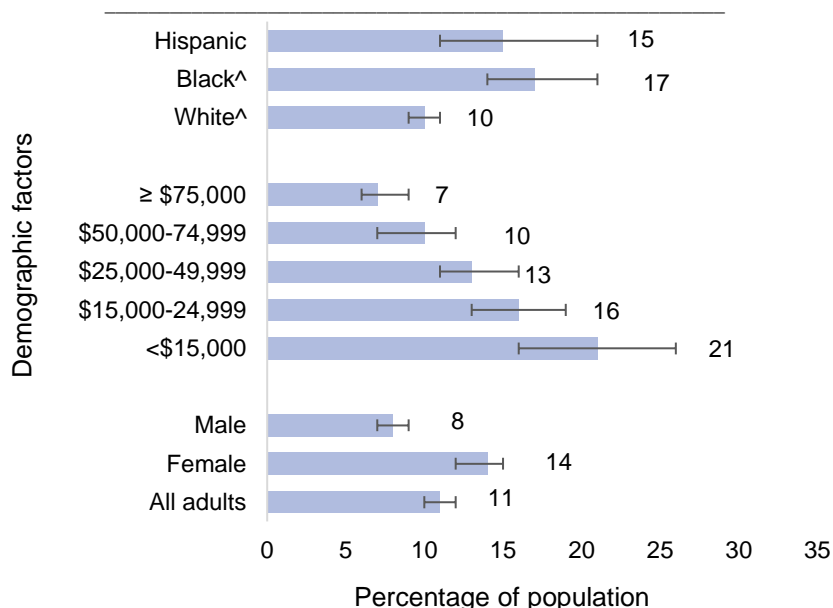
Early detection is an important part of fighting cancer, yet there are significant differences in who receives cancer screenings.

In 2018, 78% of females age 21 to 65 reported that they had a Pap test in the past 3 years, and 79% of females age 50 to 74 reported that they had a mammogram in the past 2 years. Approximately 67% of people age 50 to 75 had a colonoscopy in the past 10 years.²

Low educational status residents were less likely to be screened for colorectal cancer.²

[^] Non-Hispanic

Figure CD.4. Adults Who Currently Have Asthma, 2019²



- The prevalence of asthma was 6% among those age 0 to 11, 10% among those age 12 to 17, and 11% among adults.²
- There were disparities among those with asthma. Males, non-Hispanic blacks, and those individuals with lower household incomes had higher estimates than their counterparts (Figure CD.4).²
- Air quality can impact lung function and worsen asthma symptoms.¹⁰

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

- The ability to make healthy choices is linked to social determinants of health, such as where a person lives, their income and their educational attainment.¹¹
- Low-income and minority communities often lack convenient places with affordable healthier foods or safe places for exercise.
- In 2019, 49% of adults did not participate in the recommended amount of physical exercise. Those with lower educational attainment and household income were at increased risk. Of those with household incomes over \$75,000, 57% exercised at the recommended 150 minutes or more per week compared to 36% of those with incomes of \$15,000 or less annually.²
- High school students who did not eat vegetables increased from 5% in 2009 to 8% in 2019. In contrast, high school students who drank carbonated sugary beverages or sports drinks one or more times per day decreased between 2015 and 2019.⁸
- Only 10% of adults consumed 5 or more servings of fruits and/or vegetables daily.²
- Americans, particularly children, are eating more sugar than recommended. Sugar intake is associated with cardiovascular disease.^{12,13}

^ Non-Hispanic

2019
51%

of adults exercised 150 minutes or more per week.²

2019
10%

of adults consumed at least 5 servings of fruits and/or vegetables daily.²

I'm starting to see very young children with very adult diseases: severe obesity, hypertension, type II diabetes..."

– Focus group participant

Although tobacco use has declined, it is still a leading contributor to chronic disease and death.

Smoking is a major risk factor for chronic diseases. In Pennsylvania in 2019, 17% of adults were current smokers, with the national average at 16% among states and territories.^{2,14} Cigarette smoking was higher among those with household incomes under \$15,000 compared to those with household income of \$75,000 or more. Non-Hispanic black residents had higher smoking prevalence than non-Hispanic white residents.² In 2017, about 5% of adults used electronic cigarettes, with highest percentages among those age 18-25.¹⁴

The prevalence of current smoking, either some days or every day, was over twice as high among those who identified as gay, lesbian, or bisexual (40% vs 17%).¹⁵

Policies to reduce tobacco use have strengthened: Federal and state taxes on cigarettes increased from \$1.60 in 2014 to \$2.60 in 2018, and state taxes on smokeless tobacco increased from \$0.00 in 2014 to \$0.55 in 2018.¹⁶

Dental caries is one of the most common chronic diseases in the US.¹⁶

- Oral health is an important aspect of an individual's physical well-being. Although dental caries (cavities) and periodontal disease are highly preventable, dental caries is one of the most common chronic diseases in the US.¹⁷
- Among children ages 1-17 in Pennsylvania, during 2018-2019, about 11% reported having 1 or more oral health problems and 10% reported having decayed teeth or cavities.¹⁸ Among children ages 6-14, only 13.4% who were enrolled in Medicaid received sealants in 2018.¹⁹
- Oral and pharyngeal cancers are increasing in Pennsylvania. In 2017, there were 2,086 oral and pharyngeal cancers diagnosis. The age-adjusted mortality rate was 2.4 per 100,000 residents in 2018.^{1,20}
- Pennsylvania Oral Health Plan 2020-2030 identified main oral health priority areas namely: improving access to dental care, preventive services and health literacy, increasing oral health work force, and improve oral health infrastructure.¹⁹

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 report sections for additional context:



- [Social Determinants of Health, Equity & Racism](#)
- [COVID-19 Implications](#)
- [Assets](#)

References

1. Pennsylvania Death Certificate Dataset, 2018. Enterprise Data Dissemination Informatics Exchange. health.pa.gov. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/DeathCntySt.aspx>. Accessed July 10, 2020.
2. Pennsylvania Behavioral Risk Factor Surveillance System (BRFSS), 2019. Enterprise Data Dissemination Informatics Exchange. health.pa.gov. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/BRFSSstate.aspx>. Accessed September 10, 2020.
3. Population and Housing Unit Estimates Tables. U.S. Census Bureau, 2019). census.gov. Retrieved from: <https://www.census.gov/programs-surveys/popest/data/tables.html>. Accessed September 28, 2020.
4. Alzheimer's & Dementia: State Overview. Alzheimer's Association. Alz.org. Retrieved from: <https://www.alz.org/professionals/public-health/state-overview/Pennsylvania>. Accessed September 28, 2020.
5. Alzheimer's Disease and Healthy Aging. Centers for Diseases Control and Prevention. cdc.gov. retrieved from: <https://www.cdc.gov/aging/data/infographic/2018/pennsylvania-cognitive-decline.html>. Accessed November 4, 2020.
6. Puhl RM, Heuer CA. Obesity stigma: important considerations for public health. *Am J Public Health*. 2010 Jun;100(6):1019-28. doi: 10.2105/AJPH.2009.159491. Epub 2010 Jan 14. PMID: 20075322; PMCID: PMC2866597.
7. Pi-Sunyer X. The medical risks of obesity. *Postgrad Med*. 2009;121(6):21-33. doi:10.3810/pgm.2009.11.2074.
8. Youth Risk Behavioral Survey, 2019. Centers for Diseases Control and Prevention. cdc.gov. Retrieved from: <https://nccd.cdc.gov/youthonline/App/Results.aspx?LID=PA>. Accessed September 28, 2020.
9. Cancer dashboard, 2017. Pennsylvania Department of Health. Health.pa.gov. Retrieved from: <https://app.powerbigov.us/view?r=eyJrIjoieWJlMjM4NC00NDI4LWFIMDAyJFkZDYzZDk4OGJiliwidCI6IjQxOGUyODQxLTAxMjgtNGRkNS05YjZlTQ3ZmM1YTlhMWJkZSJ9&pageName=ReportSection01b75def58c942cece09>. Accessed October 7, 2020.
10. Guarnieri M, Balmes JR. Outdoor air pollution and asthma. *Lancet*. 2014;383(9928):1581-1592. doi:10.1016/S0140-6736(14)60617-6.
11. Overweight and obesity. CDC.gov. Retrieved from <https://www.cdc.gov/obesity/strategies/improving-access-to-healthier-food.html>. Accessed September 28, 2020.
12. Johnson RK, Appel LJ, Brands M, Howard BV, Lefevre M, Lustig RH, Sacks F, Steffen LM, & Wylie Rosett J. Dietary sugars intake and cardiovascular health: A scientific statement from the American Heart Association. *Circulation*. 2009; 120(11):1011-20. doi: 10.1161/CIRCULATIONAHA.109.192627.
13. How much sugar is too much? American Heart Association. Heart.org. Retrieved from: <https://www.heart.org/en/healthy-living/healthy-eating/eat-smart/sugar/how-much-sugar-is-too-much>. Accessed June 2020.
14. BRFSS Prevalence & Trends Data. Centers for Disease Control and Prevention (CDC). cdc.gov. Retrieved from: <https://www.cdc.gov/brfss/brfssprevalence/index.html>. Accessed September 28, 2020.
15. Pennsylvania Behavioral Risk Factor Surveillance System (BRFSS), 2018. Enterprise Data Dissemination Informatics Exchange. health.pa.gov. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/BRFSSstate.aspx>. Accessed December 4, 2020.
16. Health People 2020. Pennsylvania Department of Health. Health.pa.gov. Retrieved from: <https://www.health.pa.gov/topics/HealthStatistics/HealthyPeople/Documents/current/state/tobacco-use.aspx>. Accessed September 28, 2020.
17. Hygiene-related Diseases. Centers for Disease Control and Prevention (CDC). Cdc.gov. Retrieved from: https://www.cdc.gov/healthywater/hygiene/disease/dental_caries.html. Reviewed September 22, 2016. Accessed June 2020.
18. National Survey of Children's Health (NSCH), 2018-2019. Data Resource Center for Child & Adolescent Health. Childhealthdata.org. Retrieved from: <https://www.childhealthdata.org/browse/survey>. Accessed December 8, 2020.
19. Pennsylvania Oral Health Plan 2020-2030. 2020. Pennsylvania Department of Health. health.pa.gov. Retrieved from: <https://www.health.pa.gov/topics/Documents/Programs/Pennsylvania%20Oral%20Health%20Plan%202020-2030.pdf>. Accessed December 8, 2020.
20. Pennsylvania Cancer Registry Dataset, 2017. Enterprise Data Dissemination Informatics Exchange. health.pa.gov. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/CancerCntySt.aspx>. Accessed December 8, 2020.



Mental Health

Mental health is an important part of overall health and well-being. This section examines the overall mental health status of Pennsylvanians, including the prevalence of mental health conditions, self-reported “poor” mental health days, and rates of depression and suicide. The section then reviews 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.

This section 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

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

Data shared in this section is from 2016 to 2020; data represents Pennsylvania unless otherwise noted.

Of major concern are the prevalence of mental health issues and the increasing frequency of mental distress.

2019

14%

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

2018

15 per 100,000

suicide deaths (age-adjusted rate)¹

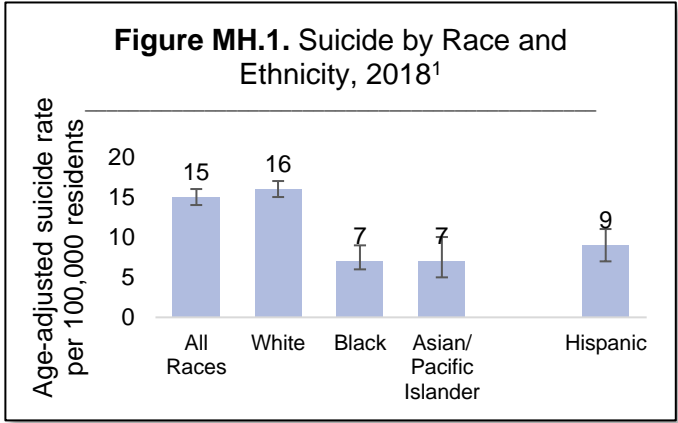
In 2018, there were 2,017 Pennsylvanians who lost their lives to suicide. Suicide rates in Pennsylvania have increased over the past decade, from 12 per 100,000 residents in 2010 to 15 per 100,000 residents in 2018.¹

The suicide rate was higher among white residents (16/100,000) than other racial groups, as shown in Figure MH.1.

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

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 2019.²

About 7% of Pennsylvanians age 18 or older had a major depressive episode in the past year.³



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

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

Racial and ethnic minority groups are more likely to report poor mental health. In 2019, 19% of Hispanic Pennsylvanians reported having 14 or more poor mental health days in the past month compared to 13% for non-Hispanic white residents.¹

Stakeholders discussed particularly vulnerable populations who have reduced access to essential services and higher rates of mental health problems,⁴ including:

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

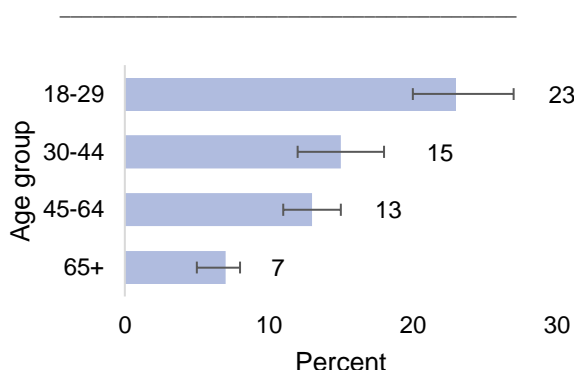
“The economics of farming have gotten so bad for [farmers] and many of them are just struggling financially. I am sure the pandemic is not helping the majority of them...On top of that, there’s cultural issues...they tend to be isolated, geographically, [and] there is a culture that goes against seeking help....So, combine the two, and you see big problems.”

– Focus group participant

Mental health among young adults is of particular concern.

- One in 5 adults age 18 to 29 reported their mental health was “not good” for 14+ days in the past month.²
- Approximately 18% of adults reported having “any” mental illness, with the highest prevalence among 18- to 25-year-olds.³
- Suicide was among the top 3 causes of death among the age groups 15 to 19 and 20 to 24.¹
- Among adults age 18 to 25, the percent of major depressive episodes and serious suicidal thoughts were high (14% and 10% respectively) and increasing.³

Figure MH.2. Adults Reporting “Not Good” Mental Health for 14+ Days in Past Month by Age, 2019²



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

Pennsylvania ranks ²⁰¹⁸

37

of 50 states for risk of social isolation among adults 65+,⁷

Seniors without meaningful relationships or support networks are at higher risk for poor cognitive functioning and premature mortality.^{5,6,7} Factors strongly related to overall risk of social isolation include: ⁷

- 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 (2008) requires all benefits offered by health insurers to be equal, such that mental health benefits should be no lower than benefits for medical or surgical care.⁸

Accessing mental health services may be difficult for more vulnerable 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.⁸

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

35%

2019

of high school students reported feeling sad or hopeless.⁹

“Speaking for youth, there really isn’t a system that is set up to help them build skills at a young age so that they can better understand their own emotions so that they don’t get to the point of needing some of these higher levels of care.”

- Focus group participant

8%

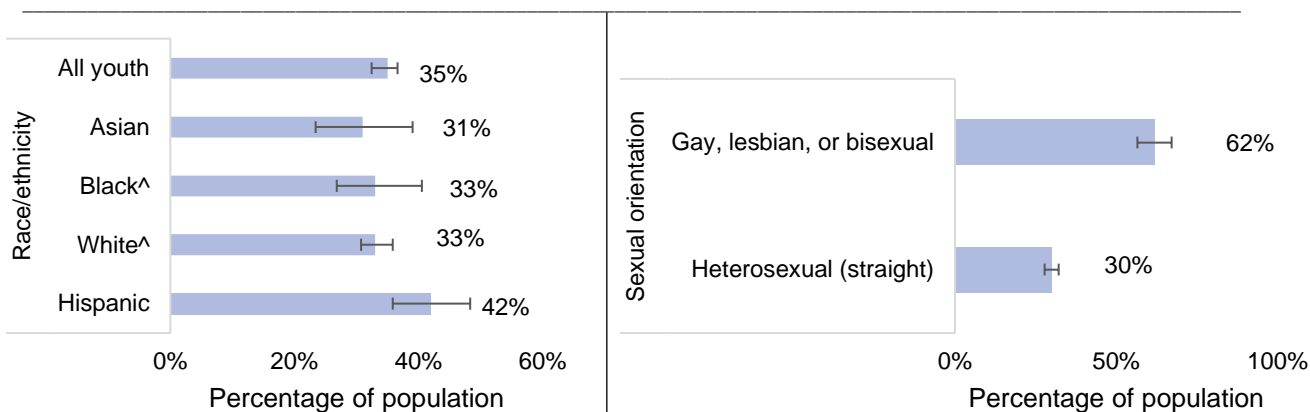
2019

of high school students attempted suicide.⁹

- Stakeholders providing services in rural Pennsylvania expressed how the availability of mental health providers offering specialized services is limited, especially considering youth-focused services.

- The percent of high school students who, in the past 12 months, felt sad or hopeless almost every day for 2 weeks or more in a row, so that they stopped doing some usual activities, increased from 28% in 2015 to 35% in 2019.⁹
- A higher percentage of Hispanic high school students reported feeling sad or hopeless than did non-Hispanic white. This trend is similar for lesbian, gay, or bisexual students compared to heterosexual high school students.⁹

Figure MH.3. High School Students Reporting Feeling Sad/Hopeless by Race and Ethnicity and Sexual Orientation, 2019⁹



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

In 2018, 88% of Pennsylvania secondary schools reported having teachers who tried to increase student knowledge on emotional and mental health in a required course.¹⁰ Several focus group participants highlighted the need for having additional supports inside schools, such as school-based health centers, to ease the burden placed on guidance counselors and school psychologists. Focus group participants also described how youth are especially vulnerable to familial stressors and trauma, making it essential to have adequate support available for children and families.

[^] Non-Hispanic

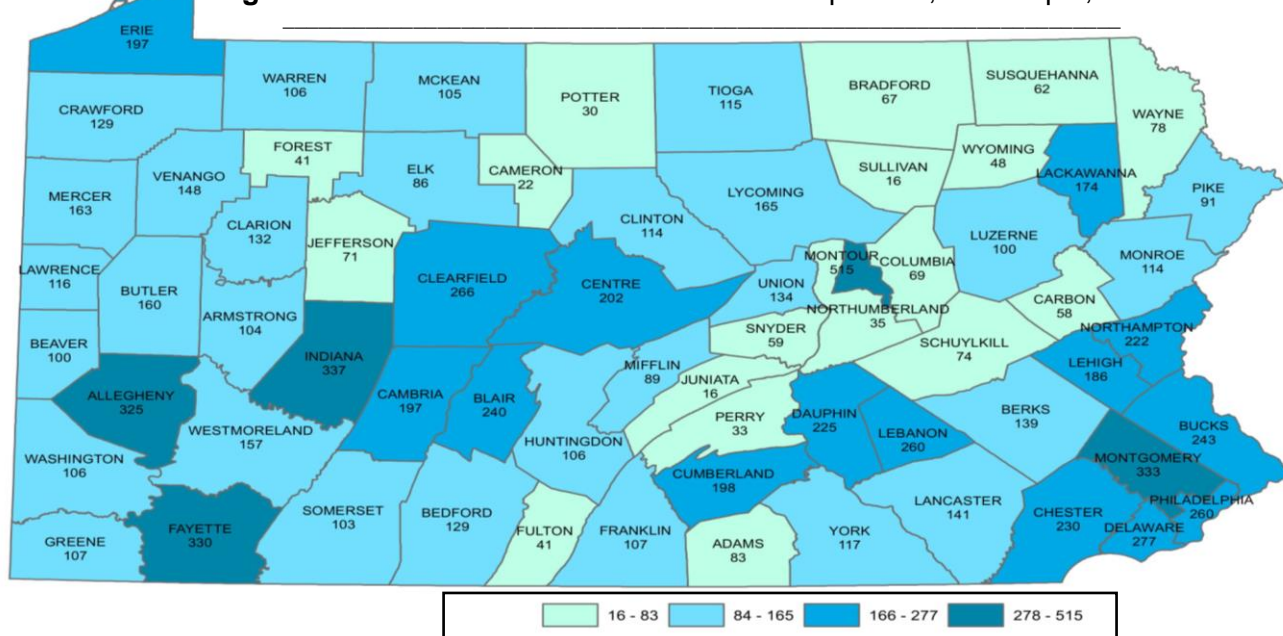
While access to mental health providers has improved in recent years, Pennsylvania continues to face a shortage of licensed clinicians and mental health providers, particularly in rural areas.

Pennsylvania's ratio of population to mental health providers has improved in recent years from 600:1 people per provider in 2016 to 480:1 in 2019. However, the state remains above the national ratio of 400:1.¹¹ Non-licensed providers face barriers in getting the formal supervision needed for licensure, thus reducing the number of potential providers.⁴

Access to care and delivery of health services to the aging population is challenging for many reasons including availability of providers specializing in geriatrics. It is also important to have geriatric specialists such as geriatric psychologists, which are key to early detection of dementia and other chronic diseases of this age group.⁴

Lack of representation across clinicians is an added barrier for those who might benefit from provider-client cultural congruency.⁴

Figure MH.4. Ratio of Mental Health Providers per 100,000 People, 2019¹¹



“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.¹²

19%

2019

of adults reported having fair or poor general health.¹³

37%

2018

of adults reported getting an average of six or fewer hours of sleep per night.¹³

Self-reported physical and mental health are measures of an individual's perceived quality of life. In 2019, the percentage of adults reporting fair or poor general health was particularly high among those making less than \$25,000 per year.¹

Other factors, like quality of sleep (+/- 6 hours of sleep per night), contributes to quality of life. Overall, 37% of Pennsylvanians reported getting an average of 6 or fewer hours of sleep per night, with a higher percent reported among non-Hispanic black than non-Hispanic white adults.¹

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 report sections for additional context:



- [Social Determinants of Health and Equity](#)
- [COVID-19 Implications](#)
- [Assets](#)

References

1. Pennsylvania Death Certificate Dataset, 2018. Enterprise Data Dissemination Informatics Exchange. health.pa.gov. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/DeathCntySt.aspx>. Published 2018. Accessed October 5, 2020.
2. Pennsylvania Behavioral Risk Factor Surveillance System (BRFSS), 2019. Pennsylvania Department of Health, Division of Health Informatics. Data request September 28, 2020.
3. Interactive NSDUH State Estimates, 2017-2018. United States Substance Abuse and Mental Health Services Administration (SAMHSA). pdas.samhsa.gov. Retrieved from: <https://pdas.samhsa.gov/saes/state>. Published 2017-2018. Accessed October 5, 2020.
4. Pennsylvania Statewide Health Assessment and Focus Group Convenings, 2020. Pennsylvania Department of Health. Harrisburg, PA.
5. 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.
6. 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 August 27, 2020.
7. America's Health Rankings Senior Report, 2018. America's Health Rankings. americashealthrankings.org. Retrieved from: <https://www.americashealthrankings.org/learn/reports/2018-senior-report/senior-report-spotlight>. Published 2018. Accessed October 5, 2020.
8. Melek S, Davenport S, Gray TJ. Addiction and mental health vs. physical health: Widening disparities in network use and provider reimbursement. assets.milliman.com. Retrieved from: http://assets.milliman.com/ektron/Addiction_and_mental_health_vs_physical_health_Widening_disparities_in_network_use_and_provider_reimbursement.pdf. Published 2019. Accessed October 5, 2020.
9. Youth Risk Behavior Survey, 2019. Centers for Disease Control and Prevention (CDC). cdc.gov. <https://nccd.cdc.gov/Youthonline/App/Default.aspx>. Published August 2020. Accessed October 5, 2020.
10. Profiles Report, 2018. Centers for Disease Control and Prevention (CDC). cdc.gov. Retrieved from: <https://www.cdc.gov/healthyyouth/data/profiles/results.htm>. Published 2018. Accessed October 5, 2020.
11. County Health Rankings & Roadmaps 2020. University of Wisconsin Population Health Institute. countyhealthrankings.org. Retrieved from: <https://www.countyhealthrankings.org/app/pennsylvania/2020/measure/factors/62/data>. Published 2020. Accessed October 5, 2020.
12. Well-Being Concepts. Centers for Disease Control and Prevention (CDC). cdc.gov. Retrieved from: <https://www.cdc.gov/hrqol/wellbeing.htm>. Published October 2018. Accessed October 5, 2020.
13. Pennsylvania Behavioral Risk Factor Surveillance System (BRFSS). Enterprise Data Dissemination Informatics Exchange. health.pa.gov. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/BRFSSstate.aspx>. Accessed October 5, 2020.



Maternal and Infant Health

The Maternal and infant health section describes the health of women* as 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. Next, 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. The section then delves into infant health and breastfeeding and, finally, considers reproductive health and health services.

This section includes the following:



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

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

Data shared in this section is from 2013 to 2020; data represents Pennsylvania unless otherwise noted.

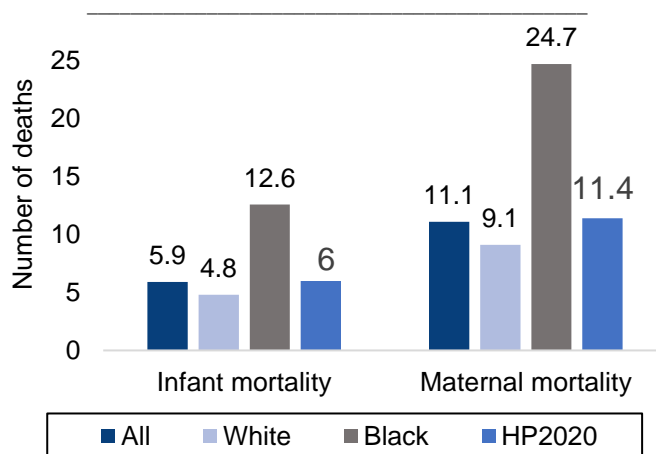
* Although it is recognized that not all individuals who may become pregnant or who interact with reproductive health services are cisgender women, this SHA did not explore the unique needs of non-binary and transgender individuals. Secondary data sources may or may not have included gender minorities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

As in the United States, there are disparities in maternal and infant health outcomes across Pennsylvania.

While Pennsylvania is close to or has met Healthy People 2020 (HP2020) goals related to infant mortality, maternal mortality, preterm births, and low birthweight, for black families, none of these goals have been attained.¹⁻⁴

- In Pennsylvania, black women and infants were nearly 3 times more likely to die than their white counterparts.^{2,4}
- Preterm birth and low birthweight rates were higher among black than white mothers in 2018.³
- Both preterm birth and low birthweight can lead to increased risk of death and potential lifelong disabilities. Preterm

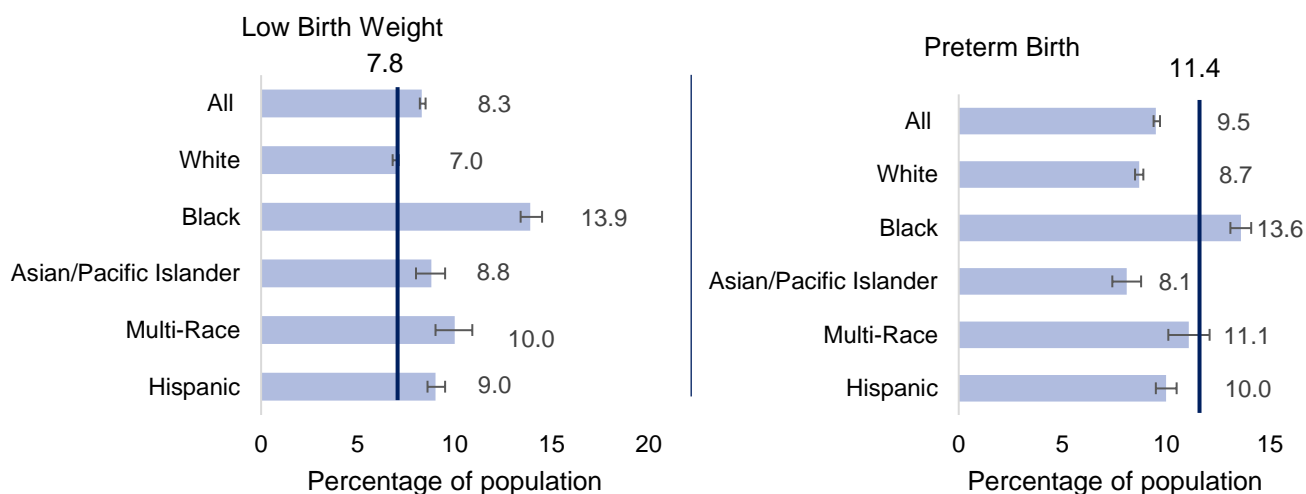
Figure MIH.1. Infant Mortality per 1,000 Live Births, 2018² and Maternal Mortality per 100,000 by Race and Ethnicity, 2013-2017⁴



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 5 pounds, 8 ounces and can be caused by preterm birth.⁵

- Complications and causes of infant deaths can be attributed to birth defects, low birthweight, pregnancy complications, sudden infant death syndrome (SIDS), and injuries.⁶

Figure MIH.2. Preterm and Low Birthweight Births by Race and Ethnicity, 2018³



Vertical line indicates HP2020 goal.

In addition to these racial disparities, stakeholders identified additional populations that experience adverse birth outcomes, including rural and urban residents, low-income individuals, immigrants, undocumented individuals, those who are uninsured and underinsured, and populations lacking culturally appropriate services.

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.⁷

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.⁸

“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, including:

- Housing
- Trauma
- Adverse childhood experiences
- Air pollution
- Stress
- Education
- Income
- Food security
- Employment
- Transportation
- Social capital of local communities

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

Health care that is culturally responsive and free of bias is an important facet of maternal and infant health.

- The HP2020 goal for live births to mothers beginning prenatal care in the first trimester (early prenatal care) is 84.8%, an unmet goal for Pennsylvania. Sixty-five percent of black women and 77% of white women received early prenatal care in 2018.^{1,3}
- Early and adequate prenatal care is important for the health of the mother and to reduce risks for low-birthweight and newborn death. Between 2016 and 2018, 79% of mothers received early and adequate prenatal care.⁹ In 2018, about 2% did not receive prenatal care. Black mothers have been about 4 times as likely not to receive prenatal care compared to white mothers.³
- Health care can be culturally insensitive, judgmental, and biased. Providers can struggle to meet clients where they are and there can be a lack of connection between providers and clients. Stakeholders called for care that is based in empowerment and for educating providers and administrative staff on implicit bias.¹⁰

2016-2018

79%
of pregnant women
received early and
adequate prenatal
care.*⁹

* Early and adequate prenatal care as herein referenced is defined by the Kotelchuck Index, which uses a ratio of observed to expected visits. Here, early and adequate prenatal care includes those with ratios of observed to expected visits that were 80% or higher.⁹

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

Roughly 32,000 women in Pennsylvania live in a maternity care desert,¹¹ where care is limited or absent through lack of services or other barriers to access.¹²

Focus group respondents identified access to health care challenges in the state to include:¹⁰

- 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 those for whom English is not their first language.

“There’s waiting periods for Medicaid, horrible logistical barriers of non-continuous enrollment that put moms and kids at risk to fall on-and-off, underinsured, and non-insured. We have just made it very hard for people who already struggle with the lowest amount of resources to cobble together what they need for care.”

- Focus group participant

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.

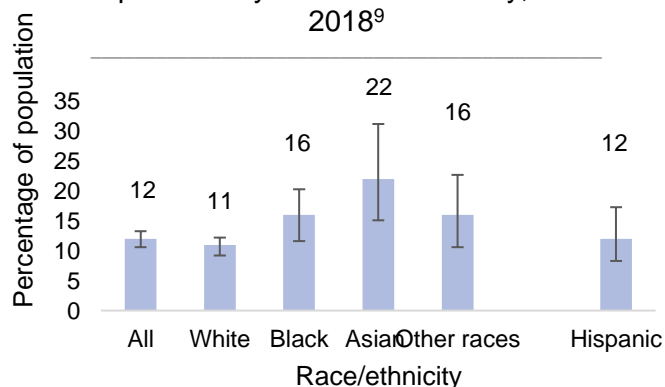
Between 2016 and 2018, in the 3 months prior to pregnancy, 23% of women who gave birth reported experiencing anxiety, 16% reported experiencing depression, and 12% reported postpartum depression.⁹

Asian women were most likely to report postpartum depression compared to whites, as shown in figure MIH.3.⁹

“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

Figure MIH.3. Self-reported Postpartum Depression by Race and Ethnicity, 2016-2018⁹



- Figure MIH.4. Cigarette Smoking and Alcohol Use in Last 3 Months Among Women who Gave Birth by Education, 2016-2018⁹**
-
- | Education Level | Cigarette smoking (%) | Alcohol use (%) |
|--------------------------------|-----------------------|-----------------|
| High school or less | 19 | 4 |
| Some college/ Associate degree | 17 | 6 |
| Bachelor's degree or higher | 1 | 11 |

[illegible]

- 2016-2017
- 1 in 25**
- maternal hospital stays had
substance use present.¹³

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 needed at well-child visits from infancy through adolescence.¹⁶ Pennsylvania ranked well, at 11 out of 50 US states for well-baby checkups.¹⁷

Breastfeeding is beneficial to both mother and infant. Breast-fed infants have a reduced risk of many conditions, including asthma, obesity, type 1 diabetes, and SIDS. Mothers have a reduced risk of high blood pressure, type 2 diabetes, and ovarian and breast cancers.¹⁸

Breastfeeding initiation was less common among black and multi-race infants compared to whites.³ Breastfeeding barriers among these populations include lack of provider and hospital support, the need for the mother to return to work, inflexible work environments, and lack of breastfeeding knowledge and social support.¹⁹

Women younger than 25 were also less likely to initiate breastfeeding. However, initiation of breastfeeding increased in women age 20-24 from 60% in 2009 to 76% in 2018.³

2016-2017

86%

of babies 0-2 years had a well-baby check in the past year.¹⁷

Table MIH.1. Infants Ever Breastfed, 2018³

Race/ethnicity	Percentage breastfed
All	82%
Asian/Pacific Islander	92%
White	82%
Hispanic	81%
Black	77%
Multi-race	77%

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

2016-2018

66%

of women 18 to 44 had a well-woman visit in the past year.²⁰

2016-2018

78%

of women said that either they or their partner was doing anything to prevent pregnancy.⁹

2019

11%

of sexually active high school students did not use any contraception at last sexual intercourse.²¹

- Pennsylvania ranked 28 among 50 US states for women who had a preventative medical visit (well-woman visit) in the past year.²⁰
- In 2016-2018, 46% of women age 15 to 44 were prescribed a contraceptive method during their postpartum visit. About 3 in 4 women said that they or their partner were doing anything to prevent pregnancy.⁹
- Between 1990 to 2018, teen births have declined by 69%. Yet in 2018, 4% of births were to teens (15 to 19 years old) with high prevalence among blacks and multi-race compared to whites.³

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 report sections for additional context:



- [Social Determinants of Health, Equity & Racism](#)
- [COVID-19 Implications](#)
- [Assets](#)

References

1. Maternal, Infant, and Child Health: Objectives. Healthy People 2020. [Healthypeople.gov](https://www.healthypeople.gov/2020/topics-objectives/topic/maternal-infant-and-child-health/objectives). Retrieved from: <https://www.healthypeople.gov/2020/topics-objectives/topic/maternal-infant-and-child-health/objectives>. Accessed September 17, 2020.
2. Pennsylvania Death Certificate Dataset, 2018. Enterprise Data Dissemination Informatics Exchange. [health.pa.gov](https://www.phaim1.health.pa.gov/EDD/WebForms/BirthCntySt.aspx). Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/BirthCntySt.aspx>. Accessed September 17, 2020.
3. Pennsylvania Birth Certificate Dataset, 2018. Enterprise Data Dissemination Informatics Exchange. [health.pa.gov](https://www.phaim1.health.pa.gov/EDD/WebForms/BirthCntySt.aspx). Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/BirthCntySt.aspx>. Accessed September 17, 2020.
4. Maternal Mortality Rate. Pennsylvania Department of Health. [health.pa.gov](https://www.health.pa.gov/topics/HealthStatistics/HealthyPeople/Documents/current/state/maternal-infant-and-child-health.aspx). Retrieved from: <https://www.health.pa.gov/topics/HealthStatistics/HealthyPeople/Documents/current/state/maternal-infant-and-child-health.aspx>. Accessed September 25, 2020.
5. Low Birthweight. March of Dimes. [marchofdimes.org](https://www.marchofdimes.org/complications/low-birthweight.aspx). Retrieved from: <https://www.marchofdimes.org/complications/low-birthweight.aspx>. Published March 2018. Accessed September 25, 2020.
6. Infant Mortality. Centers for Diseases Control and Prevention. [cdc.gov](https://www.cdc.gov/reproductivehealth/maternalinfanthealth/infantmortality.htm). Retrieved from: <https://www.cdc.gov/reproductivehealth/maternalinfanthealth/infantmortality.htm>. Accessed September 25, 2020.
7. Matoba N, Collins JW. Racial disparity in infant mortality. *Seminars in Perinatology*. 2010;41:354-359.
8. 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.
9. Pennsylvania Department of Health. Pregnancy Risk Assessment Monitoring System (PRAMS). Data request
10. Pennsylvania Department of Health. 2020. Pennsylvania Statewide Health Assessment and Focus Group Convenings. Harrisburg, PA. Accessed August 2020.
11. Healthy Moms. Strong Babies. March of Dimes. [Marchofdimes.org](https://www.marchofdimes.org/peristats/tools/ReportFiles/HMSB/Healthy%20Moms%20Strong%20Babies_Pennsylvania.pdf). Retrieved from: https://www.marchofdimes.org/peristats/tools/ReportFiles/HMSB/Healthy%20Moms%20Strong%20Babies_Pennsylvania.pdf. Published 2018. Accessed September 17, 2020.
12. Nowhere to Go: Maternity Care Deserts Across the U.S. March of Dimes. [Marchofdimes.org](https://www.marchofdimes.org/materials/Nowhere_to_Go_Final.pdf). Retrieved from: https://www.marchofdimes.org/materials/Nowhere_to_Go_Final.pdf. Published 2018. Accessed September 17, 2020.
13. Maternal Hospital Stays Involving Substance Use and Opioids. Pennsylvania Health Care Cost Containment Council (PHC4). [phc4.org](http://www.phc4.org/reports/researchbriefs/opioids/17/docs/researchbrief_opioids17.pdf). Retrieved from: http://www.phc4.org/reports/researchbriefs/opioids/17/docs/researchbrief_opioids17.pdf. Published March 2018. Accessed September 17, 2020.
14. Hospitalizations for Newborns with Neonatal Abstinence Syndrome. Pennsylvania Health Care Cost Containment Council (PHC4). [phc4.org](http://www.phc4.org/reports/researchbriefs/neonatal/18/docs/researchbrief_neonatal18.pdf). Retrieved from: http://www.phc4.org/reports/researchbriefs/neonatal/18/docs/researchbrief_neonatal18.pdf. Published March 2018. Accessed September 17, 2020.
15. Hospitalizations for Newborns with Neonatal Abstinence Syndrome – 2018. Pennsylvania Health Care Cost Containment Council (PHC4). [phc4.org](http://www.phc4.org/reports/researchbriefs/neonatal/17/docs/researchbrief_neonatal2017.pdf). Retrieved from: http://www.phc4.org/reports/researchbriefs/neonatal/17/docs/researchbrief_neonatal2017.pdf. Published June 2019. Accessed September 17, 2020.
16. Periodicity Schedule. American Academy of Pediatrics. [Aap.org](https://www.aap.org/en-us/professional-resources/practice-transformation/managing-patients/Pages/Periodicity-Schedule.aspx). Retrieved from: <https://www.aap.org/en-us/professional-resources/practice-transformation/managing-patients/Pages/Periodicity-Schedule.aspx>. Accessed September 17, 2020.
17. Well-Baby Check. America's Health Rankings. [Americashealthrankings.org](https://www.americashealthrankings.org/explore/health-of-women-and-children/measure/wellbaby_visit/state/PA). Retrieved from: https://www.americashealthrankings.org/explore/health-of-women-and-children/measure/wellbaby_visit/state/PA. Accessed September 25, 2020.
18. Breastfeeding: Why It Matters. Centers for Diseases Control and Prevention. [cdc.gov](https://www.cdc.gov/breastfeeding/about-breastfeeding/why-it-matters.html). Retrieved from: <https://www.cdc.gov/breastfeeding/about-breastfeeding/why-it-matters.html>. Published November 4, 2019. Accessed September 17, 2020.
19. Beauregard 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>.
20. Well-Woman Visit. America's Health Rankings. [americashealthrankings.org](https://www.americashealthrankings.org/explore/health-of-women-and-children/measure/well_women_visit_women/state/PA). Retrieved from: https://www.americashealthrankings.org/explore/health-of-women-and-children/measure/well_women_visit_women/state/PA. Accessed September 2020.
21. Youth Risk Behavioral Survey (YRBS), 2019. Centers for Diseases Control and Prevention (CDC). [cdc.gov](https://nccd.cdc.gov/youthonline/App/Results.aspx?LID=PA). Retrieved from: <https://nccd.cdc.gov/youthonline/App/Results.aspx?LID=PA>. Accessed September 25, 2020.



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 concludes with a discussion of firearms, firearm safety, and the prevalence of hate crimes across the state.

This section includes the following:



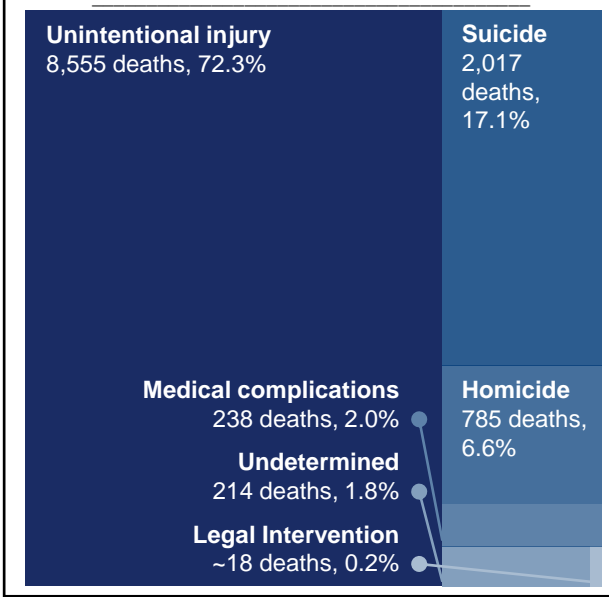
- Key issues
- Datapoints to illustrate main points
- Highlights on especially vulnerable populations
- Hyperlinks for further data exploration
- Data sources

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

Data shared in this section is from 2015 to 2020; data represents Pennsylvania unless otherwise noted.

Unintentional injuries and preventable deaths are high-priority issues for Pennsylvanians, as shown by the high rate of fatal injuries.

Figure IVP.1. Fatal Injuries, 2018¹



Fatal injuries are deaths resulting from unintentional injury (accidents) and violence. In 2018, the rate of fatal accidents in Pennsylvania (61.7 per 100,000) was higher than the national rate of 48.0 per 100,000.^{2,3}

In 2018, the leading cause of death for Pennsylvanians was heart disease. However, the leading cause of death among those aged 15-44 was unintentional injury.²

The overall trend of unintentional injury deaths increased between 2010 (40.1 per 100,000) and 2018 (61.7 per 100,000).² In 2018, the leading cause of unintentional injury death was accidental poisoning (50%), followed by falls (21%), and transport accidents (16%).¹ Of note, accidental poisoning includes unintentional drug overdoses.⁴

Experiences of violence impact quality of life and can have lasting emotional, physical, and financial effects and may contribute to premature death.^{5,6}

In 2018, Pennsylvania ranked 22 of 50 states for its violent crime rate (306 per 100,000), which includes rapes, robberies, aggravated assaults, and homicides. During the past 5 years, Pennsylvania has stayed in the middle quintile for violent crime rates among states.⁷

The age-adjusted homicide rate increased from 5 per 100,000 in 2014 to 7 per 100,000 in 2018. Philadelphia, Lycoming, Allegheny, and Delaware counties had significantly higher 5-year homicide rates compared to the rest of the state.²

The homicide rate in 2018 was approximately 10 times higher among black residents (29/100,000) than white residents. It was also higher among Hispanic residents (9/100,000) compared to the overall residents (7/100,000). Over the past 5 years, while the rate of homicides among white residents has held steady, there has been an increase among black residents.²

Figure IVP.2. Violent Crime in the US and PA, 2008-2018⁸

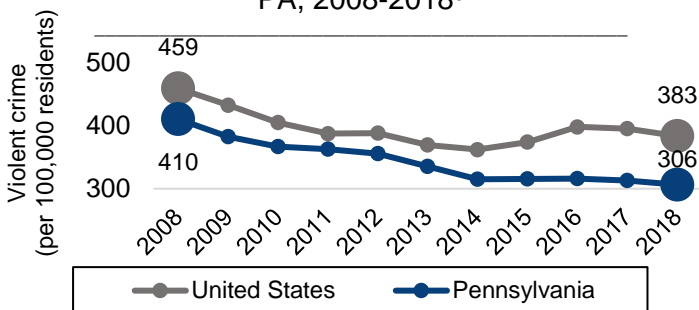
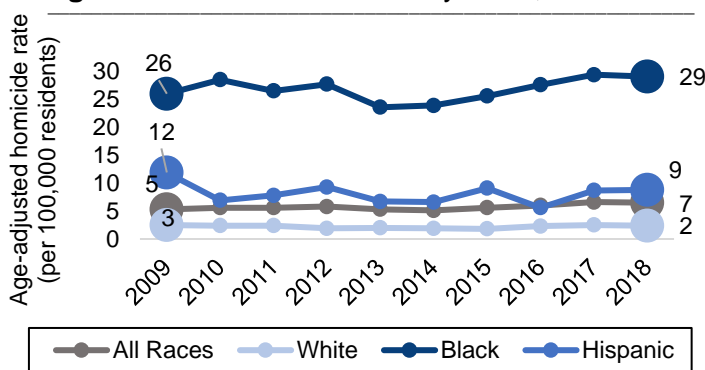


Figure IVP.3. Homicide Rate by Race, 2009-2018²



Violent crime is costly for residents, 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 2018⁹

Types of crime	Amount paid	% Total
Child sexual abuse	\$4,277,650	34.2%
Assault	\$2,886,943	23.1%
Homicide	\$2,369,967	19.0%
Sexual assault	\$1,240,762	9.9%
Fraud/finance crimes	\$676,224	5.4%
Robbery	\$313,707	2.6%
Child physical abuse/neglect	\$220,918	1.8%
Other vehicular crimes	\$207,705	1.7%
DUI/DWI	\$120,212	1.0%
Burglary	\$110,871	0.9%
Stalking, arson, terrorism, kidnapping	\$70,407	0.6%

In fiscal year 2018, the Victims Compensation Assistance Program (VCAP) approved compensation for 6,445 residents (98% approval rate) and awarded 10,678 people money for their claims. In total, VCAP awarded \$12,500,367 for expenses related to approved claims (Table IVP.1).⁹

A stark majority (76%) of approved victim compensation (1,097 claims) was paid for child sexual abuse, assault, and homicide, highlighting the costly nature of violent crime. Paid claims were further categorized by their relation to domestic and family violence (10%) and elder abuse/neglect (6%).⁹

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.¹⁰ Reports and substantiated claims of elder abuse increased by 39% in recent years, from 6,068 substantiated claims in fiscal year 2016 to 8,408 substantiated claims in fiscal year 2018.¹¹

According to the Pennsylvania Department of Aging, the most reported forms of elder abuse from 2017-2018 were caregiver neglect (29%), financial exploitation (28%), and self neglect (26%). Approximately 17% of substantiated perpetrators were family members.¹¹

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

The overall count of hate crimes increased in recent years, from 2012 (38) to 2018 (67). Most hate crimes (64%) were committed due to bias against race, ethnicity, or ancestry, followed by bias against religion (28%) and sexual orientation (7%).¹²

In 2019, the Southern Poverty Law Center reported 36 known hate groups in Pennsylvania. The state was seventh of 50 states and Washington, DC for its number of hate groups, accounting for approximately 4% of the nation's 940 active groups.¹⁴

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."¹³

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.

10%

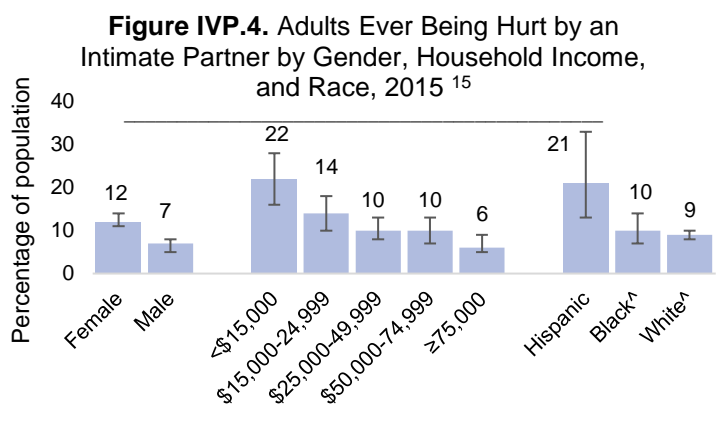
2015

of adults reported ever being hit, slapped, pushed, kicked, or hurt in any way by an intimate partner.¹⁵

7%

2015

of females reported ever experiencing unwanted sex by a current or former intimate partner.¹⁵



- In 2015, about 10% of adults reported ever being physically hurt by an intimate partner, with a higher percent among females (12%) compared to males (7%). Additionally, the percent was higher among Hispanic residents (21%) compared to non-Hispanic white residents (9%), and higher among those within lower income brackets (Figure IVP.4).¹⁵
- Between 2013 and 2019, the percent of reported rapes increased: 30 per 100,000 in 2008 to 34 per 100,000 in 2019.⁸ 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 2018, there were 122 domestic violence homicides, 68% of which were perpetrated by a current or former intimate partner. By gender, 70% of total victim deaths were female, and a higher percentage of female victims were killed by a current or former intimate partner (85%) compared to male victims (32%).¹⁶
- The number of domestic violence deaths increased between 2014 and 2018, from 150 (105 victims, 45 perpetrators) to 181 (122 victims, 59 perpetrators).¹⁶

“ 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 age 17 to 24, as later patterns of intimate partner violence may begin through early experiences of teen dating violence.¹⁷

- Approximately 10% of high school students reported experiencing sexual violence in the last year. Reports included unwanted kissing or touching and being physically forced to have sexual intercourse.¹⁸
- Sexual violence was about 2 times higher among students identifying as gay/lesbian/bisexual (19%) as heterosexual students (9%), and 4 times higher among females (17%) than males (4%).¹⁸
- Between 2006-2016, there were 88 intimate partner homicides among people age 17 to 24, 90% of which had female victims.¹⁹

10%

2019

of high school students reported experiencing sexual violence at least once in the past year.¹⁸

^ Non-Hispanic

Child maltreatment is an issue of national concern with lifelong implications. Substantiated reports of child maltreatment were higher in rural than urban areas of Pennsylvania.²⁰

“ I can speak for Tioga County. We are completely rural. Our entire county has 40,000 people. We are geographically dispersed. We are seeing poverty, rural poverty, family dysfunction which is probably exactly what urban sites are seeing a lot of isolation, lack of services so that people are struggling to get to services and 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

Pennsylvania Child Protective Services received 42,252 reports of child abuse in 2019. Of those reports, 12% (4,865) were substantiated and resulted in 51 fatalities and 93 near fatalities. Most child abuse reports (85%) came from mandated reporters.²⁰

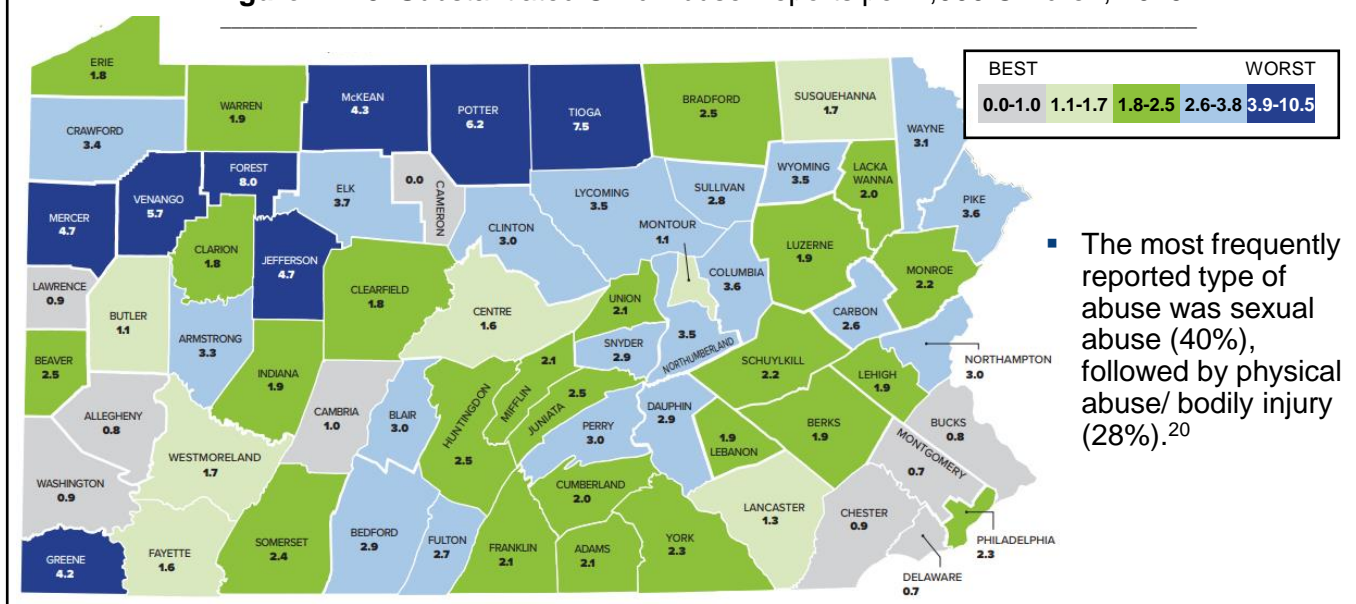
There are several risk factors associated with child abuse and neglect, including:²¹

- **Parent/Caregiver:** Previous familial abuse, substance abuse, 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

2019
1.8 per 1,000
children under the age of 18
experienced child maltreatment.²⁰

2019
1.9 per 100,000
children under the age of 18 died
due to child maltreatment.²⁰

Figure IVP.5. Substantiated Child Abuse Reports per 1,000 Children, 2019²⁰



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,”²² and often involves the violent behaviors listed in the boxes below.

22%

2019

of high school students were in a physical fight at least once in the past year.¹⁸

8%

2019

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.¹⁸

8%

2019

of high school students were threatened or injured with a weapon on school property at least once in the past year.¹⁸

“I think the other thing that people need to remember is that when children grow up in a home where there is a lot of domestic violence...that child is being abused as well....and we need to remember children imitate what they see.”

- Focus group participant

Juvenile arrest rates decreased between 2013 and 2018 across 5 major areas of crime, including larceny-theft (688 to 377/100,000), drug abuse (349 to 268/100,000), aggravated assault (169 to 128/100,000), robbery (101 to 64/100,000), and possession of weapons (98 to 59/100,000).²³

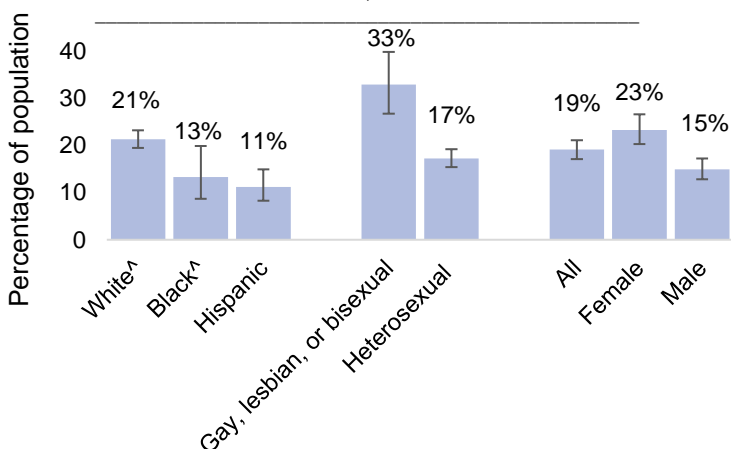
Stakeholders emphasized the importance of contextualizing violent or criminal activity of youth and young adults, as there are numerous risk factors associated with youth violence. Additionally, arrest rates may be further inflated as a result of systemic racism.²⁴

Stakeholders also discussed the effects of intergenerational trauma on families, which often precedes abuse. Child abuse and maltreatment often overlap with domestic violence,²⁵ which highlights the importance of primary prevention efforts in addressing abuse holistically, at the family level and in schools.

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 2019.¹⁸

Approximately 19% of high schoolers reported being bullied on school property during the past year. Female students were more frequently bullied than male students, as were those who identified as gay, lesbian or bisexual compared to heterosexual-identifying students (Figure IVP.6).¹⁸

Figure IVP.6. High School Students Bullied on School Property by Race, Sexual Identity, and Gender, 2019¹⁸



^ Non-Hispanic

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 violence²⁶

- Prevention
- Keeping firearms out of the wrong hands
- Mental health
- Community gun violence
- Training and education
- Coordinated planning and response
- Informing better policies and practices

2018
12.5 per 100,000

deaths due to firearm-related incidents
(age-adjusted rate)²

“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 766,204 firearms were purchased or transferred in 2019, a 1% increase from 2018. The Pennsylvania Instant Check System processed a total of 982,036 background checks, 98% of which were approved.³² Firearm sales have increased in the past decade.
- Firearms were used in 77% of homicides, 37% of robberies, and 21% of aggravated assaults in 2019.³²

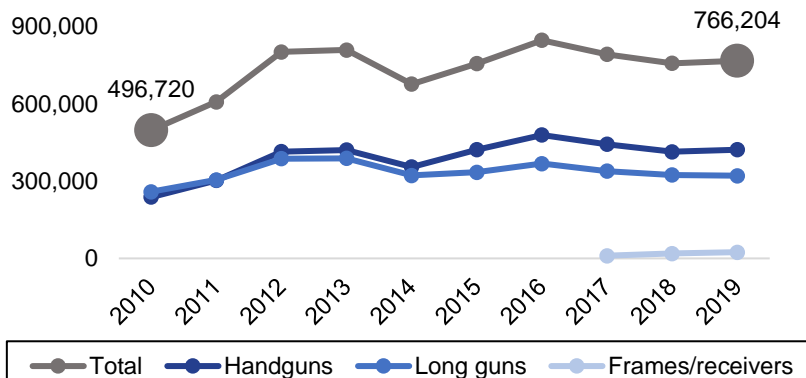
In 2018, firearm-related injuries were the second leading cause of traumatic pediatric death and third leading cause of overall pediatric death in the US.²⁷ In 2016 and 2017 in Pennsylvania, of the deaths that were reviewed by the Child Death Review teams, there were 278 deaths to children under 21 years old caused by firearms.²⁸

The overall rate of firearm-related deaths increased between 2010 (10.0 per 100,000) and 2018 (12.5 per 100,000), and the rate of firearm-related deaths for Pennsylvanians in 2018 was slightly higher than the national rate (12.0 per 100,000).²⁹

In 2018, the firearm-related death rate was higher for males (22.3/100,000) compared to females (3.2/100,000). Across racial and ethnic groups, the rate of death is highest for non-Hispanic black individuals at 28.5 deaths per 100,000.²

States with stricter gun laws had fewer pediatric gun-related deaths.^{30,31} In 2019, Pennsylvania received a C+ rating from Giffords Law Center for its gun safety laws; the state ranked 12 of 50 for gun law strength and 29 of 50 for gun deaths.³¹

Figure IVP.7. Sales/Transfers of Firearms, 2010-2019³²



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 report sections for additional context:



- [Social Determinants of Health, Equity & Racism](#)
- [COVID-19 Implications](#)
- [Assets](#)

References

1. Pennsylvania Vital Statistics: Mortality Report, Table C-14, 2018. Pennsylvania Department of Health. Health.pa.gov. Retrieved from: https://www.health.pa.gov/topics/healthstatistics/vitalstatistics/pavitalstatistics/Documents/PA_Vital_Statistics_Death_2018.pdf. Published July 2020. Accessed October 9, 2020.
2. Pennsylvania Death Certificate Dataset, 2018. Pennsylvania Department of Health. Enterprise Data Dissemination Informatics Exchange. Health.pa.gov. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/DeathCntySt.aspx>. Published 2018. Accessed October 9, 2020.
3. Xu J, Murphy SL, Kochanek KD, Arias E. Mortality in the United States, 2018. cdc.gov/nchs. Retrieved from: <https://www.cdc.gov/nchs/data/databriefs/db355-h.pdf>. Published January 2020. Accessed October 9, 2020.
4. Unintentional drug poisoning in the United States. Centers for Disease Control and Prevention. Cdc.gov. Retrieved from: https://www.cdc.gov/medicationsafety/pdfs/cdc_5538_ds1.pdf. Accessed October 9, 2020.
5. 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.
6. Langton L, Truman J. Socio-emotional impact of violent crime. bjs.gov. Retrieved from: <https://www.bjs.gov/content/pub/pdf/sivc.pdf>. Published September 2014. Accessed October 9, 2020.
7. Pennsylvania Annual Report, 2019. America's Health Rankings. americashealthrankings.org. Retrieved from: <https://www.americashealthrankings.org/explore/annual/state/PA>. Published 2020. Accessed October 9, 2020.
8. Crime rates in Pennsylvania. United States Department of Justice, Federal Bureau of Investigation. fbi.gov. <https://crime-data-explorer.fr.cloud.gov/explorer/state/pennsylvania/crime>. Published 2018. Accessed October 9, 2020.
9. Victim Compensation Formula Grant Program - Annual Performance Measures Report, October 1, 2017 - September 30, 2018. U.S. Department of Justice, Office for Victims of Crime. ovc.ojp.gov. Retrieved from: <https://ovc.ojp.gov/sites/g/files/xyckuh226/files/media/document/pennsylvania-2018-voca-compensation-state-report.pdf>. Published 2019. Accessed October 9, 2020.
10. Signs and Symptoms of Elder Abuse and Neglect. Pennsylvania Office of Victim Service. pcv.pccd.pa.gov. Retrieved from: <https://pcv.pccd.pa.gov/available-services/Pages/Signs-and-Symptoms-of-Elder-Abuse-and-Neglect.aspx>. Accessed October 12, 2020.
11. Older Adults Protective Services, 2017-2018. Pennsylvania Department of Aging. Aging.pa.gov. Retrieved from: <https://www.aging.pa.gov/publications/annual-reports/Documents/PS%20Annual%20Report%2017-18.pdf>. Published 2019. Accessed October 9, 2020.
12. FBI Hate Crimes Report, 2018. United States Department of Justice, Federal Bureau of Investigation. ucr.fbi.gov. Retrieved from: <https://ucr.fbi.gov/hate-crime/2018/tables/table-13-state-cuts/pennsylvania.xls>. Accessed October 9, 2020.
13. Uniform Crime Reporting (UCR): Hate Crime Statistics. United States Department of Justice, Federal Bureau of Investigation. ucr.fbi.gov. Retrieved from: <https://www.fbi.gov/services/cjis/ucr/hate-crime>. Accessed October 9, 2020.
14. Hate Map, 2019. Southern Poverty Law Center. Splcenter.org. Retrieved from: <https://www.splcenter.org/hate-map>. Accessed October 9, 2020.
15. Pennsylvania Behavioral Risk Factor Surveillance System (BRFSS), 2015. Enterprise Data Dissemination Informatics Exchange. Health.pa.gov. Retrieved from: <https://phaim1.health.pa.gov/EDD/WebForms/BRFSSstate.aspx>. Published 2015. Accessed October 9, 2020.
16. Fatality Report, 2018. Pennsylvania Coalition Against Domestic Violence. pcadv.org. Retrieved from: https://www.pcadv.org/wp-content/uploads/2018-Fatality-Report_web.pdf. Accessed October 9, 2020.
17. Preventing Teen Dating Violence. Centers for Disease Control and Prevention. cdc.gov. Retrieved from: https://www.cdc.gov/violenceprevention/pdf/tpv/TDV-factsheet_2020.pdf. Published 2020. Accessed October 9, 2020.
18. Youth Risk Behavior Survey (YRBS), 2019. Centers for Disease Control and Prevention. cdc.gov. nccd.cdc.gov. Retrieved from: <https://nccd.cdc.gov/Youthonline/App/Default.aspx>. Published August 2020. Accessed October 9, 2020.
19. The Lethality Assessment Program: Five Years Later. Pennsylvania Coalition Against Domestic Violence. Pcadv.org. Retrieved from: <https://www.pcadv.org/wp-content/uploads/pcadv-lap-5-year-anniversary-report.pdf>. Accessed October 9, 2020.
20. Child Protective Services Annual Report, 2019. Pennsylvania Department of Human Services. dhs.pa.gov. Retrieved from: <https://www.dhs.pa.gov/docs/Publications/Documents/2019%20child%20prev.pdf>. Accessed October 9, 2020.

References

21. Child Abuse & Neglect: Risk and Protective Factors. Center for Disease Control and Prevention. Cdc.gov. Retrieved from: <https://www.cdc.gov/violenceprevention/childabuseandneglect/riskprotectivefactors.html>. Published March 2020. Accessed August 2020.
22. Preventing Youth Violence - Fast Facts. Centers for Disease Control and Prevention. cdc.gov. Retrieved from: <https://www.cdc.gov/violenceprevention/youthviolence/fastfact.html>. Updated April 7, 2020. Accessed August 2020.
23. Juvenile Arrest Rates by State, 2018. United States Department of Justice, Office of Juvenile Delinquency Prevention. ojjdp.gov. Retrieved from: <https://www.ojjdp.gov/ojstatbb/crime/qa05103.asp?qaDate=2018>. Published October 31, 2019. Accessed August 2020.
24. Pennsylvania Statewide Health Assessment and Focus Group Convenings, 2020. Pennsylvania Department of Health. Harrisburg, PA.
25. 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.
26. 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.
27. 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/NEJMSr1804754. PMID: 30575483; PMCID: PMC6637963.
28. Child Death Review Annual Report, 2019. Pennsylvania Department of Health. Health.pa.gov. Retrieved from: <https://www.health.pa.gov/topics/Documents/Programs/2019%20CDR%20Annual%20Report.pdf>. Published 2019. Accessed September 25, 2020.
29. Deaths Due to Injury by Firearms per 100,000 Population. Kaiser Family Foundation. Kff.org. Retrieved from: <https://www.kff.org/other/state-indicator/firearms-death-rate-per-100000/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D>. Accessed October 13, 2020.
30. 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.
31. Annual Gun Law Scorecard. Giffords Law Center. giffords.org. Retrieved from: <https://giffords.org/lawcenter/resources/scorecard/#PA>. Accessed October 12, 2020.
32. Firearms Annual Reports. Pennsylvania State Police. Psp.pa.gov. Retrieved from: <https://www.psp.pa.gov/firearms-information/Pages/Firearms-Information.aspx>. Accessed October 12, 2020.



Immunizations and Infectious Diseases

Taken together, immunizations and infectious diseases comprise a key public health theme, especially as the world faces COVID-19. This section begins by examining vaccination coverage for vaccine-preventable diseases such as measles, mumps, and pertussis. It reviews the impacts of communicable diseases such as pertussis and tuberculosis on different populations. The focus then turns to the low rates of human papillomavirus (HPV) and influenza (flu) vaccination. Next, the section details the impact of COVID-19's racial disparities, followed by a look at the state of HIV and AIDS, sexually transmitted infections (STIs), and hepatitis C. Finally, this section addresses foodborne illnesses and Lyme disease in Pennsylvania.

This discussion includes the following:



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

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

Data shared in this section is from 2016 to 2020; data represents Pennsylvania unless otherwise noted.

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

2017

70%

of children age 19 to 35 months were up-to-date with required immunizations.¹

2017

45%

of adults age 65 and older had ever received the shingles vaccine.²

Of 50 states, Pennsylvania ranked 26 in childhood immunizations (among those 19 to 35 months), 11 in recommended adolescent immunizations (among those age 13 to 17), and 27 in shingles vaccination (among those 65 and older).³

In 2017, 70% of 19- to 35-month-old children received all recommended vaccinations, below the Healthy People 2020 (HP2020) goal of 80%.¹ For Hispanic children, HP2020 vaccination goals were met for 5 recommended vaccinations, but for non-Hispanic white children only 3 were met, and for non-Hispanic black children only 4 were met (Table IID.1).¹

Some Pennsylvanians, such as members of the Amish community, may not receive vaccines for religious or cultural reasons, because of philosophical objections, or due to misinformation about safety. Other reasons can include cost, poor insurance coverage, transportation challenges, language barriers, and/or 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 for Children 19 to 35 Months Old by Race and Ethnicity, 2017¹

	All (%)	Non-Hispanic White (%)	Non-Hispanic Black (%)	Hispanic (%)	Met HP2020 Goal of vaccination (>=90%)	Did not meet goal
4 doses of tetanus, diphtheria & acellular pertussis (DTaP)	83	84	65	92	No	White, Black
3 doses of polio	92	91	94	98	Yes	-
1 dose of measles, mumps & rubella (MMR)	92	91	93	97	Yes	-
3 doses of hepatitis B	93	93	97	97	Yes	-
1 does of varicella (chickenpox)	88	86	93	97	No	White

Vaccination coverage for flu and HPV merit concern. Stakeholders suggested that immunization levels in the state can be improved through a more robust state registry.

“ 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

2018

33%

of adults 18 to 64 and

60%

of adults 65+
had a flu shot.¹

Influenza is a respiratory illness caused by flu viruses that can manifest mild to severe symptoms resulting in hospitalization or even death.⁵ Flu vaccination varied from 21% among those with less than high school education to 41% among those with at least some college education, far below the HP2020 goal of 80%.¹

HPV is a vaccine-preventable virus that can lead to 6 types of cancers, namely; cervix, vagina, vulva, penis, anus and back of the throat (oropharyngeal).⁶ Centers for Disease Control and Prevention (CDC) recommends HPV vaccines for individuals age 11 to 12 up to 26. Among 50 US states, Pennsylvania ranked 30 in HPV vaccination among 13- to 17-year-old males, and 8 among same-aged females.³

The Pennsylvania Statewide Immunization Information System (PA-SIIS) is a registry that aims to curb 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, and participation is voluntary.⁷ In 2017, 82% of children under age 6 were registered in PA-SIIS.¹

2018

62%

of females age 13 to 17 and

46%

of males age 13 to 17 were
up-to-date with recommended
doses of HPV vaccine.³

Despite vaccine availability, there are still cases of pertussis, tuberculosis, measles, and mumps in Pennsylvania.

- Pertussis, or whooping cough, is a highly contagious vaccine-preventable disease.⁸ From 2016 to 2018, there were a total of 3,038 new pertussis cases in Pennsylvania, 263 of which were in children under the age of 1.⁹
- There were 212 tuberculosis cases in Pennsylvania in 2018. The disease disproportionately affected blacks (3.5/100,000) compared to whites (0.6/100,000). It was also higher among Hispanic (4.3/100,000) residents compared to the overall population (1.7/100,000).⁹
- There were 2 reported, confirmed cases of measles and 54 cases of mumps in 2018. Between 2008 and 2017 average case counts were 4 for measles and 17 for mumps per year.¹⁰

2018

41

per 100,000 children under
one year were diagnosed
with pertussis.⁹

2018

1.7

per 100,000 residents were
diagnosed with
tuberculosis.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 or differently than they would in other populations with more means.”

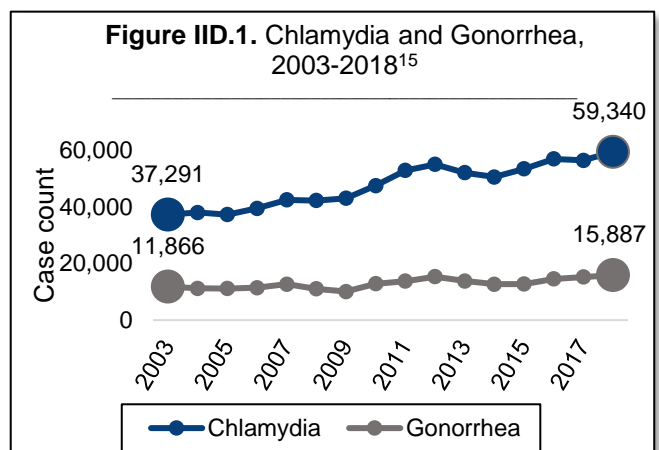
- Focus group participant

Pennsylvania followed CDC guidelines to control the spread of the virus, including mandatory, universal face-mask wearing, hand washing, social distancing, and surface cleaning. Through increasing testing capacity, prioritizing contact tracing, and addressing COVID-19 related health disparities, the state continues to respond proactively and aggressively.

The COVID-19 pandemic has highlighted underlying, long-standing health system gaps and social inequities. Although racial/ethnic reporting is incomplete (as of September 2020, only 54% of records included race and 35% included ethnicity), available data showed that COVID-19 has disproportionately affected racial and ethnic minorities in Pennsylvania. Of the COVID-19 records that included race and ethnicity, black residents, who are 12% of the population, accounted for 28% of cases and 21% of deaths. Similarly, Hispanic or Latinx individuals are 8% of residents, but accounted for 26% of cases and 6% of deaths.¹¹

Pennsylvanians continue to prioritize addressing HIV, AIDS, STIs, and hepatitis C.

- In 2019, there were 986 new HIV diagnoses, the fewest new cases since the mid-1990s, and a total of 35,949 people living with HIV. The number of deaths due to HIV/AIDS has decreased over the past decade due to antiretroviral therapy use, which has improved the life expectancy of people living with HIV.^{12,13} HIV case counts have been disproportionately higher for sexual and racial/ethnic minorities: black residents accounted for over 49% of cases, and of all cases, the most common means of transmission was men having sex with men.¹⁴
- Hepatitis C can result in serious health problems, including cirrhosis and liver cancer. The CDC recommends one-time hepatitis C testing of all adults (age 18 and older) and all pregnant women during every pregnancy.¹⁶ In 2018, the incidence of hepatitis C was 1.9 per 100,000, 9 times higher than the HP2020 goal of 0.2/100,000.^{1,17}
- Between 2003 and 2018, both primary and secondary syphilis increased by close to 400%. Figure IID.1 shows a 15-year, 59% increase in chlamydia, and a 34% increase in gonorrhea over that same time. Disparities by race and ethnicity were evident: compared to whites, black individuals were much more likely to be diagnosed with syphilis (7 times), gonorrhea (13 times), and chlamydia (9 times). Similarly, compared to the overall population, Hispanic residents were more likely to be diagnosed with syphilis and chlamydia.¹⁵



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 the US. In 2018, there were 21 *Campylobacter* infections per 100,000 people, which is higher than the HP2020 goal of 8.5/100,000.^{9,18}
- *Salmonellosis* is often found in undercooked meat, raw vegetables, and unpasteurized milk and generally affects the intestinal tract, causing diarrhea and/or vomiting.¹⁹ In 2018, there were 1,728 cases (13.5/100,00) of *Salmonellosis* reported. The HP2020 goal is 11.4/100,000.^{9,18}
- *E. coli* is a group of bacteria which may make people sick. The illness usually causes severe bloody diarrhea, vomiting, and abdominal cramps.¹⁹ In 2018, there were 3.4 *E. coli* infections per 100,000 people, which is higher than the HP2020 goal of 0.6/100,000.^{9,18}

Lyme disease is also a pressing problem in Pennsylvania.

2018
30%

of Lyme disease cases in the US
were in Pennsylvania.²⁰

2018
80

per 100,000 residents were
diagnosed with Lyme disease.⁹

Lyme disease is a bacterial infection spread by tick bites and has caused more than 10,000 illnesses in each of the past 3 years in Pennsylvania.⁹ Pennsylvania continues to be among the top states for incidence of Lyme disease, with the number of cases more than doubling in the past 15 years.⁹ Reasons for the increase in Lyme disease may include warmer winters that cause less tick die-back and increased exposure as Pennsylvanians spend more time in wooded parts of the state.²¹

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 C
- Foodborne illnesses
- Lyme disease

Visit these report sections for additional context:



- [Social Determinants of Health, Equity & Racism](#)
- [COVID-19 Implications](#)
- [Assets](#)

References

1. Immunization and Infectious Diseases. Healthy People 2020. Pennsylvania Department of Health. health.pa.gov. Retrieved from: <https://www.health.pa.gov/topics/HealthStatistics/HealthyPeople/Documents/current/state/immunization-and-infectious-diseases.aspx>. Accessed September 25, 2020.
2. Shingles Vaccination - Ages 65+. America's Health Rankings. United Health Foundation, AmericasHealthRankings.org. Retrieved from: https://www.americashealthrankings.org/explore/senior/measure/Shingles_vaccine_sr/state/PA. Accessed September 25, 2020.
3. Pennsylvania Annual Report, America's Health Rankings, United Health Foundation. AmericasHealthRankings.org. Retrieved from: <https://www.americashealthrankings.org/explore/annual/state/PA>. Accessed September 25, 2020.
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). cdc.gov. Retrieved from: <https://www.cdc.gov/flu/about/index.html>. Accessed September 25, 2020.
6. Human Papillomavirus (HPV). Centers for Disease Control and Prevention (CDC). cdc.gov. Retrieved from: <https://www.cdc.gov/hpv/parents/about-hpv.html>. Reviewed April 29, 2019. Accessed September 25, 2020.
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). Cdc.gov. Retrieved from: <https://www.cdc.gov/pertussis/index.html>. Accessed September 28, 2020.
9. Communicable Diseases, 2018. Enterprise Data Dissemination Informatics Exchange. health.pa.gov. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/CommDisSt.aspx>. Accessed September 24, 2020.
10. Pennsylvania National Electronic Disease Surveillance System (PA-NEDSS). Health.pa.gov. Data request August 27, 2020.
11. COVID-19 Data for Pennsylvania. Health.pa.gov. Retrieved from : <https://www.health.pa.gov/topics/disease/coronavirus/Pages/Cases.aspx>. Updated: September 25, 2020. Accessed September 25, 2020.
12. Pennsylvania Department of Health, Bureau of Epidemiology. Data request August 19, 2020.
13. Antiretroviral Therapy Cohort Collaboration. Survival of HIV-positive patients starting antiretroviral therapy between 1996 and 2013: a collaborative analysis of cohort studies. Lancet HIV. 2017 Aug;4(8):e349-e356. doi: 10.1016/S2352-3018(17)30066-8. Epub 2017 May 10. PMID: 28501495; PMCID: PMC5555438.
14. Pennsylvania Department of Health, Bureau of Epidemiology. Annual HIV Surveillance Summary 2018.health.pa.gov. Retrieved from: <https://www.health.pa.gov/topics/Documents/Programs/HIV/2018%20Annual%20HIV%20Surveillance%20Report.pdf>. Accessed September 21, 2020.
15. Sexually transmitted diseases, 2018. Enterprise Data Dissemination Informatics Exchange. health.pa.gov. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/STDSt.aspx>. Accessed September 24, 2020.
16. Viral Hepatitis. Centers for Disease Control and Prevention. cdc.gov. Retrieved from: <https://www.cdc.gov/hepatitis/hcv/index.htm>. Accessed September 25, 2020.
17. National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention. Centers for Disease Control and Prevention. cdc.gov. Retrieved from: <https://www.cdc.gov/nchhstp/atlas/>. Accessed September 25, 2020.
18. Food Safety. Healthy People 2020. Pennsylvania Department of Health. health.pa.gov. Retrieved from: <https://www.health.pa.gov/topics/HealthStatistics/HealthyPeople/Documents/current/state/food-safety.aspx>. Accessed October 13, 2020.
19. Disease Fact Sheets. Pennsylvania Department of Health. health.pa.gov. Retrieved from: <https://www.health.pa.gov/topics/disease/Pages/Foodborne-Illness.aspx>. Accessed October 13, 2020.
20. Nationally Notifiable Infectious Diseases and Conditions, United States: Annual Tables. Wonder.CDC.gov. Retrieved from: <https://wonder.cdc.gov/nndss/static/2018/annual/2018-table2i-H.pdf>. Accessed September 29, 2020.
21. Pennsylvania 2017 Lyme and Other Tickborne Diseases Surveillance Report. Health.pa.gov. Retrieved from: <https://www.health.pa.gov/topics/Documents/Diseases%20and%20Conditions/Lyme/Lyme%20Disease%20Annual%20Report%202017.pdf>. Accessed September 29, 2020.



Environmental Health

Environmental health is a cross-cutting issue of immense importance and 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 built environment, air quality, and water quality. It then reviews environmental exposures and hazards that impact health within the home and built environments, as well as the impact of environmental hazards on children. The section also briefly reviews pedestrian safety and motor vehicle accidents and access to safe recreational spaces. Air and water quality are other focus areas, featuring discussions on air pollution, cancer risk, and access to safe drinking water. The section concludes with an overview of Pennsylvania's standing in global initiatives for climate change and the emphasis for the state's current Climate Action Plan.

This section includes the following:



- Key issues
- Data to illustrate main points
- Highlights on especially vulnerable populations
- Hyperlinks for further exploration
- Data sources

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

Data shared in this section is from 2014 to 2020; data represents Pennsylvania unless otherwise noted.

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

Environmental health is defined by the World Health Organization (WHO) as being “all the physical, chemical, and biological factors external to a person, and all the related behaviors” that impact health, such as air and water quality, homes and communities, infrastructure and surveillance, exposure to toxic substances and hazardous wastes, and global environmental health.¹

Section 27 of the Pennsylvania state 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 healthy spaces, chronic disease, cardiovascular health, injury prevention, infectious disease, and more. Those with less control over their environment face greater risk of long-term exposure to toxins and environmental hazards.² Populations at greatest risk include:²

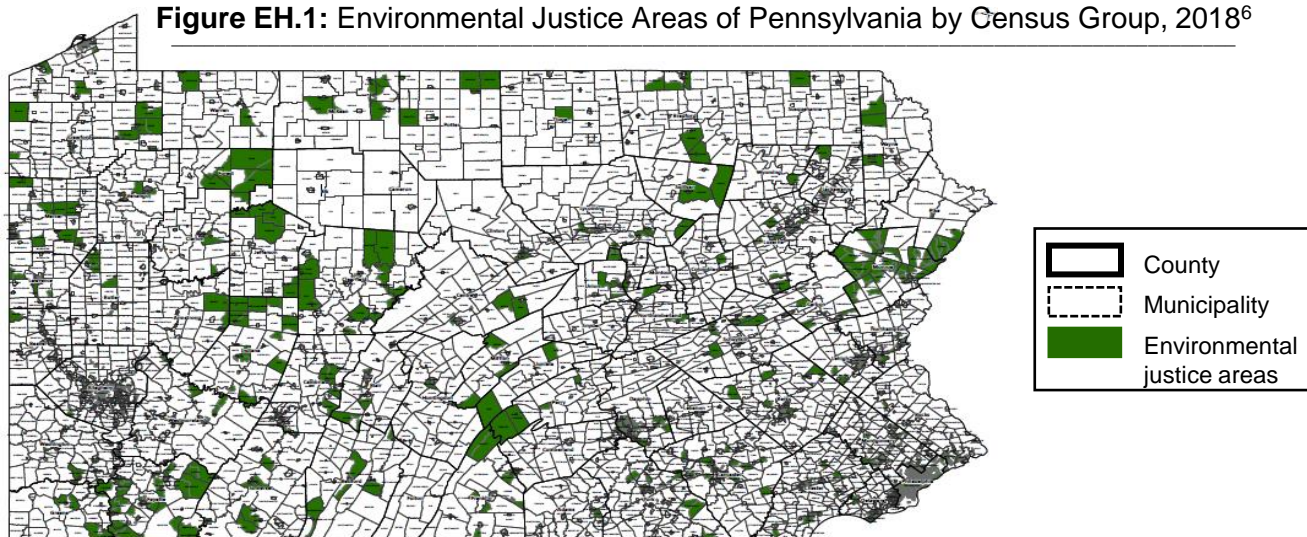
- Communities of color
- Individuals with lower incomes
- Children
- Senior residents (65+)
- Those with lower literacy and/or limited English proficiency
- Those with disabilities
- Those who are legally detained or incarcerated

The Environmental Protection Agency (EPA) stresses the necessity of practicing environmental justice to ensure all persons have equal access to safe environments and decision-making power.³

Populations most vulnerable to environmental inequities are identified using “environmental justice areas,” which are census tracts in which at least 20% of residents live in poverty and/or 30% is a racial minority.⁴ Figure EH.1 shows communities defined as environmental justice areas.⁴

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

Figure EH.1: Environmental Justice Areas of Pennsylvania by Census Group, 2018⁶



Housing quality and built environment, such as work environments, construction sites, and schools, are important components of overall quality of life and health outcomes of citizens.

Older housing stock – In 2019, Pennsylvania ranked 47 of 50 states for the percentage of housing stock at risk for lead exposure (29% compared to the national average of 18%).⁵ According to 2013-2017 estimates, approximately 68% of Pennsylvania homes were built before 1978, increasing resident lead exposure risk.⁶ The counties with highest proportion of older homes include Philadelphia (87%), McKean, Delaware, and Cambria (81% each).⁶ Stakeholders noted environmental health risks, like lead in the home, may take longer to manifest and be harder to prioritize when more imminent needs are present.²

“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

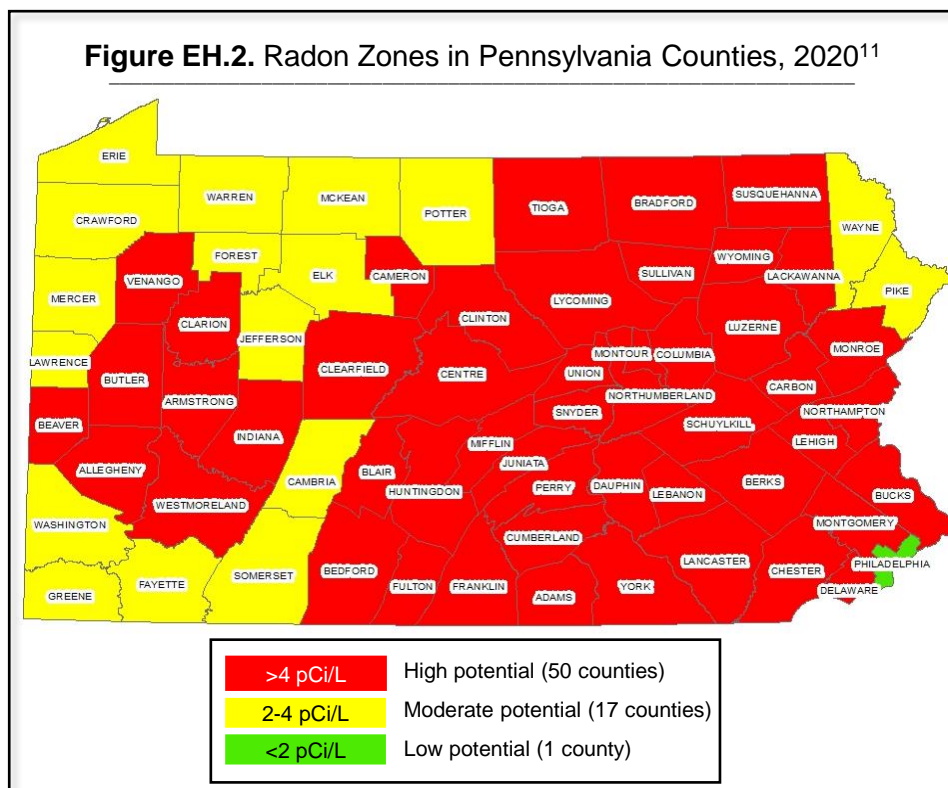
Housing-related discrimination – Real estate redlining, which was structural racism, labeled neighborhoods as 'high risk' so banks would not lend money to people to do needed home repairs.⁷ This and other unjust municipal infrastructure policies and decisions have contributed to residential segregation, often leaving communities of color with more socioeconomic and home-related health challenges. Stakeholders discussed the resources and infrastructure needed to create and maintain healthy homes: financial resources for household upkeep, education to support decision-making about protecting a home, and policies and infrastructure investment to build communities.²

Community-level exposures – On their National Priorities List (NPL), also known as the Superfund List, EPA tracks sites that either have released or are in danger of releasing hazardous substances. In 2020, Pennsylvania had 91 sites listed on NPL, ranking the state among the top 3 in the country for

frequency of such sites.⁸ Children and the elderly are more at risk, and health impacts include higher levels of cancer, birth defects, developmental disabilities, and other serious health issues.⁹

Radon, a radioactive gas within homes and built environments, is the second leading cause of lung cancer after smoking. With lifetime exposure to radon levels above 4 pCi/L (picocuries per liter), risk of lung cancer increases for smokers and non-smokers alike.¹⁰ Most counties have a predicted average indoor radon screening level above recommended levels.¹⁰

Figure EH.2. Radon Zones in Pennsylvania Counties, 2020¹¹



Children are especially vulnerable to environmental hazards and exposures because they have little control over their environment.

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.¹² While 5 µg/dL is the CDC reference value, there are no identified safe levels of lead for children.

In 2018, 19% of children under age 6 (160,986) were tested for lead. Among those tested, 4% had a blood-lead level greater than 5 µg/dL. Non-Hispanic black children were nearly 3 times as likely (8%) and Hispanic children were nearly 2 times as likely (5%) as non-Hispanic white children (3%) to have elevated blood-lead levels.¹³

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.¹⁴

Children exposed to secondhand smoke are also at risk of adverse health conditions such as middle ear infections, respiratory problems, and sudden infant death syndrome.¹⁵ From 2017 to 2018, 19% of children lived with someone who smoked, which was higher than the national report of 15%.¹⁶

“ I know [there is] a lot of difficulty in the city [for the] pediatric population and the families are just, there are so many barriers...the un-documentation, the language barriers; just being able to get to the doctor, financially, especially right now with COVID-19....So, I know we have tried to address lead in this environment, and it's been a huge struggle...”

– Focus group participant

Pedestrian and vehicular deaths may be reduced by ensuring safe walkways, bicycle paths, and other policy supports are in place.

2018
9.3 per 100,000
people died in car crashes.¹⁷

2018
1.5 per 100,000
pedestrians died in car crashes.¹⁷

2018
37 min / 51 min
average arrival time to hospital from
time of crash for EMS, urban vs. rural¹⁷

- Pennsylvania developed the Pennsylvania Walkable Communities Collaborative in 2016 to increase walkability across the state and link residents to their communities.¹⁸
- In 2018, pedestrian-related crashes represented 3% of the total reported traffic crashes; however, they accounted for 17% of all traffic-crash fatalities, a 5-year high.¹⁹
- In 2018, there were 974 bicycle crashes, representing 1% of the total reported crashes and 1.5% of traffic fatalities.¹⁹
- In 2020, Pennsylvania scored 92 out of 200 on the Safe Routes to School report on support for walking, bicycling, and active kids and communities, demonstrating momentum and opportunities for improvement.²⁰

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

Obesity in Pennsylvania is on an upward trend and the prevalence is projected to increase from 33% in 2019 to 50% by 2030.^{21,22} 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 is needed for all, especially children and older adults, including those in long-term care, and benefits people physically, emotionally, and mentally. 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.¹⁸

“ 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 in Pennsylvania varies by geographic location, often tied to industry and climate change, heat, and ozone.

One of Pennsylvania's greatest health challenges is high levels of air pollution which can lead to cardiovascular disease, respiratory diseases, reproductive and central nervous system dysfunctions and cancers. Nationally, Pennsylvania ranked 47 of 50 states for the general public's exposure to acceptable levels of particulate matter (PM, 2.5 micrograms or less per cubic meter). The state's average exposure levels of PM (9.2 $\mu\text{g}/\text{m}^3$) exceeded the national average (8.4 $\mu\text{g}/\text{m}^3$).²³

A Healthy People 2020 leading health indicator is days people are exposed to unhealthy air. This is measured by the number of days the Air Quality Index (AQI) exceeds 100, multiplied by the population (AQI-weighted people days).²⁴ Pennsylvania's AQI-weighted people days decreased by 95% from 2006-2008 to 2017-2019, which surpasses the HP2020 goal of a 10% decrease.²⁵

According to American Lung Association's 2020 State of the Air report, 21 of 36 participating Pennsylvania counties had passing grades (C or higher) for ozone pollution.²⁶

The total cancer risk per million people was last recorded as 31.7 both in Pennsylvania and the US based on a 2014 EPA National Air Toxics Assessment report.²⁷ There is wide variation within Pennsylvania, with the most recent highest reported emission levels in Lehigh County attributable to corporate manufacturing emissions of large amounts of ethylene oxide.²⁷

What does the Air Quality Index (AQI) measure?³¹

0 - 50	51 - 100	101 - 150	151 - 200	201 - 300	301+
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The AQI is a composite measure of air pollution (ozone and particle pollution) 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.

98%

of community water systems complied with health-based standards.²⁸

2019

Between 2010 and 2018, Pennsylvania had 37 waterborne disease outbreaks that resulted in 351 illnesses, 158 hospitalizations, and 18 deaths. In 2019, most residents had access to regulated community water systems (89%), and there were 2 reported waterborne disease outbreaks related to public water supplies.^{28,29}

56%

of residents were served by community water systems that had optimally fluoridated water.³⁰

2018

Optimal water fluoridation is a public health innovation that is an important, cost-effective means of preventing tooth decay in the general public.³¹ In 2018, the state ranked 42 of the 50 states and Washington, D.C. for access to fluoridated water. The percentage of residents with access to fluoridated water (56%) was far below the national average (73%).³⁰

As of 2019, 11% of Pennsylvanians were served by private well systems.³⁰ 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.³² Well-water testing has a cost and may not be consistently performed; there are also potential gaps in education or knowledge about the importance of testing and how to do it, which may lead to contamination and increased health risks.³³ Stakeholders discussed the difficulty in reaching rural populations who use private well-water systems to provide adequate testing information.²

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

Rising heat poses a threat for the entire state. Resulting extreme weather events and increased rainfall puts the commonwealth at higher risk for health impacts (e.g. asthma, heat stress/stroke), food insecurity, flooding, property damage, economic impacts to industries, and injury and death.³⁴

Climate change has a disproportionate impact on urban, racial minorities, and environmental justice communities, where residents of these regions are already faced with health challenges.

Additionally, heat islands (urbanized areas that experience higher temperatures than outlying areas), have a daytime temperature of about 1–7°F higher than temperatures in outlying areas and nighttime temperatures about 2–5°F higher. Elevated temperatures from heat islands can affect a community's environment and quality of life by increasing energy consumption, elevating emissions of air pollutants and greenhouse gases, and impairing water quality.³⁵

32% / 24%

32% of greenhouse gas emissions were from energy production and 24% were from industrial fuel consumption.³⁴

+1.8°

The average temperature increased 1.8°F in the last century and is projected to be 5.4°F warmer by 2050.³⁴

+10%

The annual precipitation has increased by about 10% in the past 100 years.³⁴

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

Pennsylvania ranked 18 of 50 states on progress towards the US's global Sustainable Development Goal for climate action.³⁶

Pennsylvania has achieved several of these goals including having a climate action plan, FEMA mitigation coverage, reducing weather injury/fatality rates, and reducing weather costs. There are challenges in achieving the remaining goals including resilient building codes, global warming awareness, reduced energy-related CO2 emissions per capita, effective carbon rate, and climate alliance partnership.

As part of the Pennsylvania Climate Action Plan, the state plans for a 26% reduction in greenhouse gases (GHG) by 2025 and an 80% reduction by 2050. The plan presents 19 strategies and actions for the state to reduce its GHG emissions and provides an outline of 100 actions for government leaders.³⁴

Pennsylvania also has an Emergency Operation Plan that is prepared, exercised, and maintained by the Pennsylvania Emergency Management Agency. It outlines procedures and responsibilities that are employed in event of a disaster or emergency.³⁷

With the Act 27 of 2008, the Clean Indoor Air Act, protections from tobacco smoke and carcinogens have benefited many Pennsylvanians. However, exemptions in Act 27 leave some hospitality workers and others unprotected at work and when visiting certain establishments.³⁸

“*...air and water move place to place. The idea that you can have one regulation in one place and none in another doesn't make any sense because we live on one planet.*”

– Focus group participant

Unconventional oil and natural gas development, commonly known as fracking, are often located near residential areas. While research on health impacts so far has been limited, there are concerns of impacts to water, air, and soil quality, traffic, stress, and other health outcomes.³⁹ 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 report sections for additional context:



- [Social Determinants of Health, Equity & Racism](#)
- [COVID-19 Implications](#)
- [Assets](#)

References

1. Environmental Health Overview. Office of Disease Prevention and Health Promotion. HealthyPeople.gov. 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. epa.gov. 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. dep.pa.gov. Retrieved from: <https://www.dep.pa.gov/PublicParticipation/OfficeofEnvironmentalJustice/Pages/PA-Environmental-Justice-Areas.aspx>. Accessed October 13, 2020.
5. Housing with lead risk. America's Health Rankings, United Health Foundation. americashealthrankings.org. Retrieved from: https://www.americashealthrankings.org/explore/health-of-women-and-children/measure/housing_leadrisk/state/PA. Published 2017. Updated 2019. Accessed October 13, 2020.
6. Pennsylvania Housing by Year Built Report, 2013-2017. Enterprise Data Dissemination Informatics Exchange. health.pa.gov. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/ChildLdHouse.aspx>. Published 2018. Accessed October 13, 2020.
7. Redlining and Neighborhood Health. National Community Reinvestment Collation. ncr.or. Retrieved from: <https://ncrc.org/holc-health/>. Accessed October 13, 2020.
8. National Priorities List (NPL) Sites – by State. Environmental Protection Agency. epa.gov. Retrieved from: <https://www.epa.gov/superfund/national-priorities-list-npl-sites-state#PA>. Updated April 2, 2020. Accessed October 13, 2020.
9. The Negative Impacts of Proximity to a Superfund Site. Center for Health, Environment and Justice. chej.org. Retrieved from: <http://chej.org/superfund-and-health/>. Accessed November 9, 2020.
10. Fact Sheet: Health effects of radon. Pennsylvania Department of Environmental Protection. depgreenport.state.pa.us. 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.
11. EPA Map of Radon Zones including State Radon Information and Contacts. Environmental Protection Agency. epa.gov. Retrieved from: <https://www.epa.gov/radon/find-information-about-local-radon-zones-and-state-contact-information#main-content>. Updated March 2020. Accessed October 13, 2020.
12. Health effects of lead exposure. Centers for Disease Control and Prevention (CDC). cdc.gov. Retrieved from: <https://www.cdc.gov/nceh/lead/prevention/health-effects.htm>. Updated January 7, 2020. Accessed October 13, 2020.
13. Childhood Lead Surveillance Annual Report, 2018. Pennsylvania Department of Health. health.pa.gov. Retrieved from: <https://www.health.pa.gov/topics/Documents/Environmental%20Health/2018%20Childhood%20Lead%20Surveillance%20Annual%20Report.pdf>. Published on January 2020. Accessed October 13, 2020.
14. Lead in drinking water, information for schools. Pennsylvania Department of Education. education.pa.gov. Retrieved from: <https://www.education.pa.gov/Schools/safeschools/resources/Pages/Lead-in-Drinking-Water.aspx>. Accessed October 13, 2020.
15. Health Effects of Secondhand Smoke. Centers for Disease Control and Prevention (CDC). Cdc.gov. Retrieved from: [https://www.cdc.gov/tobacco/data_statistics/fact_sheets/secondhand_smoke/health_effects/index.htm#:~:text=There%20is%20no%20risk%2Dfree,infan%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,infan%20death%20syndrome%20(SIDS)). Updated February 27, 2020. Accessed October 13, 2020.
16. National Survey of Children's Health (NSCH), 2017-2018. Data Resource Center for Child & Adolescent Health. Childhealthdata.org. Retrieved from: <https://www.childhealthdata.org/browse/survey/results?q=7155&r=40&r2=1>. Accessed September 25, 2020.
17. Traffic Safety Facts: A Compilation of Motor Vehicles Crash Data, 2018. National Highway Traffic Safety Administration (NHTSA), United States Department of Transportation. Cdan.nhtsa.gov. Retrieved from: <https://cdan.nhtsa.gov/tsftables/tsfar.htm>. Updated June 30, 2020. Accessed October 13, 2020.
18. Pennsylvania statewide outdoor recreation plan (2020-2024). Pennsylvania Department of Conservation and Natural Resources. Dcnr.pa.gov. Retrieved from: <http://elibrary.dcnr.pa.gov/GetDocument?docId=3223603&DocName=PASCORP2020-2024Final>. Published 2019. Accessed October 13, 2020.
19. Pennsylvania Crash Facts & Statistics, 2018. Pennsylvania Department of Transportation. Penndot.gov. Retrieved from: https://www.penndot.gov/TravelInPA/Safety/Documents/2018_CFB_linked.pdf. Accessed October 14, 2020.
20. Lieberman M, Pedroso M, & Zimmerman S. Making Strides 2020: Pennsylvania State Report Card. Safe Routes Partnership. Saferoutespartnership.org. Retrieved from: https://www.saferoutespartnership.org/sites/default/files/resource_files/making-strides-2020-final.pdf. Accessed October 14, 2020.
21. 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.
22. Pennsylvania Behavioral Risk Factor Surveillance System (BRFSS), 2019. Enterprise Data Dissemination Informatics Exchange. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/BRFSSstate.aspx>. Published 2020. Accessed October 14, 2020.
23. Air pollution in Pennsylvania. America's Health Rankings analysis of U.S. Environmental Protection Agency; U.S. Census Bureau, Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2018, United Health Foundation. americashealthrankings.org. Retrieved from: <https://www.americashealthrankings.org/explore/annual/measure/air/state/PA>. Published 2018. Updated 2019. Accessed October 14, 2020.

References

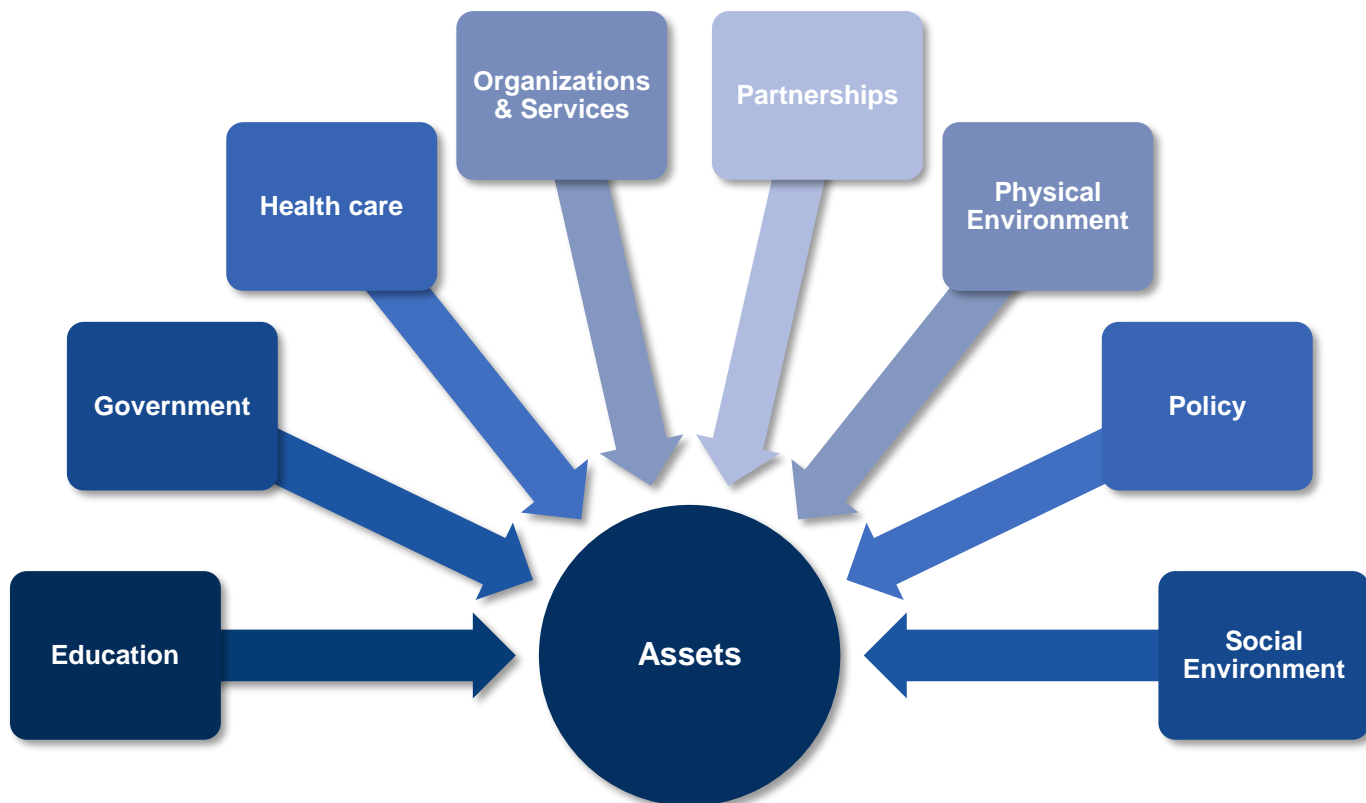
24. EH-1 Data Details: Reduce the number of days the Air Quality Index (AQI) exceeds 100, weighted by population and AQI. Office of Disease Prevention and Health Promotion. HealthyPeople.gov. Retrieved from: https://www.healthypeople.gov/node/4282/data_details. Accessed October 14, 2020.
25. Air Quality Index Daily Values Reports, 2006-2019. Environmental Protection Agency. aqs.epa.gov. Retrieved from: https://aqs.epa.gov/aqsweb/airdata/download_files.html#AQI. Published 2006-2019. Accessed October 14, 2020.
26. State of the Air, Report Card: Pennsylvania. American Lung Association. Stateoftheair.org. Retrieved from: <https://www.stateoftheair.org/city-rankings/states/pennsylvania/>. Published 2020. Accessed October 14, 2020.
27. National Air Toxics Assessment: National cancer risk by pollutant, 2014. Environmental Protection Agency. Epa.gov. Retrieved from: <https://www.epa.gov/national-air-toxics-assessment/2014-nata-assessment-results#nationwide>. Published 2018. Accessed October 14, 2020.
28. Water Fluoridation Basics. Centers for Disease Control and Prevention (CDC). Cdc.gov. Retrieved from: <https://www.cdc.gov/fluoridation/basics/index.htm>. Updated January 24, 2020. Accessed October 14, 2020.
29. Pennsylvania Public Water System Compliance Report, 2019. Pennsylvania Department of Environmental Protection. Dep.state.pa.us. Retrieved from: http://files.dep.state.pa.us/Water/BSDW/DrinkingWaterManagement/PublicDrinkingWater/PA_DEP_2019_Annual_Compliance_Report.pdf. Published 2019. Accessed October 14, 2020.
30. Fluoridation Statistics, 2018. Centers for Disease Control and Prevention (CDC). Cdc.gov. Retrieved from: <https://www.cdc.gov/fluoridation/statistics/2018stats.htm>. Published 2018. Accessed October 14, 2020.
31. CDC National Outbreak Reporting System (NORS), Waterborne outbreaks 2010-2018 in Pennsylvania. Centers for Disease Control and Prevention (CDC). Cdc.gov. Retrieved from: <https://wwwn.cdc.gov/norsdashboard/>. Accessed October 14, 2020.
32. Unregulated Drinking Water Systems. National Conference of State Legislatures. Ncsl.org. Retrieved from: <https://www.ncsl.org/research/environment-and-natural-resources/unregulated-drinking-water-systems.aspx>. Published February 2018. Accessed October 14, 2020.
33. 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.
34. Pennsylvania Climate Action Plan, 2018. Pennsylvania Department of Environmental Protection. Dep.pa.gov. Retrieved from: <https://www.dep.pa.gov/Citizens/climate/Pages/PA-Climate-Action-Plan.aspx>. Published 2018. Accessed October 14, 2020.
35. Heat island impacts. 2020. Environmental Protection Agency. epa.gov. Retrieved from: <https://www.epa.gov/heatislands/heat-island-impacts>. Accessed December 9, 2020.
36. Sustainable Development Report of the United States, 2018. Sustainable Development Solutions Network. unsdsn.org. Retrieved from: <https://sdgusa-data.netlify.app/#/SDG/13>. Accessed October 14, 2020.
37. Commonwealth Emergency Operations Plan. 2019. Retrieved from: <https://www.pema.pa.gov/Preparedness/Planning/Documents/Commonwealth-Emergency-Operations-Plan-2019.pdf>. Accessed December 10, 2020.
38. Clean Indoor Air Act. Pennsylvania Department of Health. Health.pa.gov. Retrieved from: <https://www.health.pa.gov/topics/programs/CIAA/Pages/CIAA.aspx>. Accessed October 14, 2020.
39. Oil and Natural Gas Production Health Concerns. Pennsylvania Department of Health. Health.pa.gov. 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 can 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
- 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 *
- Transportation
- Walkability

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
- Child care 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

* Refers to most frequently mentioned assets

XIII. Next Steps

This state health assessment reviews a broad range of indicators of health and conditions to describe health in Pennsylvania and the factors contributing to disparate health outcomes. This report 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 report is intended to be used to foster discussion, promote ongoing and expanded data analysis, support local health improvement interventions, and inform the next Healthy Pennsylvania Partnership (HPP) State Health Improvement Plan.

The State Health Improvement Plan will use 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

B. Methods

Appendix A:

Leading Causes of Death

Table XII.1. Leading Causes of Death by Age Group, 2018

Rank V	Age Groups									
	0-4	5-9	10-14	15-19	20-24	25-44	45-54	55-64	65-74	75+
1	Perinatal conditions, 426	Accidents, 29	Cancer, 23	Accidents, 110	Accidents, 402	Accidents, 2,865	Cancer, 1,452	Cancer, 5,046	Cancer, 7,695	Heart disease, 21,987
2	Congenital malformations, 174	Cancer, 15	Accidents, 15	Suicide, 76	Drug-induced deaths, 276	Drug-induced deaths, 2,410	Heart disease, 1,277	Heart disease, 3,531	Heart disease, 5,393	Cancer, 13,180
3	Accidents, 59	Congenital malformations, 4	Congenital malformations, 8	Homicide, 75	Suicide, 152	Cancer, 531	Accidents, 1,174	Accidents, 1,102	Chronic lower respiratory diseases, 1,544	Mental and behavioral disorders, 7,469
4	Infectious and parasitic diseases, 24	Heart disease, 3	Heart disease, 6	Drug-induced deaths, 36	Homicide, 136	Suicide, 464	Drug-induced deaths, 904	Digestive system, 864	Digestive system, 982	Cerebrovascular diseases, 4,917
5	Homicide, 21	Anemias, 2	Homicide, 5	Cancer, 20	Heart disease, 27	Heart disease, 462	Digestive system, 431	Drug-induced deaths, 705	Cerebrovascular diseases, 964	Chronic lower respiratory diseases, 4,066
6	Influenza and pneumonia, 15	Genitourinary system, 2	Cerebrovascular diseases, 3	Heart disease, 10	Cancer, 22	Homicide (assault), 370	Suicide, 361	Chronic lower respiratory diseases, 664	Diabetes mellitus, 873	Alzheimer's disease, 3,843
7	Heart disease, 14	Homicide, 2	Complications of medical and surgical care, 3	Digestive system, 5	Cerebrovascular diseases, 7	Diabetes mellitus, 105	Atherosclerotic cardiovascular disease, 270	Atherosclerotic cardiovascular disease, 645	Infectious and parasitic diseases, 725	Genitourinary system, 2,814
8	Cancer, 11	Influenza and pneumonia, 2	Digestive system, 3	Infectious and parasitic diseases, 5	Congenital malformations, 7	Infectious and parasitic diseases, 94	Diabetes mellitus, 229	Diabetes mellitus, 549	Genitourinary system, 673	Digestive system, 2,268
9	Cerebrovascular diseases, 5	Chronic lower respiratory diseases, 1	Drug-induced deaths, 2	Influenza and pneumonia, 4	Infectious and parasitic diseases, 7	Atherosclerotic cardiovascular disease, 93	Cerebrovascular diseases, 171	Infectious and parasitic diseases, 501	Accidents, 683	Accidents, 2,116
10	Digestive system, 5	Diabetes mellitus, 1	Infectious and parasitic diseases, 2	Diabetes mellitus, 3	Epilepsy, 4	Cerebrovascular diseases, 78	Infectious and parasitic diseases, 172	Cerebrovascular diseases, 441	Atherosclerotic cardiovascular disease, 706	Diabetes mellitus, 1,841
All deaths:	931	79	122	348	854	6,108	6,591	15,960	23,924	79,723

Pennsylvania Death Certificate Dataset, 2018. Pennsylvania Department of Health. Enterprise Data Dissemination Informatics Exchange. Health.pa.gov. Retrieved from: <https://www.phaim1.health.pa.gov/EDD/WebForms/DeathCntySt.aspx>. Published 2018. Accessed October 9, 2020.

Appendix B: Methods

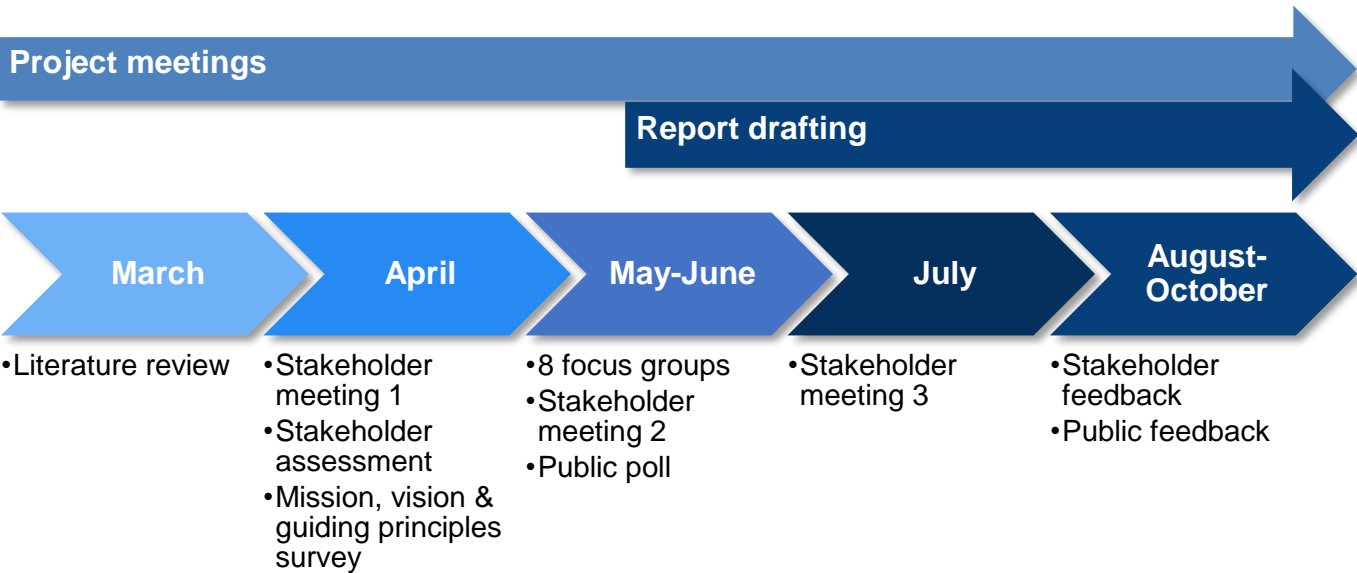
Pennsylvania State Health Assessment Process

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 Healthy Pennsylvania Partnership (HPP) to develop this State Health Assessment (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 PA 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 9 steps for conducting a health assessment, illustrated in the image below. Steps 1 through 6 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 report visuals	4/1/2020
Stakeholder assessment	Gather input on key health issues, vulnerable populations, assets & indicator selection criteria	4/6/2020
Mission, vision & guiding principles survey	Refine mission, vision & guiding principles	5/21-26/2020
8 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 8 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 Healthy People 2020³ topics and objectives.

The 12 most frequently occurring themes to appear across all reports were condensed into 9 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 8 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 meeting 1, participants reflected on and suggested refinements to the draft vision content.
4. The project team leveraged meeting participants’ suggestions to develop 2 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 2 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 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 8 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 1 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 8 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 1 (not that important; does not need to be addressed immediately) to 4 (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 general 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 2 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 and/or high in magnitude, 5) has trend data available, and 6) can be analyzed by subgroups. Scores from the 2 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/standards-and-measures-for-initial-accreditation/>. 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. Leading Health Indicators. Healthy People 2020. Updated April 2019. https://www.cdc.gov/nchs/healthy_people/hp2020/hp2020_indicators.htm. Accessed March 2020.