

Final Report

***Examination of Health and Public Health Service Delivery
in Delaware County, Pennsylvania***

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Prepared by the Johns Hopkins Bloomberg School of Public Health,
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EXECUTIVE SUMMARY

To ensure the best possible health services and practices for its residents, the Delaware County Council hired the Johns Hopkins Bloomberg School of Public Health in 2019-2020 to conduct an assessment of the delivery of health and public health services in Delaware County. This work builds on the Johns Hopkins 2010 Profile of Health and Public Health Services in Delaware County. This 2020 study includes an overview of the current health and public health infrastructure in the County; compilation and analysis of community health status indicators; evaluation of existing and projected health and public health needs of Delaware County residents; and recommendations to enhance health and public health service quality and efficiency in Delaware County.

The underlying principles at the outset of this study were two-fold: 1) explore the need for the establishment of a local governmental public health presence in Delaware County; and 2) assure conditions that are conducive to health and quality of life for all Delaware County residents. However, given leadership changes in the Delaware County Council as a result of the November 2019 election, an effort was launched in January 2020 to establish a Delaware County Health Department by 2021. Given this change, our study was adapted to align with and inform the establishment of a Delaware County Health Department.

As a result, our analysis and recommendations are framed by the core public health functions developed by the Institute of Medicine to describe public health practice¹ and the ten essential public health services² that offer local public health departments a blueprint for activities that should be provided to local communities to protect and promote the health of all residents.

Input from Delaware County Residents

Information on how well Delaware County is meeting the existing and projected health and public health needs of its residents was collected via a variety of mechanisms including a community survey, focus groups, community forums, and in-depth interviews. The community survey focused on respondents' individual health whereas the focus groups, community forums, and in-depth interviews explored population level health and public health services. While the individuals and organizations that provided input to this study have varying perspectives and backgrounds, there was widespread agreement and consensus on Delaware County's key issues and health needs. Contributors were forthcoming about their public health concerns and shared a common goal of improved health and public health for all Delaware County residents.

Community survey: A total of 1,795 surveys were completed. Survey respondents were more likely to be white, female, older, educated, homeowners, employed full-time, and have health

¹ Institute of Medicine (US) Committee for the Study of the Future of Public Health. The Future of Public Health. Washington, D.C: National Academy Press; 1988. pp. 7-8

² Centers for Disease Control and Prevention. The Public Health System & the 10 Essential Public Health Services Updated May 21, 2020. Accessed July 1, 2020 from <https://www.cdc.gov/publichealthgateway/publichealthservices/essentialhealthservices.html>

insurance, suggesting that respondents were not completely representative of the overall Delaware County population. However, as the vast majority of survey respondents (84%) reported having lived in the County for over 10 years, their input provides helpful insight from the perspective of long-term County residents.

Focus groups and community forums: Researchers facilitated four one-hour focus groups for County residents and health professionals serving the County, averaging 16-18 participants per session. Additionally, researchers partnered with Multicultural Community Family Services to host a ‘Palava Hut’³ community convening, with a diverse group of approximately 50 community members in attendance.

In-depth interviews: The JHSPH research team conducted 23 in-depth interviews with representatives from multiple sectors to obtain insight into Delaware County’s existing public health infrastructure and identify gaps.

Collectively the study outreach efforts revealed consensus from stakeholders around a number of key needs to improve public health systems and services for all Delaware County residents. First and foremost, was the need for a formal public health entity for Delaware County that offers identifiable leadership and vision for public health as well as a centralized entity to coordinate public health efforts and communications across county agencies and community-based organizations. In particular, a cohesive and strengthened system for communication of information and improved access to services was emphasized, particularly for underserved communities. Health disparities and inequities were cited as major concerns that require approaches tailored to meet the needs of targeted populations, as well as data systems to track and report outcomes at the neighborhood level. It was emphasized that to sustain such efforts the County will need access to resources and a well-trained public health workforce. In sum, study outreach findings suggested a keen interest in and support for establishing a local Delaware County entity charged with promoting health and advancing health equity for all Delaware County residents.

COVID-19 Implications

All qualitative data collection was completed prior to March 2020 when the COVID-19 outbreak began in Delaware County. It is likely that responses to questions about public health overall and specifically related to interactions with public health agencies or sources for public health information would have been different following widespread knowledge and awareness of COVID-19. Thus, it is important to note that the findings in this report represent the views of Delaware County residents and leadership in the pre-pandemic period.

Comparisons to 2010 Study Findings

When comparing current findings to results from the Johns Hopkins 2010 study, JHU researchers found that the concerns identified in 2010 are reflected in present-day needs,

³ Danso, Kwaku. Mending Broken Relations after Civil War: The ‘Palava Hut’ and the Prospects for Lasting Peace in Liberia. May 2, 2016. Accessed June 14, 2020 from <https://media.africaportal.org/documents/KAIPTC-Policy-Brief--The-Palava-Hut-in-Liberia.pdf>

suggesting these issues have not been sufficiently addressed since the last study was completed. Specifically, both studies identified a lack of coordination and communication around health and public health services (both across public health agencies and organizations as well as within individual municipalities), with no formalized system in place to provide needed support. Environmental health issues continued to be an area of concern. Additionally, residents continued to see a lack of interaction with the state health department outside of the state-run health clinic in Chester, and reported similar health care service challenges in both 2020 and 2010, including transportation, mental health services, access to affordable care, and services to underserved populations. Finally, the belief was expressed in both studies that having a Delaware County Health Department would provide the County with additional state, federal, and philanthropic funding sources for public health efforts.

Emergency Department Visit and Mortality Data for Delaware County

Emergency department (ED) usage data for 2014-2018 was obtained from the three main Delaware County health systems (Crozer Keystone, Main Line Health/Riddle Memorial, and Mercy Fitzgerald Hospitals). Between 2014 and 2018, there were over 191,000 visits annually to these three EDs, with no significant difference across years or by month or season. The 25-44 year age group had the highest proportion of visits annually (27%), followed by the 15 to 24 year age group (25%). Females averaged more visits per year than males, and 49% of ED visits were paid for via private insurance. The two most common causes of ED visits in Delaware County in this time period were injuries (29%) and alcohol/substance use disorders (26.3%).

The Delaware County Medical Examiner's Office (DCME) provided mortality data for all deaths examined and categorized by the DCME from 2009-2018. Between 2009-2018, a total of 6,749 deaths were reported to the DCME. The majority of reported deaths occurred among individuals of white race (75.4%), male sex (65.9%), and 45-64 years of age (38.7%). The most frequent manners of death were natural and accidental causes, at 40.1% and 35.0%, respectively. Overdose was the most common cause (51.4%) of accidental death across all demographics, while cardiovascular disease was the most common cause of natural deaths (70.3%). Among all DCME-reported deaths from 2009-2018, 10.9% were attributable to suicide and 5.1% to homicide. Firearm-related injury was the leading cause of homicide deaths (81.6%).

Community Health Indicators for Delaware County and Comparable Jurisdictions

To comprehensively characterize community health in Delaware County, 37 community health status indicators were selected and analyzed for Delaware County, the Commonwealth of Pennsylvania, the United States, and seven comparison counties (five in Pennsylvania, one in Maryland, and one in Connecticut). Within Pennsylvania, the five comparison counties selected based on data comparability, demographic similarity, and proximity to Delaware County include: Berks County, Chester County, Lancaster County, Montgomery County, and York County. Comparison counties from the 2010 study that were also included in the current study include Montgomery County, Pennsylvania as well as Baltimore County, Maryland and New Haven County, Connecticut.

Researchers organized the 37 indicators across 14 key public health areas that collectively provide a comprehensive profile of the health status of Delaware County that includes a focus on socioeconomic determinants of health. In selecting these indicators, researchers consulted Healthy People 2020 (HP 2020)⁴, a national tool that offers measurable 10-year targets and objectives for strategic disease prevention and health promotion.

There are a number of indicators for which the County reflects improvement over time, yet still lags behind the progress of its neighboring counties as well as the state. These include infant mortality rate, receipt of first trimester prenatal care, violent crime offenses, self-reported poor mental health, and binge drinking. The improving trend in binge drinking is a positive change from the 2010 study findings. Similarly, Delaware County has also seen an improvement in smoking prevalence compared to the previous study findings.

Worsening trends for Delaware County center around the areas of maternal and child health, chronic disease, mental and sexual health, and injury and violence. Indicators of particular concern for the County include low birth weight babies, asthma, cardiovascular disease, depression, suicide, chlamydia and gonorrhea infections, drug-induced as well as firearm-related deaths, and prevalence of adults reporting fair or poor health. Most of these were also identified as worsening trends of concern in the 2010 study as well, with the exception of cardiovascular disease and suicide, which had both previously shown improving trends. Depression, gonorrhea infections, and firearm-related deaths are new indicators that were not examined in the 2010 study.

It is important to address a wide variety of health outcomes for all Delaware County residents in order to promote optimal health, well-being, and health equity. Though there are ongoing public health efforts and initiatives throughout the County, there is a need for more granular and accessible data at the municipal level in order to more accurately assess health within specific communities, particularly groups that may be more disproportionately impacted and subjected to increased burden of disease. Additionally, a collaborative and cross-sectoral approach is necessary to bring together key stakeholders in a unified effort to advance the health and well-being of all Delaware County community members.

Recommendations

This assessment provides Delaware County, Pennsylvania with the opportunity to better understand the health and public health needs of all County residents. The following recommendations are offered in the context of establishing and sustaining a **local governmental public health presence in Delaware County that serves as the** voice for public health and the local entity responsible for coordinating the provision of the essential public health services for all Delaware County residents.

1. Monitoring and Evaluation

⁴ Office of Disease Prevention and Health Promotion. Healthy People 2020. Updated July 6, 2020. Accessed July 6, 2020 from <https://www.healthypeople.gov/>

Data should be regularly made available to the public to monitor and evaluate the health of all Delaware County residents and direct actions to protect and promote health and advance health equity.

There needs to be sufficient data at both the county and municipal levels to enable the analysis and tracking of health disparities and emerging issues within and across specific populations and geographical areas.

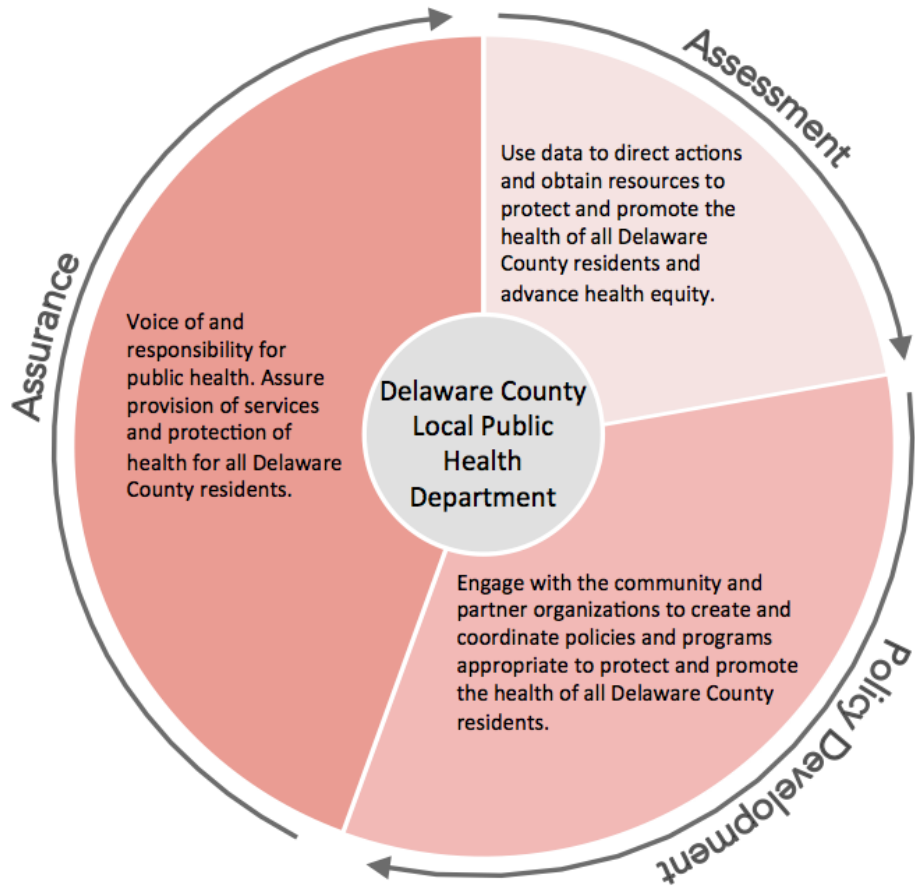
2. Coordination, Communication, and Collaboration

Though the County has various ongoing public health efforts in place, study findings indicate the general community is often unaware of these initiatives. The local health department should be the centralized entity tasked with coordinating and communicating public health information and delivery of the essential public health services available to all County residents.

The local health department should build on the work of existing organizations and agencies across all sectors to develop collaborative and coordinated public health service structures, with input from the public. All residents should have access to available public health services and resources, with tailored, culturally competent information available to underserved and minority populations. To assure the success of these efforts, evaluation mechanisms should be integrated into the planning and implementation processes.

3. Accountability, Resources, and Reporting

To ensure that all members of the Delaware County community can access resources and achieve progress toward improved health outcomes, public health needs to be a priority. This requires a clear sustainable vision and leadership for public health with built-in mechanisms for oversight and accountability. Support and training in public health skills should be integrated to assure the capacity of the County's public health workforce to respond to residents' needs and seek available resources. The local public health department should have the responsibility and authority to develop, track, and report regularly on specific data and performance measures to County officials and the public, to help guide obtainment and targeting of resources, maintain and improve the quality and effectiveness of the County's health and public health service delivery, and advance health equity for all Delaware County residents.



Background

Project Origins

To ensure the best possible health services and practices for its residents, the Delaware County Council hired the Johns Hopkins Bloomberg School of Public Health to conduct an assessment of the delivery of health and public health services in Delaware County.

The Johns Hopkins research team conducted the assessment from July 2019 to June 2020. This work builds on the Johns Hopkins 2010 Profile of Health and Public Health Services in Delaware County. The 2020 work presented here includes an overview of the current health and public health infrastructure in the County; compilation and analysis of community health status indicators; evaluation of existing and projected health and public health needs of Delaware County residents; and recommendations to enhance health and public health service quality and efficiency in Delaware County.

Contextual Background

The study timeline of July 10, 2019 – July 10, 2020 overlapped with two events significant to the implications of this study in Delaware County: Plans to establish a Delaware County Health Department and the global COVID-19 pandemic.

Plans to Establish Delaware County Health Department

The Delaware County Council November 2019 election resulted in a change of leadership. Of particular relevance to this study, the new County Council created a public health working group to assess the County's current relationships with public health agencies, gather data on health indices, and examine the plausibility and need to establish a formalized county health department⁵. As of June 2020, Delaware County has initiated plans to move forward with establishing its own public health department, with the goal for the county health department to be operational by the end of 2021. As a result of these developments, the study findings have been framed around the context of the establishment of a Delaware County local health department.

COVID-19 Pandemic

The COVID-19 outbreak was declared a global pandemic in March 2020. All qualitative data collection (survey, focus groups, in-depth interviews, and the Palava Hut convening) was completed prior to the outbreak. It is very likely that responses to questions related to interactions with public health agencies or sources for public health information would have been quite different if they had been asked following widespread knowledge and awareness of COVID19. Thus, based on the timing of the data collection, findings in this report represent the views of Delaware County residents and leadership in the pre-pandemic period.

⁵ Delco Transition. Public Health. Accessed June 14, 2020 from <https://delcotransition.org/public-health>

Delaware County leaders had planned to convene a public hearing in Delaware County in June for the JHSPH researchers to present their findings and elicit public feedback and comments to further inform the final recommendations to the County. However, due to the pandemic, the public hearing was not convened. The report was shared with the County Council and the public in July 2020.

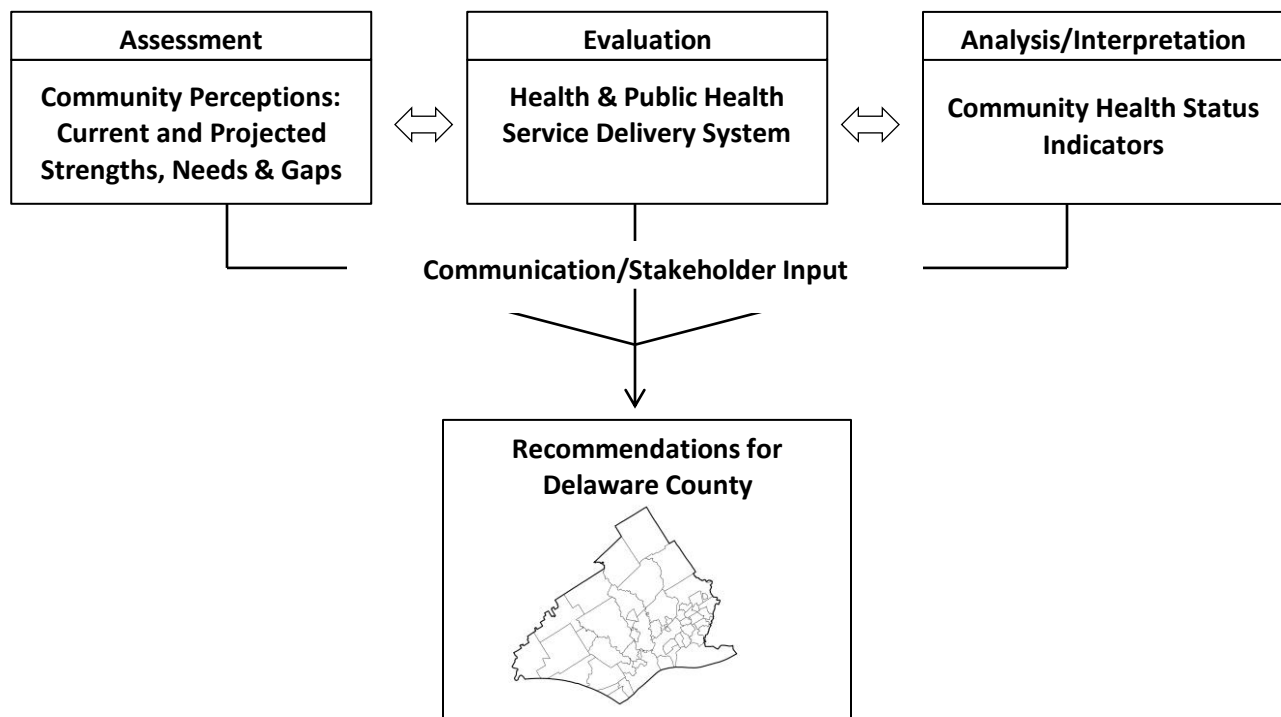
Approach and Methods

The JHSPH research team developed this *Examination of Health and Public Health Service Delivery in Delaware County* through a multi-disciplinary approach outlined in Figure 1. The study proposal was reviewed by the Johns Hopkins Institutional Review Board (IRB) and classified as ‘non-human subjects research’.

Specific project aims included:

1. Inventory existing health and public health service structure;
2. Identify and describe the main health and public health needs in the county;
3. Obtain and examine relevant secondary data;
4. Compile community health status indicators for Delaware County and a cross section of comparable jurisdictions; and
5. Develop recommendations to enhance health and public health service quality and efficiency in Delaware County.

Figure 1 – Examination of Health and Public Health Service Delivery in Delaware County



Study Framework:

The Core Public Health Functions & 10 Essential Public Health Services

The study aimed to inform the establishment of a local governmental public health presence in Delaware County and assure conditions that are conducive to health and quality of life for all Delaware County residents. As such, the study and resulting recommendations were framed around the core public health functions⁶ and the ten essential public health services⁷, a national model for local health agencies to protect and promote the health of communities.

3 core public health functions:

- Assessment—every public health agency [should] regularly and systematically collect, assemble, analyze and make available information on the community, including statistics on health status, community health needs, and epidemiologic and other studies of health problems.

Policy Development—every public health agency [should] exercise its responsibility to serve the public interest in the development of comprehensive public health policies by promoting the use of the scientific knowledge base in decision-making about public health and by leading in developing public health policy.

- Assurance—every public health agency [should] assure their constituents that services necessary to achieve agreed upon goals are provided, either by encouraging actions by other entities (public or private sector), requiring such action through regulation, or providing services directly.

The core functions were operationalized into the 10 essential public health services as a blueprint for activities for local public health agencies to undertake to protect and promote the health of their communities.

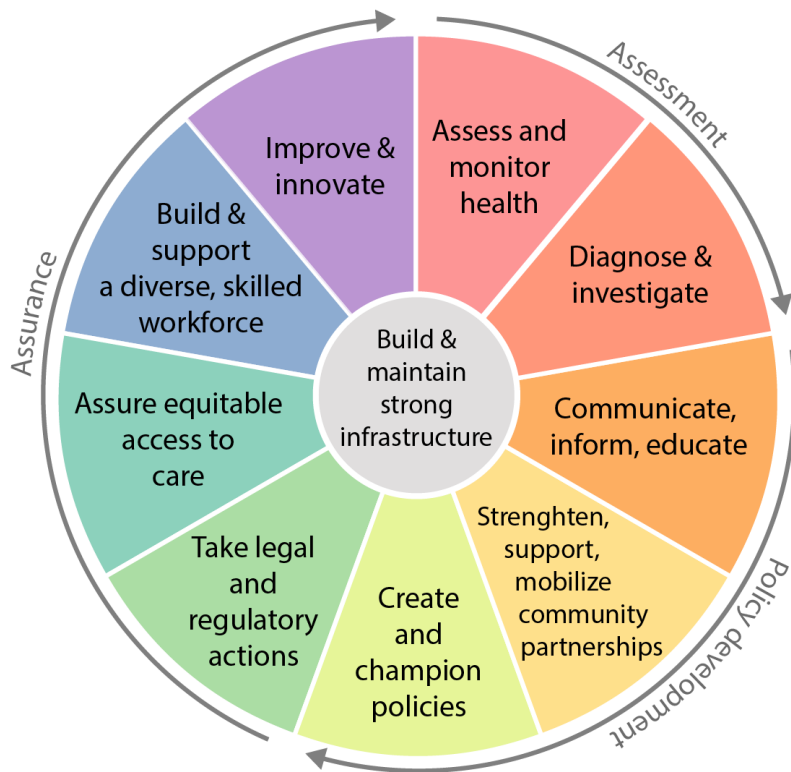
⁶ Institute of Medicine (US) Committee for the Study of the Future of Public Health. The Future of Public Health. Washington, D.C: National Academy Press; 1988. pp. 7-8

⁷ Centers for Disease Control and Prevention. The Public Health System & the 10 Essential Public Health Services Updated May 21, 2020. Accessed July 1, 2020 from <https://www.cdc.gov/publichealthgateway/publichealthservices/essentialhealthservices.html>

10 Essential Public Health Services*	
1.	Assess and monitor health status, factors that influence health, needs, and assets to understand and improve population health and wellbeing.
2.	Diagnose, investigate, and address health problems and hazards affecting the population, including the identification of root causes.
3.	Communicate effectively to inform and educate people about health, including factors that influence it and how to improve it.
4.	Strengthen, support, and mobilize the community and partnerships to improve population health.
5.	Create and champion policies and plans that improve and protect the public's health, remove obstacles to optimal health, and support the resilience of the entire population.
6.	Employ legal and regulatory actions to protect and ensure the public's health and safety.
7.	Assure an effective system that enables equitable access, by all people, to the individual services and care needed to be healthy.
8.	Build and support a diverse and skilled public health workforce.
9.	Improve and innovate public health functions through ongoing evaluation, research, and continuous quality improvement.
10.	Build and maintain a strong organizational infrastructure to support public health.

*Proposed revised 10 Essential Public Health Services as of March 2020. Final version to be released in Fall 2020

Figure 2: Study Framework - Core Functions and Essential Public Health Services



Methods

Aim 1: Inventory existing health and public health service structure.

An inventory of the existing service structure was completed via a multi-step approach. First, a literature review of relevant materials pertaining to the county's financing, organization, and capacity, including Pennsylvania laws, budget reports, and governmental infrastructure reports was conducted. Second, a legislative review was carried out to identify existing and planned health and public health legislation at the county level. Finally, information gleaned from the in-depth interviews conducted as part of Aim 2 provided further insight into the inventory of the current organization and structure of the county's health and public health service system.

Aim 2: Identify and describe the main health and public health strengths and needs in the county.

A multi-phase information gathering process was undertaken to identify key health and public health strengths and needs, as well as to evaluate how well the current system structure is meeting the existing and projected needs of Delaware County residents.

Public health community survey: The survey was developed based on prior Delaware County health assessments and with input from Delaware County leadership and key stakeholders. As community surveys are subject to limitations of self-reporting, low response rates, and inadequate representation of hard-to-reach populations, the goal of this survey effort was to provide a general sense of Delaware County residents' health and public health views. The 24-question online survey (Appendix A), offered via the Qualtrics XM Survey Software system, included a mix of multiple choice and open text questions on respondents' health needs, concerns, and services received, in addition to basic demographic information.

The survey was open for anonymous response from Delaware County residents for a three-and-a-half-month period spanning from mid-October 2019 to the end of January 2020. Outreach was conducted to a broad spectrum of organizations and individuals to encourage survey participation within their respective networks, including County public libraries, community and senior centers and facilities, members of the County's various coalitions and task forces, municipal offices and leaders including chiefs of police, educational institutions, major transit centers across the County, community-based organizations and agencies, faith-based entities, and health providers and associates across the County's three main health systems. The link to the survey was posted on the County website and paper copies were made available at 21 public libraries and 8 senior centers across the County. Residents who wished to complete a non-English version of the survey had the option to do so via live video interpretation services coordinated through the Delaware County Office of Behavioral Health. Additionally, the Delaware County Offices of Public Relations, Services for the Aging, and Intercommunity Health Coordination further publicized the availability of the survey and helped coordinate the distribution and collection of the paper copies.

The JHSPH research team received all electronic survey responses, completed data entry for all paper survey submissions, and conducted data analysis. JHSPH researchers had sole access to

the survey database, and all responses are reported in a way that ensures confidentiality is maintained.

Focus groups and community forums: Researchers facilitated four one-hour focus groups over the span of November 2019 through January 2020 during which focus group participants shared input on how they believe existing programs and policies are meeting the County's health-related needs. Eligibility for three of the focus groups encompassed all Delaware County residents aged 18 and older, in addition to individuals whose organizations directly serve the Delaware County community. The fourth focus group was specific to health professionals living in or serving the County. Initial plans included a fifth focus group specific to municipal leaders and managers, however due to low enrollment this was cancelled and any interested individuals were given the option to either attend a different focus group or participate in a brief individual interview with a member of the JHSPH research team. Focus group locations included Media, Folsom (Ridley Township), and Upper Darby, and were held at various times of day to accommodate participant work and activity schedules. Delaware County leadership provided guidance and assistance on focus group locations and day-of logistics in addition to outreach and information dissemination. Focus group outreach efforts were conducted simultaneously with survey outreach to all sources and locations previously mentioned.

The JHSPH research team oversaw the registration process for all focus groups, and all interested participants underwent a brief screening to confirm eligibility (e.g. Delaware County resident over 18 years of age) prior to enrollment in the session. Enrollment for each focus group was limited to 25 participants to keep the size manageable within the time limit and ensure all participants would have an equal opportunity to engage. Each focus group averaged 20-25 enrollees, and reminders were sent ahead of time, however given the inherent limitations of focus group recruitment and turnout, the final count averaged 16-18 participants per focus group. Refreshments were provided to all focus group participants free-of-charge, and all individuals who stayed for the duration of the focus group received a \$10 grocery gift card for their time. All focus groups were facilitated by a JHSPH researcher and utilized standardized open-ended prompts to ensure consistency across facilitators and encourage active discussion. Audio recordings of all sessions were made for data analysis purposes. To ensure participants felt comfortable sharing their opinions, researchers did not permit Delaware County leadership to sit in on any sessions; however, County leadership did provide a brief welcome and introduction to participants at three of the sessions and then left before discussions began.

Each focus group included an overview of the study by the researchers followed by semi-structured free-flowing discussion around what is working well in Delaware County, areas for improvement, and recommendations for how to meet identified needs. In addition, focus group participants were asked to share suggestions of additional outreach contacts that may be interested in providing input into the study.

Based on suggestions from focus group participants, researchers partnered with County-based organizations to coordinate two additional forums to obtain further community input on individual and community health needs. The first was an open discussion forum hosted in

partnership with the Crozer-Keystone Health System at the Upland Crozer-Chester Medical Center in January 2020. The objective of this session was to provide a convenient on-site opportunity for staff and providers to share input. This was particularly relevant given that Crozer-Chester employs a large subset of individuals from its surrounding communities, several of which have been primarily identified as underserved populations with poorer health outcomes. Unfortunately, no staff or providers attended the session, possibly due to conflicts with schedules or insufficient information about the session and the study.

The second forum was conducted by Multicultural Community Family Services (MCFS) in collaboration with the JHSPH research team in response to concerns regarding the need for more input from minority and underserved communities in Delaware County. MCFS hosted a community convening in February 2020 at MCFS's main building in Upper Darby. The 2-hour convening was structured as a 'Palava Hut'⁸ conversation, a concept and approach indigenous to Liberia centered on bringing together community members from all backgrounds and cultures into a safe space to promote dialogue and discussion about their health and public health needs. MCFS led outreach efforts via their community network contacts and social media, and guided the JHSPH researchers in the creation of a culturally competent facilitation guide. Given the extensive experience of MCFS staff in utilizing the 'Palava Hut' approach, MCFS staff facilitated this session, and invited the JHSPH research team to participate. Approximately 50 community members attended this session, with representation from a wide range of underserved and ethnic minority communities. The event was also recorded and broadcast live on Facebook⁹ by The Liberian Radio and Television Network. Attendees were not compensated for their participation, but rather at the request of MCFS, culturally diverse refreshments were available to all attendees. Researchers did not audio record the 'Palava Hut' convening, but took written notes on the issues discussed.

In-depth interviews: The JHSPH research team conducted 23 in-depth interviews in January and February 2020 with Delaware County leaders and individuals from multiple sectors. The aim of the interviews was to obtain insight into the ability of the existing health and public health service structure to meet the County's current and projected needs and identify gaps in existing services. Interviews were conducted in-person when possible, and otherwise completed by phone. Delaware County leadership provided guidance and input on the interview question guide and interviewee invitation list, with additional interviewees identified via focus group feedback. Additionally, interviews included 4 representatives who had initially registered for the municipal leaders and managers focus group; however, due to low enrollment the focus group was cancelled and registrants were interviewed instead.

Researchers utilized the interview guide to ensure standardization across interviewers. Questions covered public health service and leadership structure within the County as well as various topics pertaining to the interviewee's affiliated organization, including services and

⁸ Danso, Kwaku. Mending Broken Relations after Civil War: The 'Palava Hut' and the Prospects for Lasting Peace in Liberia. May 2, 2016. Accessed June 14, 2020 from <https://media.africaportal.org/documents/KAIPTC-Policy-Brief--The-Palava-Hut-in-Liberia.pdf>

⁹ Public Health Conversation at the Palava Hut. Facebook. Uploaded by The Liberian Radio and Television Network. February 27, 2020. https://www.facebook.com/watch/live/?v=619833381921950&ref=watch_permalink

reach, collaborative partnerships, strengths and weaknesses, and organizational capacity to provide new services or improve existing ones. All interviews were audio-recorded for analysis purposes, and culminated with the opportunity for the interviewee to share any additional comments or thoughts with the interviewer. Given the numerous groups, agencies, and organizations addressing health and public health in Delaware County, the interviewee list is by no means comprehensive, but does reflect a majority of the different sectors serving Delaware County. Time, resource, and scheduling constraints further limited the number of interviews that investigators were able to complete.

Researchers conducted interviews with representatives from the following groups:

- Delaware County Chamber of Commerce
- Delaware County Emergency Services Training Center
- Delaware County Intermediate Unit
- Delaware County Medical Society
- Delaware County Office of Services for the Aging
- Delaware County Police Chiefs Association
- Delaware County State Health Center / Pennsylvania Department of Health
- Foundation for Delaware County
- Crozer-Keystone Health System
- Main Line Health System - Riddle Hospital
- Trinity Health Mid-Atlantic – Mercy Fitzgerald Hospital
- Boys and Girls Club of Chester
- Community Action Agency of Delaware County
- Community YMCA of Eastern Delaware County
- Maternity Care Coalition
- Multicultural Community Family Services
- Reverend (representing the faith-based community)
- Senior Community Services
- Widener University
- Haverford Township
- Springfield Township
- Yeadon Borough

All focus group and in-depth interview recordings were transcribed using Otter.ai. JHSPH researchers have sole access to the recordings and transcriptions, and all findings are reported anonymously or in aggregate to maintain confidentiality, as per Johns Hopkins IRB guidelines.

Data from the focus groups, Palava Hut convening, and in-depth interviews were analyzed using grounded theory and thematic analysis techniques. Emerging themes from the data were identified during initial read-through of the transcripts, with sub-themes identified during subsequent transcript readings. All themes and sub-themes were triangulated with in-person observations and notes collected during the sessions by a JHSPH research team member.

Aim 3: Obtain and examine relevant secondary data to provide an overview of health in Delaware County.

Data for this study was obtained from direct data requests, publicly available data from national and state-level surveys, and reviews of key summary documents and reports. Mortality data spanning 2009 through 2018 was provided by the Delaware County Office of the Medical Examiner. Hospitalization and emergency department visits data were provided from the three main health systems in the County - Crozer Keystone, Main Line Health/Riddle Memorial and Mercy Fitzgerald Hospitals. JHSPH researchers also gathered and reviewed publicly available secondary data and reports from state and federal agencies and organizations including the U.S. Census, Centers for Disease Control and Prevention, Pennsylvania Department of Health, and other sources. In addition, relevant health-related reports and regulatory documents from Delaware County agencies, community groups, partner agencies, and other parties were also reviewed. All study data is housed within a secure drive within the Johns Hopkins University data system.

Aim 4: Compile community health status indicators for Delaware County and comparable jurisdictions.

Community health status indicators were compiled from available data for key public health measures including communicable and chronic disease and mortality rates, healthcare access, and environmental health risks. Building on the Healthy People 2020 (HP 2020) Leading Health Indicators¹⁰, 37 indicators were selected to provide an overview and profile of Delaware County's health status, including topics of concern such as access to healthcare and social determinants of health such as income, education, and employment, which are known to contribute to health disparities and disproportionately affect vulnerable communities. For the purpose of this report, indicators were categorized into 14 overarching topics based on HP 2020's 12 Leading Health Indicator topics¹¹. JHSPH researchers selected indicators that included health outcomes measures as well as health risk factors with effective preventive interventions.

To determine how Delaware County outcomes correspond with comparable jurisdictions, a total of seven comparison counties (five in PA, two out of state) were selected through an analysis of population demographics, racial diversity, and economic variables, with an emphasis on comparable counties located within Pennsylvania as well as along the Eastern Seaboard. Delaware County leadership provided guidance in the selection of comparison counties. The comparison counties for the current study include two comparison counties from the 2010 Profile of Delaware County (Baltimore County, Maryland and New Haven County, Connecticut). For additional context, the Delaware County outcomes were also compared with the state of

¹⁰ Office of Disease Prevention and Health Promotion. Healthy People 2020 - Leading Health Indicators. Updated July 6, 2020. Accessed June 5, 2020 from <https://www.healthypeople.gov/2020/Leading-Health-Indicators>

¹¹ Office of Disease Prevention and Health Promotion. Healthy People 2020 – 2020 LHI Topics. Updated July 6, 2020. Accessed June 5, 2020 from <https://www.healthypeople.gov/2020/leading-health-indicators/2020-LHI-Topics>

PA, as well as the nation as a whole. Trend analysis was conducted to examine changes in Delaware County health status and outcomes over time.

To ensure that priority health and public health issues were not eliminated due to a lack of data or possible implication of findings, JHSPH researchers selected all comparison indicators prior to considering data availability and potential implications of findings. Any identified data gaps and inconsistencies are noted throughout the report.

Aim 5: Develop recommendations to enhance health and public health service quality and efficiency in Delaware County.

Data and findings from Aims 1 through 4 were analyzed to identify any existing gaps between available services and public health needs, particularly those reported in the survey, focus groups, and interviews (Aim 2) and as observed from assessment of the compiled community health indicators (Aim 4). These analyses were used to inform the offered recommendations to enhance Delaware County's health and public health service delivery.

Results

The results from this study are presented by study aim and aligned with current plans to establish a local governmental public health presence in Delaware County to assure conditions that are conducive to the health and wellbeing of all County residents. Specifically, results are framed within the context of the operationalization of the three core public health functions¹² and 10 essential public health services¹³ in Delaware County:

ASSESSMENT — Ability to use data effectively to direct actions to protect and promote the health of all Delaware County residents and advance health equity;

POLICY DEVELOPMENT — Use of scientific knowledge and engagement with the community in developing equitable public health policies and programs appropriate to the needs of Delaware County residents; and,

ASSURANCE — Ensure provision of services, protection of health, and advancement of health equity for all Delaware County residents.

Aim 1: Inventory of existing health and public health service structure

Pennsylvania Public Health Structure

Established by Pennsylvania's legislature in 1905, the Pennsylvania State Department of Health (PDOH) aims to promote healthy behaviors, prevent injury and disease, and assure the safe delivery of quality health care for all Pennsylvanians. The Bureau of Community Health Systems, PDOH's public health implementation arm, supports PA's public health initiatives and operates a network of state health centers throughout the Commonwealth across six health districts, including one in Delaware County. Health centers provide a variety of public health services, such as community health assessment, quality assurance, and outreach programs¹⁴.

The Pennsylvania Local Health Administration Law was enacted in 1951 (Act 315)¹⁵, designed to improve local health administration by authorizing counties to establish departments of health. There are currently six county health departments in Pennsylvania: Allegheny, Bucks, Chester,

¹² Institute of Medicine (US) Committee for the Study of the Future of Public Health. The Future of Public Health. Washington, D.C: National Academy Press; 1988. pp. 7-8

¹³ Centers for Disease Control and Prevention. The Public Health System & the 10 Essential Public Health Services Updated May 21, 2020. Accessed July 1, 2020 from <https://www.cdc.gov/publichealthgateway/publichealthservices/essentialhealthservices.html>

¹⁴ Pennsylvania Department of Health. Bureaus and Offices. Accessed June 10, 2020 from https://www.health.pa.gov/About/Pages/Bureaus_and_Offices.aspx

¹⁵ Pennsylvania Department of Health. Local Health Administration Law Act 315, August 24, 1951 P.L. 1304. Accessed June 10, 2020 from https://www.health.pa.gov/topics/Documents/Administrative/County_Muni_HD_ACT315.pdf

Erie, Montgomery, and Philadelphia, and four municipal departments: Allentown, Bethlehem, Wilkes-Barre, and York City.

Delaware County Public Health Structure

Delaware County is located in the southeastern corner of PA, west of Philadelphia bordering Delaware State. It is currently the fifth most populated county within the state, and consists of 49 municipalities spread over 184 square miles, including the City of Chester, 27 boroughs, and 21 townships. Delaware County’s population is generally younger, more racially diverse, wealthier, and more educated when compared to PA overall, as outlined in Table 1 and in the socio-demographics section of the Delaware County community health status profiles.

Table 1. Delaware County and Pennsylvania Demographics

Area Characteristics	Delaware County	Pennsylvania
Total Population, 2018	565,000	12,800,000
Population change (since 2010)	+1.03%	+0.86%
Population under 18 (%)	22%	21%
Population over 65 (%)	16%	18%
Persons per square mile	3,820	278
White (%)	66.2%	75.9%
Black (%)	21.5%	10.6%
Hispanic/Latino (%)	3.9%	7.6%
Asian (%)	5.5%	3.5%
Living below poverty level (%)	10.4%	13.1%
Median household income (2018)	\$72,045	\$60,905
High school graduate (%)	29.8%	34.6%
Bachelor’s degree or higher (%)	38.6%	31.9%
Non-English language spoken at home, adults 18+ (%)	13%	12%

Source: Census Bureau ACS 2018

Delaware County is the only county in the Philadelphia metropolitan area without a designated county health department. Delaware County health affairs are regulated at the municipal level via local health officers and boards of health. 41 of the 49 municipalities in Delaware County currently have a local health officer, though nine of these health officers serve multiple jurisdictions. These health entities operate exclusively under local municipality regulations and ordinances and vary widely with regards to structure, funding, and scope of services, with restaurant inspection being the most common service offered.

Public Health Services

Without its own public health department, Delaware County relies on the Department of Intercommunity Health Coordination (ICH) as its prominent public health entity¹⁶. Established in 1975, ICH partners with municipal boards of health, public health providers, emergency services, and the general community to provide information, resources, and referrals on public health issues. Other departments within the Delaware County government are tasked to address specific public health issues such as Behavioral Health, Child & Youth Services, and Emergency Services. As a result of the initial 2009 health study, Delaware County took several steps in order to implement the recommended changes¹⁷, including the appointment of Dr. George Avetian as the Senior Medical Advisor for Delaware County in 2011 to advise the County on medical endeavors, improving ICH's website, establishing public meetings with the County's Health Advisory Board, and partnering with the Delaware County Intermediate Unit on emergency preparedness as well as vaccine and information dissemination.

Healthcare Services

Delaware County has seven free and low-cost local health clinics offering a wide variety of services, including maternal and child health, pediatric, primary, and dental care. These include two clinics run by ChesPenn Health Services in Chester and Upper Darby as well as the Delaware County State Health Center in Chester and the Mercy Fitzgerald Hospital Ambulatory Clinic in Darby. There are six hospitals within the County, spread across three main healthcare systems. Four hospitals operate under the Crozer-Keystone Health System: Crozer-Chester Medical Center in Upland, Delaware County Memorial Hospital in Drexel Hill, Springfield Hospital in Springfield, and Taylor Hospital in Ridley Park. Trinity Health Mid-Atlantic runs the Mercy Fitzgerald Hospital in Darby, while Main Line Health runs Riddle Hospital in Media. The largest is the Crozer-Chester Medical Center, a 424-bed tertiary care hospital that hosts many of the County's top health resources, including a Level 2 trauma center and burn unit¹⁸. Additionally, several hospitals located outside Delaware County's geographic boundaries also serve County residents, including Bryn Mawr Hospital in Bryn Mawr, Lankenau Medical Center in Wynnewood, and Paoli Hospital in Paoli. There are 40 nursing homes and rehabilitation facilities in the County. The Health Resources and Services Administration does not currently identify Delaware County as a Medically Underserved Area¹⁹.

For decades, Crozer-Keystone, originally a non-profit entity, was the de facto leader in providing healthcare access to Delaware County's socioeconomically disadvantaged and underserved populations. In 2016, the Crozer-Keystone Health System was acquired by for-profit Prospect

¹⁶ Delaware County, Pennsylvania. Intercommunity Health Coordination. Accessed June 14, 2020 from <https://www.delcopa.gov/ich/index.html>

¹⁷ Schaefer, Mari. Delaware County taking steps to coordinate public-health efforts. *The Philadelphia Inquirer*. March 11, 2011. Accessed June 14, 2020 from https://www.inquirer.com/philly/news/local/20110311_Delaware_County_taking_steps_to_coordinate_public-health_efforts.html

¹⁸ Crozer-Keystone Health System. Crozer-Chester Medical Center. Accessed June 14, 2020 from <https://www.crozerkeystone.org/crozer>

¹⁹ Health Resources & Services Administration. MUA Find – data.HRSA.gov. Accessed June 14, 2020 from <https://data.hrsa.gov/tools/shortage-area/mua-find>

Medical Holdings Inc. Non-profit assets were set aside in an independent charity, the Crozer-Keystone Community Foundation (CKCF), itself a merger of the Crozer-Chester Foundation and Delaware County Memorial Foundation. CKCF, now known as the Foundation for Delaware County, is currently the largest community foundation in the County, and oversees several major programs for women, children, and teens (e.g. Healthy Start, Nurse Family Partnership, etc.) in addition to providing grant support to strengthen programming among local non-profits²⁰. The Foundation for Delaware County is working closely with the County Council in its efforts to establish a Delaware County Public Health Department.

Substance Use and Mental Health Services

The Delaware County Office of Behavioral Health's Division of Drug and Alcohol is the primary administrative body overseeing the delivery of treatment, rehabilitation, and prevention services for drug and alcohol abuse in Delaware County. Currently, it partners with three inpatient-based treatment sites and four prevention services²¹, including Crozer-Keystone's Opioid Treatment Center of Excellence, Delaware County's largest psychiatric and full-service case management center established in January 2017 to serve those suffering from opioid use disorders. Funding for the treatment center's programs and services comes from a combination of County general funds and federal and state support.

The Delaware County Office of Behavioral Health's Division of Mental Health contracts with various agencies to ensure provision of appropriate services, resources, and referrals for mental health recovery, self-determination, and resilience. These agencies include crisis centers and resources such as the Delaware County Crisis Connections Team²², a mobile team that offers 24/7 crisis assessment, intervention, and referrals, and Crozer-Keystone's 24-hour Crisis Center. Based at Crozer-Keystone's Chester campus, the Crisis Center provides around-the-clock inpatient and outpatient services for individuals experiencing behavioral disturbances such as suicidal and homicidal ideations, psychosis, depression, and anxiety²³. The Center is currently the only operating crisis center in Delaware County, after Mercy Fitzgerald's crisis center closed in October 2019 for failure to meet hospital guidelines²⁴. Delaware County residents can also seek mental health information and services from various non-profit and for-profit organizations that serve Southeastern Pennsylvania, including the National Alliance on Mental Illness (NAMI) and Magellan Behavioral Health of PA, Inc.

²⁰ The Foundation for Delaware County. About Us - Mission | History. Accessed June 10, 2020 from <https://delcofoundation.org/about-us/who-we-are/largest-delaware-county-community-foundation/>

²¹ Delaware County Department of Human Services. Office of Behavioral Health Division of Drug & Alcohol. Accessed June 10, 2020 from <http://www.delcohsa.org/drugalcohol.html>

²² Delaware County, Pennsylvania. Delaware County Crisis Connections Team. Accessed June 14, 2020 from <https://www.delcopa.gov/ich/resources/dcct.html>

²³ Crozer-Keystone Health System. Crisis Center at Crozer-Chester Medical Center. Accessed June 14, 2020 from <https://www.crozerkeystone.org/locations/practices/c/crisis-center-at-crozer-chester-medical-center/>

²⁴ Mental Health Partnerships. Recent Family Tragedy Highlights Mental Health System Flaws. Accessed June 14, 2020 from <https://www.mentalhealthpartnerships.org/news-events/2019/11/22/recent-family-tragedy-highlights-mental-health-system-flaws>

Emergency Preparedness and Response

Delaware County's Department of Emergency Services is responsible for provision of countywide emergency response. The Department is divided into two sectors: 1) Emergency Communications, which handles the County's 911 system and dispatchment of its police, fire, and ambulance services, and 2) Emergency Management, which is responsible for rapid responses to emergent situations and assists local municipalities in emergency planning preparedness²⁵. Delaware County also operates one of sixteen Regional Emergency Medical Services (EMS) Offices in Pennsylvania via a contract with the Pennsylvania Department of Health, through which it conducts regulatory duties and certifications to support EMS services and personnel across the County²⁶. The Delaware County Council also maintains the "Delco Alert" system, a mass notification system via Everbridge that notifies residents by phone or email regarding countywide public safety concerns such as severe storms, Amber alerts, or public health threats²⁷.

Environmental Services

The Delaware County Conservation District²⁸ is the County's primary environmental regulatory body, though it functions as a subdivision of the Pennsylvania Department of Agriculture. It is primarily responsible for program implementation, evaluation of environmental issues, and advocacy pertaining to natural resource conservation. Wastewater treatment for the majority of Delaware County residents was previously managed by the Delaware County Water Quality Control Authority (DELCORA), a municipal wastewater system that in 2019 entered into an asset purchase agreement with Aqua America Inc., however as of June 2020 the Delaware County Council voted to terminate DELCORA and transfer all responsibility back to the County²⁹.

Incineration is currently the waste management modality of choice for Delaware County. Although incineration reduces the total mass of disposed waste it negatively impacts air pollution. The American Lung Association in its 2019 "State of the Air" report gave Delaware County a passing grade overall, with an F for ozone pollution and a B for particle pollution.

The County has a strong industrial presence, particularly along its Southeastern corridor. There are 16 Superfund abandoned waste sites across Delaware County, with three currently on the Environmental Protection Agency's National Priorities List (NPL) to be cleaned: Metro Container Corporation, Lower Darby Creek Area, and Havertown PCP³⁰. The East Tenth Street site has also

²⁵ Delaware County, Pennsylvania. Emergency Services. Accessed June 10, 2020 from <https://www.delcopa.gov/departments/emergencyservices.html>

²⁶ Delaware County, Pennsylvania. Regional Emergency Medical Services. Accessed June 5, 2020 from <https://www.delcopa.gov/ems/index.html>

²⁷ Delaware County, Pennsylvania. Delco Alert. Accessed June 5, 2020 from <https://www.delcopa.gov/delcoalert/delcoalert.html>

²⁸ Delaware County Conservation District. Delaware County Conservation District. Accessed June 5, 2020 from <https://www.delcocd.org/>

²⁹ Delaware County, Pennsylvania. Delaware County Council Terminates DELCORA. Accessed June 10, 2020 from <https://www.delcopa.gov/publicrelations/releases/2020/delcoraterminated2.html>

³⁰ United States Environmental Protection Agency. Superfund - National Priorities List (NPL) Sites - by State. Accessed June 14, 2020 from <https://www.epa.gov/superfund/national-priorities-list-npl-sites-state>

been proposed for addition to the NPL. Three sites in Delaware County have been successfully cleaned and deleted from the NPL: Austin Avenue Radiation Site, Lansdowne Radiation Site, and Wade (ABM).

Aim 2: Identify key health and public health strengths and needs

A public health community survey, focus groups, community forums, and interviews were conducted to identify Delaware County key health and public health strengths and needs.

The public health community survey focused on individual health and thereby reflects community members' individualized perspectives and experiences. The focus groups, community forums, and in-depth interviews explored population level health and public health services.

Public Health Community Survey Findings

A total of 1,795 surveys were completed. Of these, 1,534 (84.5%) were completed online, and an additional 261 (14.5%) were completed in paper form. Survey inclusion criteria (Table 2) included being a current resident of Delaware County (1,747, 97%); 18 years of age or older (1,787, 99%); and providing consent to participate in the survey (1,736, 97%). A total of 1,736 surveys met the three criteria and are included in this survey analysis.

Table 2: Eligibility for Survey Participation

	Number	Percent
Delaware County Resident	1,747	97%
Age 18+	1,787	99%
Agree to participate	1,736	97%

Source: JHSPH Public Health Community Survey

Demographic Characteristics

The vast majority of survey respondents reported having lived in Delaware County for 10 years or more (1,466, 84%). The majority of survey respondents were between 41 and 70 years of age (1,140, 66%), and identified as female (1,312, 76%) and white (1,387, 80%) (Table 3). Most respondents reported ownership of a single family or town home/condo (1,397, 80%) and full-time employment (944, 54%). This corresponded to health insurance responses of employer-based health insurance (1,119, 64%), followed by 353 (20%) being covered by Medicare and/or Medicaid. Respondents overwhelmingly reported having a post-high school education (1,302, 75%) or a professional degree (168, 9.7%). Comparison of survey respondents to the overall

population of Delaware County (51% female, 66% White, and 27% between the ages of 45-64), suggests an over-representation of white, older, female respondents in the survey³¹.

Table 3: Survey Respondent Demographic Characteristics

	Number	Percent
Age Group		
<20	8	0.5%
21-30	105	6.1%
31-40	217	12.5%
41-50	373	21.5%
51-60	376	21.7%
61-70	391	22.5%
71-80	196	11.3%
81+	53	3.1%
Missing	17	1.0%
Gender		
Female	1,312	75.6%
Male	379	21.8%
Other	2	0.1%
Prefer not to say	24	1.4%
Missing	19	1.1%
Race/Ethnicity		
White	1,387	79.9%
Black	203	11.7%
Mixed Race	47	2.7%
Other	24	1.4%
Asian	22	1.3%
Hispanic	10	0.6%
Missing	43	2.5%
Residence		
Single Family, own	1,351	77.8%
Apartment/Condo, rent	161	9.3%
Single Family, rent	104	6.0%
Condo, own	46	2.7%
Other	38	2.2%
Retirement community	16	0.9%
Missing	20	1.2%
Employment		
Full-time	944	54.4%
Retired	363	20.9%
Part-time	131	7.6%

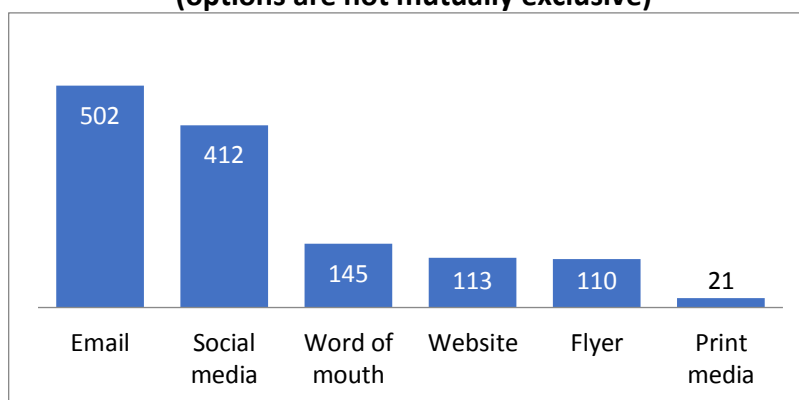
³¹ United States Census Bureau. QuickFacts – Delaware County, Pennsylvania. Updated June 25, 2020. Accessed May 1, 2020 from <https://www.census.gov/quickfacts/delawarecountypennsylvania>

Self-employed	91	5.2%
Other	85	4.9%
Unemployed	43	2.5%
Not working outside home	33	1.9%
Student	19	1.1%
Leave, expect to return	6	0.4%
Missing	21	1.2%
Education		
Some high school	10	0.6%
High school graduate	184	10.6%
Professional degree	168	9.7%
Some college	243	14.0%
Associates degree	136	7.8%
Bachelor's degree	456	26.3%
Graduate degree	467	26.9%
Other	49	2.8%
Missing	23	1.3%
Insurance		
Private (employer)	1,119	64.5%
Medicaid/Medicare	353	20.3%
Private (purchased)	114	6.6%
Other	100	5.8%
No insurance	22	1.3%
Missing	28	1.6%

Source: JHSPH Public Health Community Survey

Respondents were asked how they learned about the survey, and were allowed to select multiple options as applicable. The most frequent response was learning of the survey via e-mail (502, 39%) followed by social media (412, 32%), with print media being the least frequent response (21, 1.6%) (Figure 3).

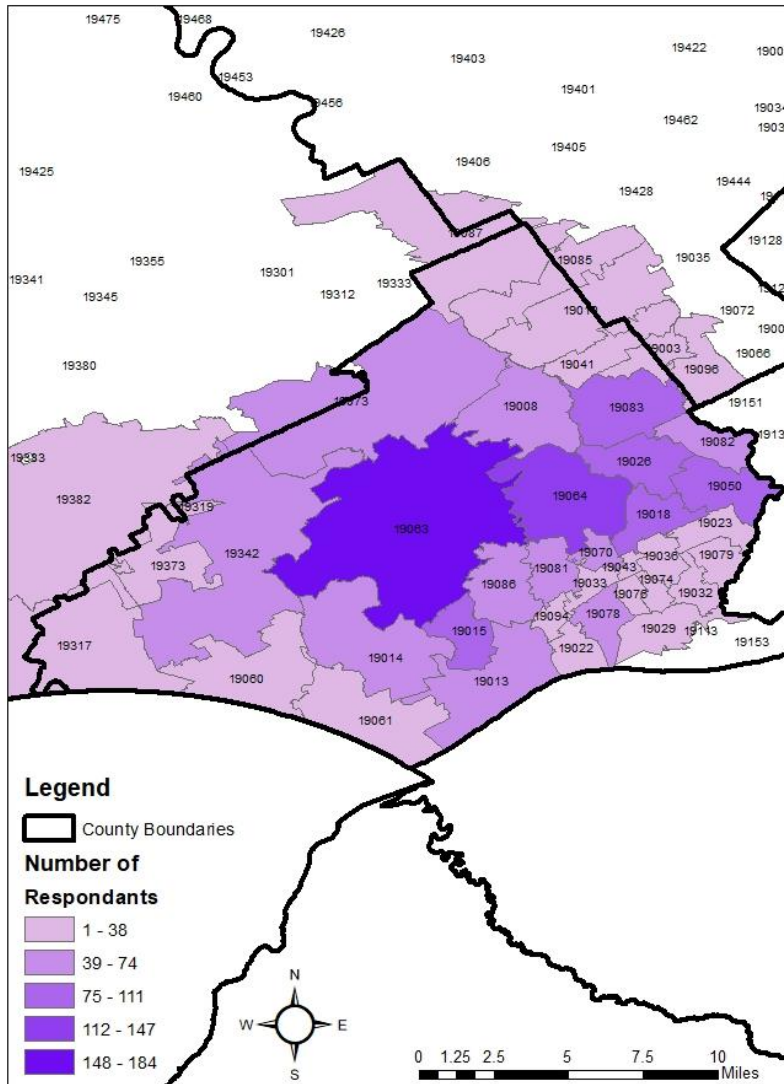
Figure 3: Reported Mechanisms by which Respondents Heard about the Survey (options are not mutually exclusive)



Source: JHSPH Public Health Community Survey

The map of Delaware County below (Figure 4) shows the self-reported zip codes of residence of survey respondents. The largest cluster of responses (184, 11%) was from zip code 19063. A higher proportion of survey responses were from the central, more populous areas of the County.

Figure 4: Number of Survey Respondents by Zip Code

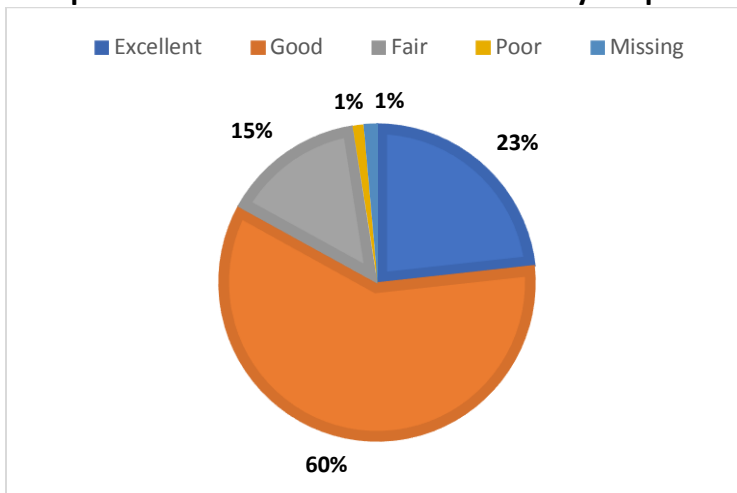


Source: JHSPH Public Health Community Survey

The majority of residents (1,037, 60%) reported their general health status as being “good” (Figure 5), followed by 404 (23%) reporting “excellent” general health status. 15% (252) reported their general health status as “fair”, while only 1% (19) reported “poor” health status. For comparison, the same question is asked on the national Behavioral Risk Factor Surveillance System (BRFSS) survey administered by the Centers for Disease Control and Prevention (CDC). In the 2015-17 BRFSS survey, 85% of Delaware County residents reported being in “excellent”

or “good” health³² while 15% reported “fair” or “poor” health, which aligns with the reporting in this survey.

Figure 5: Self-Reported General Health Status of Survey Respondents (Percent)

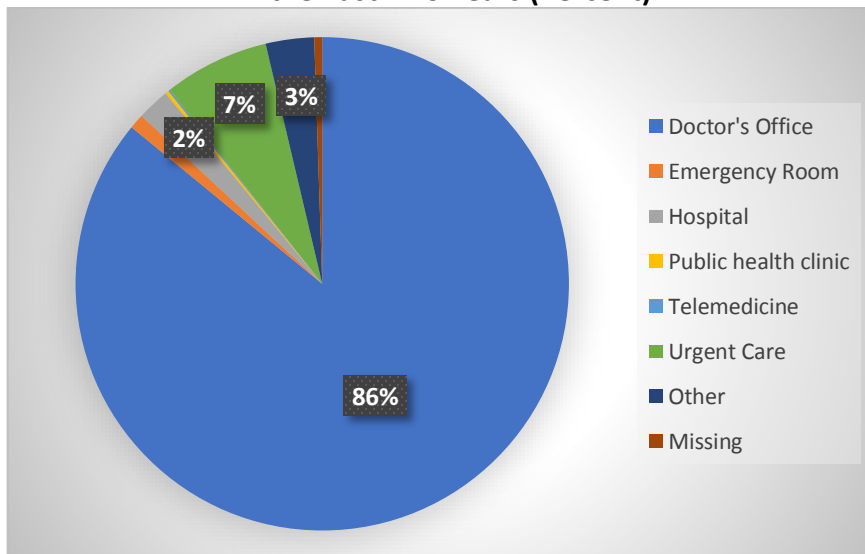


Source: JHSPH Public Health Community Survey

Direct Health Services

1,599 (92%) of respondents reported always having been able to get the healthcare services they needed in the past two years. The majority (1,492, 86%) reported receiving care from a doctor’s office, followed by 120 (7%) from an urgent care setting (Figure 6).

Figure 6: Locations where Survey Respondents Report Having Received Direct Health Services in the Past Two Years (Percent)



Source: JHSPH Public Health Community Survey

³² Pennsylvania Department of Health. County Health Profiles – Delaware. Accessed February 17, 2020 from <https://www.health.pa.gov/topics/HealthStatistics/VitalStatistics/CountyHealthProfiles/Documents/current/delaware.aspx>

300 (17%) of respondents reported having received direct health services via mobile technology. Most of these were electronic charts or telephone apps through doctor’s offices; however, 35 individuals reported interacting with a provider through a web portal. A number of respondents 708 (41%) indicated that they would be “interested” or “very interested” in the use of mobile technology for improving or enhancing their healthcare.

Respondents were asked if they had received information or education from another source (i.e., not obtained through one’s own research or questioning) on several health and health-related topics (Table 4). Mental health, cancer, and injury/violence were all areas in which only one-third of respondents reported receiving information or education.

Table 4: Percent of Survey Respondents Receiving Information/Education on Core Preventive Health Topics

Category	Included Topics	Number	Percent
Cancer	Cancer and Cancer Screening	587	34%
Chronic Conditions	Asthma, Cholesterol/Heart Disease, Diabetes, Hypertension, Stroke	1,013	58%
Environmental Health Risks	Food Safety, Lead Poisoning, Drinking Water Testing, Radon Testing	434	25%
General Preventive Care	Antibiotic Resistance, Hand washing	650	37%
Infectious Diseases	Sexually Transmitted Infections, HIV/AIDS, Ebola, West Nile, Zika, Lyme Disease	337	19%
Injury/Violence	Bicycle Helmets, Car Seats, Drunk Driving, Seatbelts, Trauma	506	29%
Mental Health	Depression, Anxiety	541	31%
Nutrition/Activity	Nutrition, Physical Activity	876	50%
Reproductive Health	Pregnancy	113	6%
Substance Use	Alcohol, Drug use, Opioids	369	21%
Tobacco	Smoking, Vaping (e-cigarettes)	362	21%
Vaccines	Flu Vaccine, Rabies Vaccine, Other Immunizations	855	49%

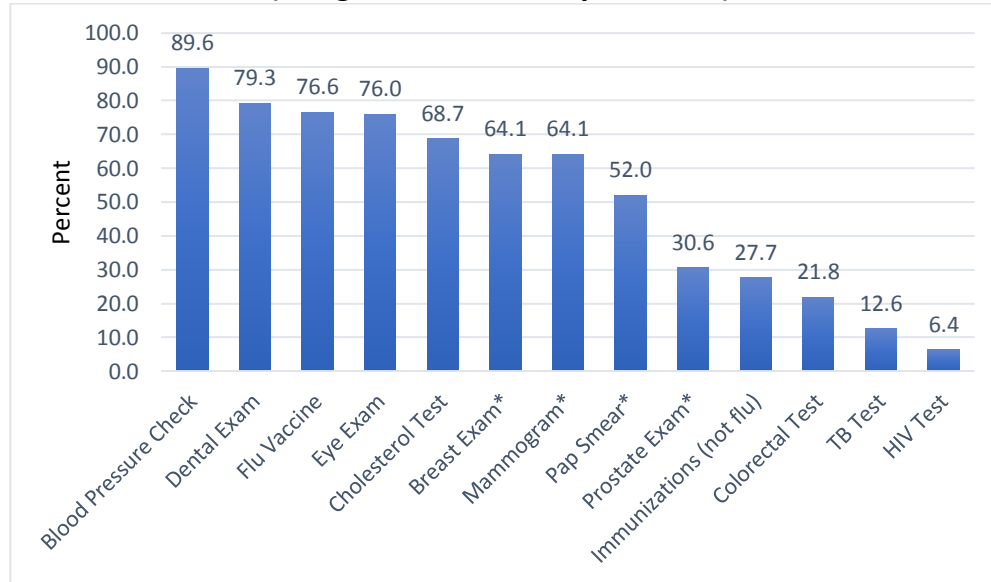
Source: JHSPH Public Health Community Survey

Screening/Prevention Services

Figure 7 shows the screening tests that respondents reported receiving in the past 2 years, with respondents being asked to select all screening tests that apply. The proportion reporting receiving breast exams, mammograms and pap smears are reported out of all female respondents, and the proportion reporting prostate exams is out of all male respondents. The most commonly reported screening or preventive service in the past 2 years was blood pressure check (1,555, 90%), cholesterol test (1,193, 69%), eye exam (1,319, 76%), and

influenza vaccine (1,329, 77%) (Figure 7, categories not mutually exclusive). In contrast, report of HIV testing in the past 2 years was very low (111, 6%). In the 2015-17 national BRFSS survey, 52% of Delaware County residents reported having ever been tested for HIV³³. Among survey responses from individuals ages 50+ only 32% (327/1,016) reported having had a colorectal test in the past 2 years. As of 2016, the United States Preventive Services Task Force recommends regular colorectal cancer screening beginning at age 50³⁴.

Figure 7: Percent of Survey Respondents Reporting Screening Tests in the Past Two Years (categories not mutually exclusive)*



*Breast exams, Mammograms and Pap Smears are among female respondents, Prostate exams are among male respondents

Source: JHSPH Public Health Community Survey

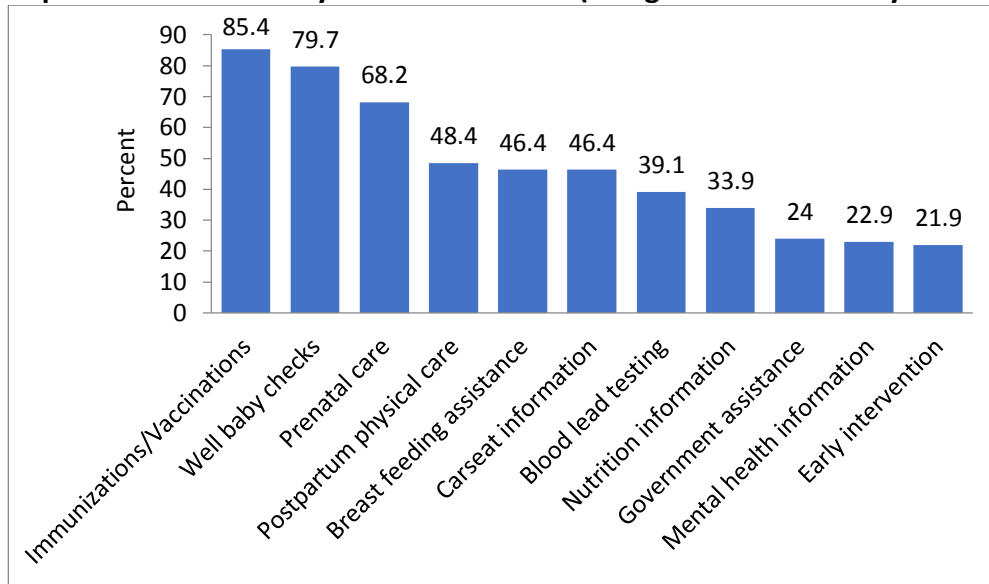
Child/Family Services

192 (11%) of survey respondents reported currently having children <5 years of age in their household. Figure 8 shows the proportion of those respondents reporting receipt of child and family oriented services, with respondents being asked to select all that apply. The proportions receiving well baby care and immunizations were both at or over 80%, whereas the proportions receiving early intervention services and mental health information were the lowest at 21.9% and 22.9%, respectively.

³³ Pennsylvania Department of Health. County Health Profiles – Delaware. Accessed February 17, 2020 from <https://www.health.pa.gov/topics/HealthStatistics/VitalStatistics/CountyHealthProfiles/Documents/current/delaware.aspx>

³⁴ U.S. Preventive Services Task Force. Colorectal Cancer: Screening. Accessed February 17, 2020 from <https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/colorectal-cancer-screening>

Figure 8: Percent of Survey Respondents with Children Less than 5 Years of Age Reporting Receipt of Child and Family Oriented Services (categories not mutually exclusive)



Source: JHSPH Public Health Community Survey

Public Health Concerns

Respondents were asked to list up to 5 public health issues that were of greatest concern to them personally. Table 5 shows the list of concerns in order of frequency that they were mentioned. The most frequently reported concern was access to healthcare (893, 51%), followed by mental health (808, 47%). Climate change, drinking water quality, obesity/healthy lifestyle, and social determinants of health were also important concerns for respondents. Drunk driving (11%) and housing conditions (8%) were mentioned the least often.

Table 5: Reported Public Health Concerns of Survey Respondents (each respondent selected up to 5) by Frequency of Selection

Area of Concern	Number	Percent
Access to healthcare	893	51.4%
Mental health	808	46.5%
Climate change	630	36.3%
Drinking water quality	604	34.8%
Obesity/healthy lifestyle	550	31.7%
Social determinants of health	546	31.5%
Violence/crime	516	29.7%
Access to healthy foods	451	26.0%
Emergency preparedness	401	23.1%
Food safety	368	21.2%
Air quality	368	21.2%
Alcohol/Drug abuse	355	20.5%
Immunizations/Vaccinations	324	18.7%
Neighborhood nuisances	239	13.8%

Drunk driving	185	10.7%
Housing conditions	145	8.4%

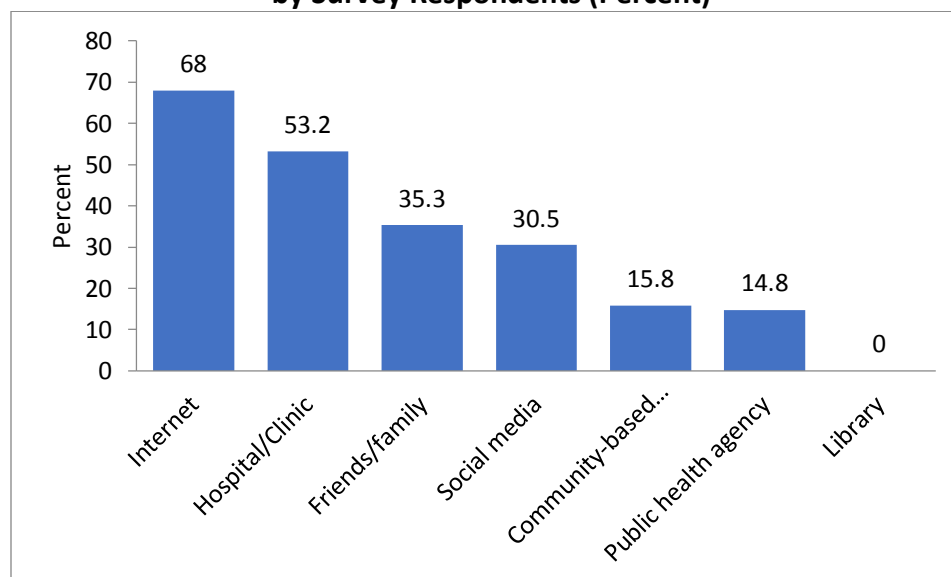
Source: JHSPH Public Health Community Survey

Respondents were then asked if there were any local health-oriented organizations or entities that they are aware of that currently address the topics that they selected as important concerns. Sixty-eight respondents commented on the lack of specific agencies or entities with responsibility for the above-mentioned areas of concern in Delaware County. Eight respondents specifically mentioned the need for a local health department.

Nearly one-third (493, 28%) of respondents reported interaction with a local or state public health agency within Pennsylvania (e.g. engaging with the agency through its website, email, call, in-person exchange, attendance at an event, etc.) over the past 2 years, including city, county and state-level entities. Twenty-four respondents mentioned that they had contacted “some agency” (they did not name which one) or were “transferred around a lot” (presumably connected from one agency to another) when they tried to connect directly with someone about a public health issue. 620 (36%) of respondents were aware of county-level emergency response planning for Delaware County. A similar proportion of respondents (686, 40%) reported having discussed or developed an emergency plan with their families and/or their community.

Figure 9 shows the sources of information respondents reported turning to for public health related information and resources. The most common sources were the Internet (e.g. websites) (1,180, 68%), hospitals and clinics (924, 53%), friends/family (613, 35%), and social media (529, 31%). In contrast, very few individuals turned to a public health agency (256, 15%) or a community-based organization (274, 16%).

Figure 9: Sources of Public Health Related Information/Resources Reported by Survey Respondents (Percent)



Source: JHSPH Public Health Community Survey

General Comments

Finally, respondents were asked if there were any general comments about the delivery of health and public health services across the county that they would like to share. A total of 494 (27.5%) individuals provided free-text comments. The most commonly mentioned themes in the comments were: the need for a Delaware County health department (n=151); environmental concerns including poor air and/or water quality (n=117); communication regarding health-related matters (n=77); healthcare accessibility (n=57); mental health service expansion (n=46); and access to services and treatment for substance use (n=45) (Figure 10).

151 respondents indicated a need for a local public health department in Delaware County to provide a variety of services including vaccination education and access, public health alerts on issues such as gas leaks and infectious disease outbreaks, food safety inspections, and data collection, surveillance, and analysis. Conversely, 25 respondents indicated that they did not want a local health department, with some stating concerns regarding increased burden on taxpayers while others felt the County currently provides sufficient services. 117 respondents indicated a need to improve or protect the environment. Environmental concerns included air and water quality, the new Mariner pipeline, disease clusters affiliated with landfills and superfund sites, and the quality of the built environment.

77 respondents indicated that better and more coordinated communication was needed in Delaware County, to make residents aware of available health and public health resources. In addition, some respondents mentioned that certain population groups (such as the elderly or those with disabilities) might require alternative communication methods due to lack of access to technology. 57 respondents indicated the need to address access to healthcare, including the expansion of transportation options to allow more patients to access care. Respondents also suggested that a clinic for low-income populations would be beneficial to the County. 46 respondents indicated a need for expansion or improvement of mental health services for both children and adults. 45 respondents indicated the need for greater focus on issues related to drug and alcohol use and misuse, including addressing the growing opioid crisis in the County, increasing access to Medication-Assisted Treatment (MAT) for opioid use disorder as well as general addiction services, and improving substance use resources and education. Other notable themes include concerns about high crime levels, improvement and expansion of emergency services, and the need to better address social determinants of health.

Figure 10: Open Comments from Survey Respondents, Categorized by Theme

Themes of Respondent Comments	Number of Mentions
Need local health department	151
Environment	117
Communication	77
Healthcare accessibility	57
Mental health	46
Drugs/Alcohol	45
No change needed	37
Health disparities	34
Emergency services	21
Crime	13
Nutrition/Physical activity	9
Cancer	7
Maternal health	6
Infectious disease	4
Accidents/Injury	3
Schools	3
Housing	2

Source: JHSPH Public Health Community Survey

Findings from Focus Groups, Community Forums, and In-depth Interviews

Summary of Observations

Focus Groups: Focus group participants were primarily female. Based on informal observation, participants were mostly White, spanning a range of ages from younger adults to seniors, though participation skewed more towards middle aged and older individuals. Focus group participants reported having lived and worked in Delaware County for 5 to 76 years, with the most common reported time frame being more than 50 years, followed by 10-20 years. Most heard about the focus groups via email or by word of mouth, with a smaller number finding out from the library or via the news or social media.

Palava Hut Convening: There were approximately 50 community members in attendance at the Palava Hut, representing a highly diverse group of primarily underserved immigrant and minority communities, including Liberian, Nigerian, Ghanaian, White, Hispanic/LatinX, African American, Asian, Asian American, Asian Indian, and Middle Eastern communities. Most attendees were residents of Upper Darby and its immediate neighboring municipalities, including Darby and Yeadon. Attesting to the ability of the 'Palava Hut' approach to provide a safe space for conversation, one of the most moving aspects of this convening was the emotional, personal anecdotes that participants shared about their health experiences, and more importantly, the support the sharer received from both facilitators and fellow attendees alike. To gauge overall understanding of health and public health, MCFS facilitators first led attendees through a series of broad introductory discussion questions to ascertain how attendees defined health before moving on to a discussion of health-related resources and concerns. The convening culminated with suggestions from attendees on how to improve health services in Delaware County.

In-depth Interviews: The in-depth interviews included individuals working in leadership positions across the following sectors: government (state, county, and municipal), law enforcement, healthcare, education, emergency response, business, faith-based community, philanthropy, social services, nonprofits/coalitions, and community-based organizations. Interviewees have worked in their respective positions for varying amounts of time, some for over 20 years. Services offered by their affiliated organizations span a wide range, but are mostly representative of the communities served within the County. Funding for public health efforts ranges from federal and state sources to grants, philanthropy, and membership fees. Most interviewees felt their organizations have sufficient capacity in terms of staffing, data monitoring and evaluation, and ability to meet the needs of their respective target populations.

Interviewees noted several important points to consider when thinking about health and public health in Delaware County. Specifically, they emphasized that the County's racial and socioeconomic diversity must be acknowledged and prioritized when working to improve community health for all county residents. Recent changes in existing resources and structures have also impacted health within the County. Crozer-Keystone Health System moved from nonprofit to for-profit status in 2016; with this change came what interviewees described as a shift away from community-centered care, with lower-income families not feeling as welcomed

and a lack of health education on key issues. Additionally, the closing of the Mercy Fitzgerald mental health crisis center in late 2019 left the County with only one operating crisis center, resulting in increased demand for services but fewer available resources. Interviewees acknowledged the efforts of the Delaware County Health Advisory Board and Senior Medical Advisor Dr. George Avetian; however, they emphasized that more needs to be done to support health and improve outcomes in Delaware County.

Essential Public Health Services Framework

Using the lens of the essential public health services framework to consider the delivery and organization of public health services at the local level, JHSPH researchers characterized findings from the focus groups, Palava Hut convening, and in-depth interviews as follows:

10 Essential Public Health Services	Identified Core Themes
1. Assess and monitor health status, factors that influence health, needs, and assets to understand and improve population health and wellbeing.	Data
2. Diagnose, investigate, and address health problems and hazards affecting the population, including the identification of root causes.	Monitoring and Evaluation
3. Communicate effectively to inform and educate people about health, including factors that influence it and how to improve it.	Communication
	Education, Knowledge, and Awareness
4. Strengthen, support, and mobilize the community and partnerships to improve population health.	Cross-sector Collaboration
5. Create and champion policies and plans that improve and protect the public’s health, remove obstacles to optimal health, and support the resilience of the entire population.	Vision and Leadership for Public Health
6. Employ legal and regulatory actions to protect and ensure the public’s health and safety.	
7. Assure an effective system that enables equitable access, by all people, to the individual services and care needed to be healthy.	Health Disparities and Health Equity
8. Build and support a diverse and skilled public health workforce.	Coordination and Training
9. Improve and innovate public health functions through ongoing evaluation, research, and continuous quality improvement.	
10. Build and maintain a strong organizational infrastructure to support public health.	Funding, Resources, and Infrastructure

Below are specific needs that participants identified within each of the essential service areas.

DATA

- Delaware County needs a centralized, systematic approach to data monitoring and evaluation so that it can improve data availability, transparency, and collection, particularly at the municipal level.

“There isn't the leadership that there needs to be...the surveillance isn't happening the way it needs to happen.” – Female, In-Depth interview – Philanthropy

“Unfortunately in public health, particularly Delaware County, a lot of things are zip code oriented.” – Female, In-Depth interview – Non-profit

“...in Delaware County, we really don't have good data. We have county level data, which doesn't reflect the picture of what public health looks like, within the county.” – Female, Focus group

MONITORING AND EVALUATION

- There is a need to collect, monitor, evaluate, and disseminate data on outbreaks, health outcomes, and general health issues across the County.

“Need to bring people together to look at root cause, to identify where to target services and interventions...the fact that many of our outcomes have gotten worse since [the] last [JHU 2010] study is saying that we're not doing the right thing.” – Female, In-depth interview – Non-profit

COMMUNICATION

- Having a County-managed central repository and point of contact for public and population health issues would decrease fragmentation and siloes across government, organizations, and individual communities and help prevent the spread of misinformation from biased Internet sources or word of mouth.

“...I think what we've been missing for many years in our county is a convener around health related issues so that we can have a coordinated response for all of these issues.” – Female, Focus group

- The County needs to develop and provide culturally and linguistically appropriate health communications tailored for multiple populations.

EDUCATION, KNOWLEDGE, AND AWARENESS

- There is a lack of awareness and knowledge about existing resources, suggesting that more effective promotion and dissemination of information is needed.

“...a public health initiative needs to be more proactive in getting the word out to the community that they even exist and what services that they're able to offer.” – Male, In-depth interview – Faith-based community

“We are resource rich and information poor.” – Female, Focus group

“Different communities have different resources. We have to make sure children have the right opportunities and the right systems. Make sure people know where they can get care and make sure people can afford health care. As a community we want people to care.” – Female, Palava Hut convening

- It is important to promote awareness of and access to services for all populations regardless of racial, immigration, or insurance status.

CROSS-SECTOR COLLABORATION

- Stronger interdisciplinary partnerships and collaboration across all sectors is required, particularly among organizations that share aligned objectives. It is important to centralize efforts and resources and coordinate across organizations and agencies to prevent redundancy.

“It's as much about how we do business as it is about specific health needs...do the right people know each other. Are the departments talking to each other, is the kind of coordination that needs to happen going on. We're not operating at a system wide level, at the level of sophistication that other communities are operating at and that this county needs...We are all really interconnected and we need to act like it and try to address problems.”

– Female, In-depth interview – Philanthropy

- All community members, particularly those from minority, low-income, and underserved populations, need to have a voice at the table and be included in planning and discussions pertaining to County health-related issues.

“...those that live...and work in the community, that [make] this community their home...should be the ones to have their voices represented.” – Female, In-depth interview – Social services

“I would like to suggest that we [MCFS stakeholders] have to be part of the process”

– Male, Palava Hut convening

“Need [a] meeting with the council to address how we feel.”

– Female, Palava Hut convening

“The people in the inner circles, we're all being re-circulated, but there's not a lot of effort to get new people. And I would say that it's not very culturally or linguistically reflected in a lot of these task forces...it's not reflective of communities in Delaware County.” – Female, In-depth interview – Non-profit

VISION AND LEADERSHIP FOR PUBLIC HEALTH

- Delaware County needs to develop a collective overview/vision of county health.

“...just about everything we raised...oh, we outsource that, oh we outsource that...but no evaluation, no vision for the future...I think we do need a vision for

what public health – what the totality of public health service should be.”
– Female, Focus Group

- The County would benefit from increased advocacy for and a stronger liaison to state level services such as hazardous materials response.

HEALTH DISPARITIES AND HEALTH EQUITY

- A lack of cultural competence negatively impacts the ability of underserved populations, particularly low-income, ethnic minority, and immigrant communities, to access and receive adequate care and services. Language barriers as well as a lack of trust in government and authority further exacerbate these disparities. More outreach to marginalized communities is necessary to work towards health equity.

“these [underrepresented] communities...[are] not comfortable, particularly interfacing with or interacting with governments.” – Male, Focus group

“In the Liberian community most of the people who live in Darby tend to go to Philadelphia and if you go and don’t have insurance they don’t treat you...so some people change addresses to make sure they get treatment. The lack of cultural education for the people at the front desk – they treat [immigrants] with disrespect. We need to make sure the immigrants are treated fairly and with respect.” – Female, Palava Hut convening

- The combination of socioeconomic disparities with geographic and municipal-level disparities in health access and quality lead to inequity in health outcomes. Food and housing insecurity, environmental hazards, and transportation challenges are important contributing factors to health disparities among underserved communities.

“I think one of the...disconcerting things in Delaware County is you can go from the very affluent to the very needy or very poor in a matter of miles. And those two communities are segmented communities...we have to give everyone a fair shake and everyone a chance. Not just because of the tax bracket you live in, but because of where everyone is. And we have to start allocating resources better, so that those who need it most get it.”

– Male, In-depth interview – Community-based organization

- Challenges in navigating the existing health care system contribute to increased disparity and inequity, particularly for uninsured and underinsured individuals and especially pertaining to services for mental health, stigma, opioid use and abuse, school-based health, and pediatric care.

“Just because you’re in the system, doesn’t mean it’s easy to navigate.”

– Male, Focus group

“...it’s a very complicated county depending on where you live and what you know and how you navigate the system.” – Female, Focus group

“We have the opioid use disorder program where we can’t meet the demand for the people trying to walk through the doors...they fall through the cracks at the end.” – Male, Focus group

COORDINATION AND TRAINING

- Delaware County needs a well-trained public health workforce, particularly at the local level, with stronger inter- and intra-municipal as well as cross-county coordination to ensure all residents’ needs are being met. This is especially important in relation to outbreak response, to ensure the County is prepared to respond in a timely and sufficient manner both to County-specific outbreaks, e.g. influenza and Hepatitis A, as well as global outbreaks such as the current COVID-19 pandemic.
“...there are jobs that we can prepare our people to be in. I can tell you looking at the workforce today it’s more about skill sets.”
– Female, In-depth interview – Healthcare
- The County should consider encouraging volunteerism among residents as well as early exposure and training for youth to engage them in health-related jobs and thereby help address any deficits in the health and public health workforce.

FUNDING, RESOURCES, AND INFRASTRUCTURE

- The County needs a formalized public health effort with a collective vision for health; clear, coordinated leadership; centralized data tracking and reporting mechanisms; and better allocation of public health funding and resources.
“We need to do something to see that the community is constantly changing. We need to put focus on different things than what we placed it on for the last 10 years.” – Female, In-depth Interview - Healthcare

“I think we have a lot of services in Delaware County that are attempting to address...public health needs, but without any public health staff, infrastructure, data collection systems, and so that’s where I would say the real gap is.” – Female, Focus Group
- Expanded funding and increased state and federal support are needed to not only boost the expansion of countywide services, but also increase community-oriented health and public health efforts and support associated staffing and administrative costs.

Discussion of Key Community Health Needs in Delaware County

The timing of the community outreach for this study (October 2019 – February 2020) resulted in the completion of all qualitative data collection prior to the COVID-19 pandemic, thus responses were not impacted by people’s experiences during the pandemic. While the individuals and organizations that provided input to this study have varying perspectives and backgrounds, there was widespread agreement and consensus on the key issues and health needs outlined below. Most contributors were very forthcoming about their public health concerns, and shared a common goal to work towards improved health and public health for all Delaware County residents.

Strengths

Commonly noted strengths within the County include maternal and child health programs (e.g. Healthy Start and Nurse Family Partnership) as well as services provided by the Department of Human Services, Office of Behavioral Health, ICH, and the Office of Services for the Aging (COSA). Emergency preparedness and response was noted as a key strength for the County, particularly its emergency preparedness workshops, Medical Counter Measures (MCM)/Strategic National Stockpile (SNS) programs, and crisis intervention and community emergency response teams. Multiple individuals also highlighted the effectiveness of certain drug and alcohol resources such as prescription drug drop-off boxes and the County’s Heroin Task Force.

Additional strengths included the County’s domestic violence programs (e.g. Domestic Abuse Project); health literacy services; homelessness services (e.g. Homeless Services Coalition of Delaware County and Community Action Agency programs); and health and hospital services (e.g. Delaware County’s two Federally Qualified Health Centers, and hospital-based Hepatitis C and HIV programs). Some participants noted the County library system as a good information source. Others mentioned that certain townships and municipalities have notably strong boards of health (e.g. Radnor).

Areas for Improvement

Major areas for improvement mentioned by participants across all data collection methods included mental health, opioid use, stigma, in-home aging, access to and continuity of care, and youth-related services. Environmental health concerns were also widely noted, especially pertaining to lead poisoning, Lyme disease, asthma, and air and water quality. Relating to child and adolescent health, participants were especially concerned about maternal and infant morbidity and mortality, adverse childhood experiences (ACEs), childhood obesity, youth homelessness, and the need to provide trauma-informed care in schools. Among survey respondents with children less than 5 years of age who reported receipt of child and family oriented services, important areas that may require increased focus include mental health information and support, breastfeeding support, and car seat information/installation.

More broadly, participants were concerned about access to affordable health care and vaccinations, particularly for those who are uninsured or lack reliable transportation. This issue

has been magnified by increased hospital provider consolidation and the recent shift of the Crozer-Keystone health system to for-profit. Participants suggested more local pop-up clinics, preventive screenings, and health fairs to allow residents to more easily access services in their own communities. At the County level, participants noted a lack of interaction with the PA State Department of Health, and mentioned that though the work done by ICH is helpful, the ICH cannot adequately meet all residents' needs on its own.

Two additional issues that were primarily raised in the in-depth interviews were gun violence and high levels of sexually transmitted disease. Related, the discrepancy between the low levels of HIV testing reported in the survey compared to higher percentage reported in the 2015-2017 national BRFSS survey suggests there is a need for ongoing testing for individuals at risk for HIV is important for the County. It is important to distinguish, however, that the majority of survey respondents were white, wealthier, and highly educated, and thus likely not representative of the target population for HIV testing. Further, the survey asked about HIV testing within the past 2 years, whereas BRFSS asked respondents whether they had *ever* been tested for HIV.

Targeted, specialized services are needed to address key health issues. Given that only one-third of survey respondents reported receiving information or education on topics related to mental health, cancer, and injury/violence, all three areas represent opportunities for increased attention and awareness. In particular, mental health services came up the most in discussions across all data collection methods, with an emphasis on access to services and housing for those suffering from mental health disorders, as well as support for their family, friends, and caregivers. Another opportunity for improved education and awareness in the County is the need for regular colorectal screening.

Comparisons to 2010 Study Findings

When comparing current findings to results from the Johns Hopkins 2010 study, JHU researchers found that the concerns identified in 2010 were reflected in present-day needs, suggesting these issues have not been sufficiently addressed since the last study was completed. Specifically, both studies identified a lack of coordination and communication around health and public health services (both across public health agencies and organizations as well as within individual municipalities), with no formalized system in place to provide needed support and coordination. Environmental health issues continued to be an area of concern. Additionally, residents continued to indicate a lack of interaction with the state health department outside of the state-run health clinic in Chester, and reported similar health care service challenges in both 2020 and 2010, including transportation, mental health services, access to affordable care, and services to underserved populations. Finally, the belief was expressed in both studies that having a Delaware County Health Department would provide the County with additional state, federal, and philanthropic funding sources for public health efforts.

Aims 3 & 4: Gather Relevant Data and Compile Community Health Status Indicators

The following section addresses findings from three key data components of this study:

- I. Hospitalization and emergency department usage data from the three main Delaware County health systems (Crozer Keystone, Main Line Health/Riddle Memorial, and Mercy Fitzgerald Hospitals)
- II. Mortality data from the Delaware County Medical Examiner's Office
- III. Community Health Status Indicator Profile for Delaware County and comparison counties, compiled from publicly available data from various national and state-level surveys.

Emergency Department Visits

Emergency Departments (ED) represent a significant proportion of healthcare provision across the United States; in 2016, there were over 145.6 million visits to EDs across the country³⁵. Patients receive care for a variety of urgent and emergent conditions, including both acute and chronic illnesses as well as injuries, and exploring demographic and secular trends in ED visits is one important indicator of the general health of a target community.

Importantly, EDs are often used for non-urgent conditions, serving as an alternative to primary or clinic care settings. The estimated average cost of an ED visit in 2017 was \$1,389, and an estimated \$18 billion in healthcare costs could be saved annually across the US if non-urgent conditions were seen in primary or preventive care settings³⁶ rather than the ED.

Hospital Systems

Data on ED visits for this report were obtained from three of the major hospital EDs serving the catchment population of Delaware County. Information was requested for all visits occurring from 2014 through 2018. The three hospital systems contributing data were:

- Crozer-Keystone Health System (CKHS), headquartered in Springfield, PA, with multiple hospital locations around the County.
- Trinity Health Mid-Atlantic – Mercy Catholic Medical Center, Mercy Fitzgerald Campus, located in Darby, PA.
- Main Line Health System (MLHS) – Riddle Hospital, located in Media, PA.

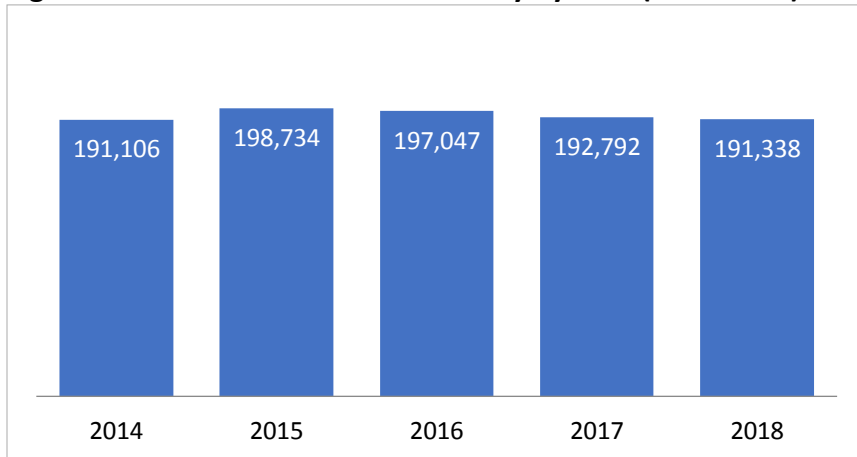
³⁵ Centers for Disease Control and Prevention. Emergency Department Visits. Updated January 19, 2017. Accessed November 30, 2019 from <https://www.cdc.gov/nchs/fastats/emergency-department.htm>

³⁶ Fay, Bill. Debt.org. Emergency Rooms vs. Urgent Care Centers – Differences in Services & Costs. Accessed November 30, 2019 from <https://www.debt.org/medical/emergency-room-urgent-care-costs/>

ED Visits by Year

Between 2014 and 2018, there were over 191,000 visits annually to the three EDs in Delaware County (Figure 11). There were no marked differences between years, ranging from a lowest number of 191,106 in 2014 to a highest number of 198,734 in 2015.

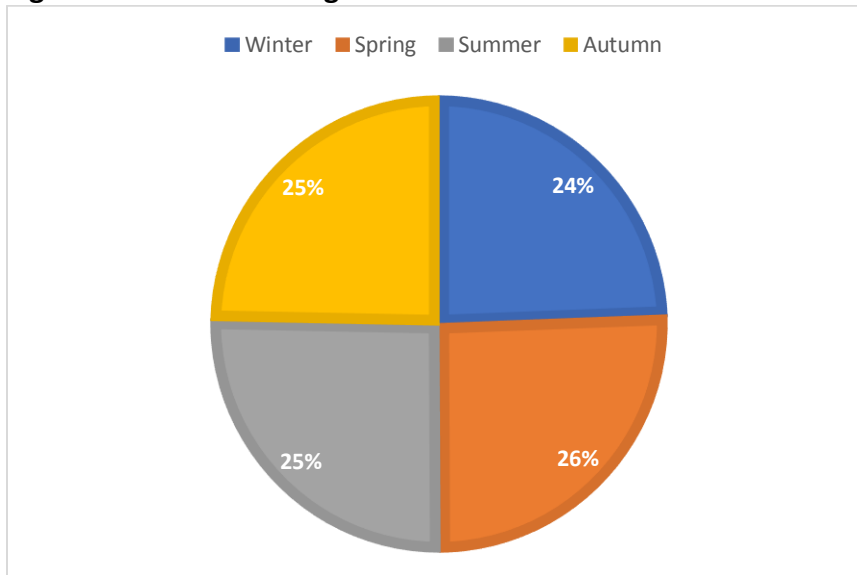
Figure 11: ED Visits in Delaware County by Year (2014-2018)



Source: ED data from Crozer-Keystone, Mercy Fitzgerald, and Riddle Hospital

There were no significant differences in number of visits by month or season, with approximately 25% of visits occurring in Winter, Spring, Summer and Autumn (Figure 12).

Figure 12: Annual Average Number of ED Visits in Delaware County by Season (2014-2018)



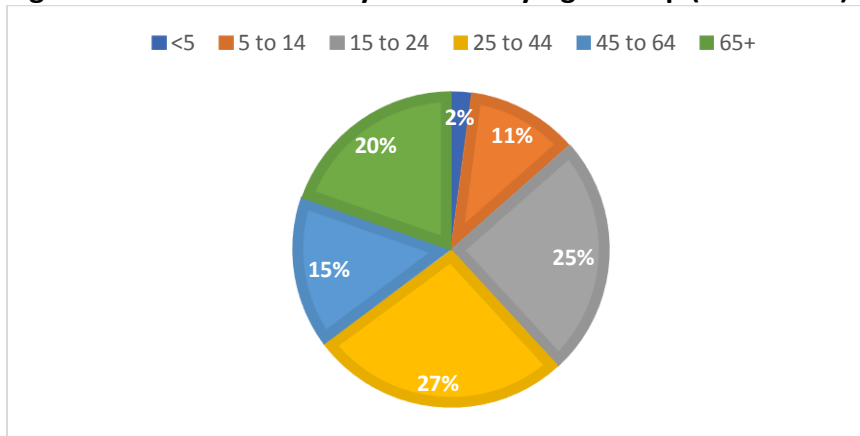
Source: ED data from Crozer-Keystone, Mercy Fitzgerald, and Riddle Hospital

ED Visits by Age, Sex and Race

The 25-44 year age group had the highest proportion of visits annually (51,682, 27%), followed by the 15 to 24 year age group (47,837, 25%) (Figure 13). This is in slight contrast to the US-

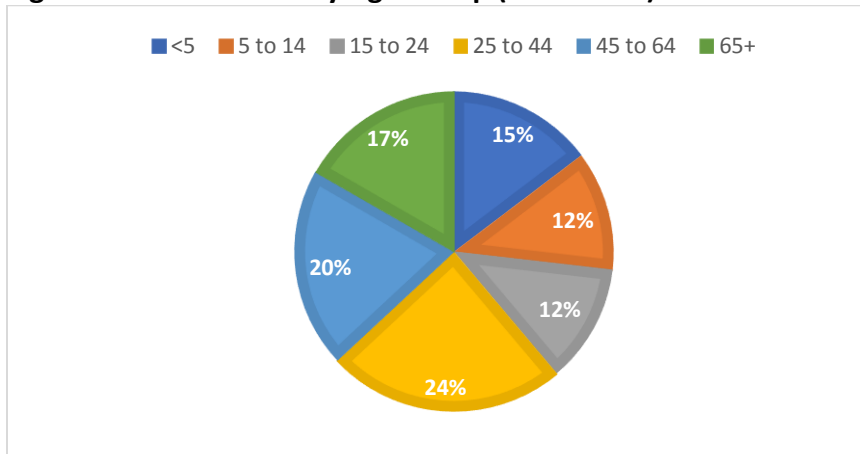
wide data, where the 25-44 year age group represented 24% of all visits and the 15-24 year age group had 12% of visits (Figure 14).

Figure 13: Delaware County ED Visits by Age Group (2014-2018)



Source: ED data from Crozer-Keystone, Mercy Fitzgerald, and Riddle Hospital

Figure 14: US ED Visits by Age Group (2014-2018)



Source: ED data from Crozer-Keystone, Mercy Fitzgerald, and Riddle Hospital

The total number of visits in Delaware County was consistently higher among females (57%) than males (43%), with females averaging around 110,000 visits per year compared with 82,000 visits per year among males. There were no significant differences across the years.

On average, 87,843 (47%) visits were by individuals identifying as White, and 87,000 by those identifying as Black (46%). The percentage of visits by Black individuals was greater than expected given the lower proportion of Black individuals comprising the overall population of Delaware County, with 20.7% identifying as Black³⁷ and 66.7% identifying as White.

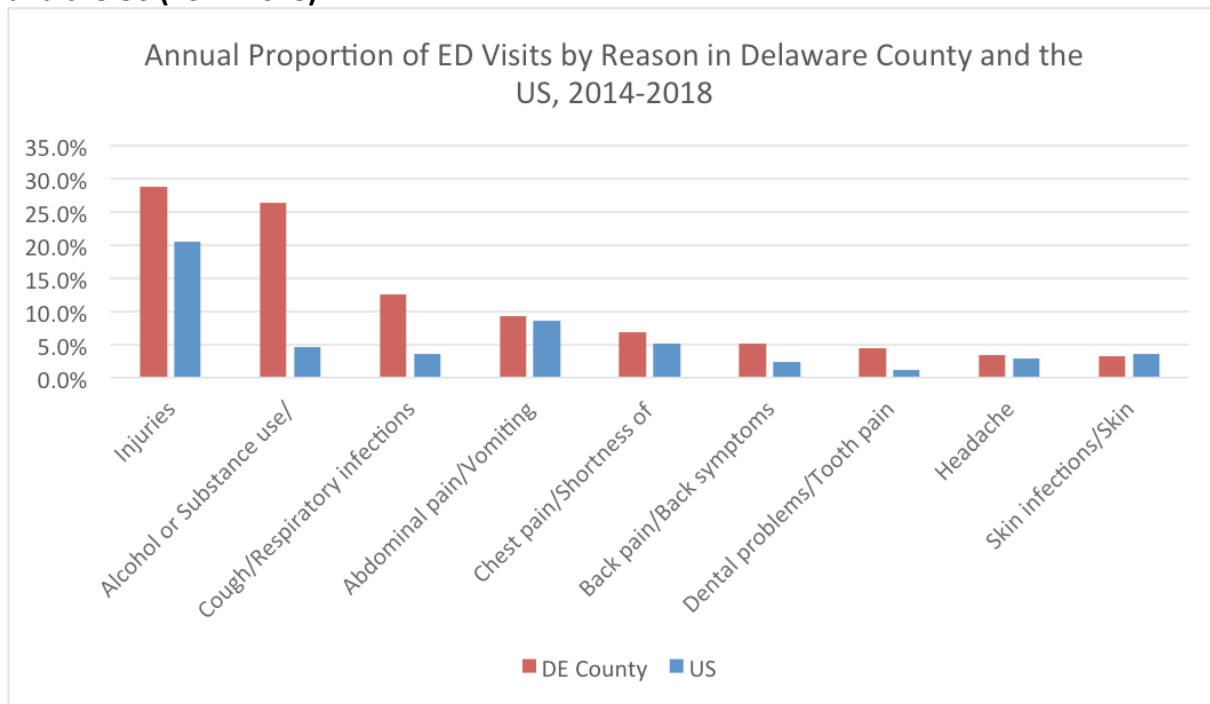
³⁷ DATAUSA. data.us.io – Delaware County, Pennsylvania. Accessed November 30, 2019 from <https://datausa.io/profile/geo/delaware-county-pa>

ED Visits by Chief Complaint/Diagnosis

Two of the EDs provided data by discharge diagnosis, whereas the third (Mercy Fitzgerald Hospital) provided information by chief complaint. The findings presented below reflect annual data from all three EDs combined.

In Delaware County, 29% of ED visits annually were due to injuries in 2014 - 2018; this is higher than the US-wide proportion of 21% in 2016³⁸ (Figure 15). Among visits for injuries in Delaware County, 48% were for falls and 44% were for motor vehicle crashes. In addition, Delaware County had more ED visits for cough/respiratory symptoms than the US (12.5% vs. 3.5%), although visits for these reasons have decreased in Delaware County from 2014 to 2018 (16,728 compared to 12,541). The cause of this discrepancy is unclear from the data provided. Delaware County ED visits for other common conditions including abdominal pain/vomiting (9.2%), chest pain (6.9%), headache (3.4%) and back pain (5.2%) occurred in relatively similar proportions to US-wide data. Dental problems, which have been noted as a common reason for ED visits in other jurisdictions, comprised 4.4% of ED visits annually in Delaware County, compared to 1.5% of ED visits annually nationwide³⁹.

Figure 15: Annual Proportion of ED Visits by Reason in Delaware County and the US (2014-2018)



Source: ED data from Crozer-Keystone, Mercy Fitzgerald, and Riddle Hospital

³⁸ Centers for Disease Control and Prevention – National Center for Health Statistics. National Hospital Ambulatory Medical Care Survey: 2016 Emergency Department Summary Tables. Accessed November 30, 2019 from https://www.cdc.gov/nchs/data/nhamcs/web_tables/2016_ed_web_tables.pdf

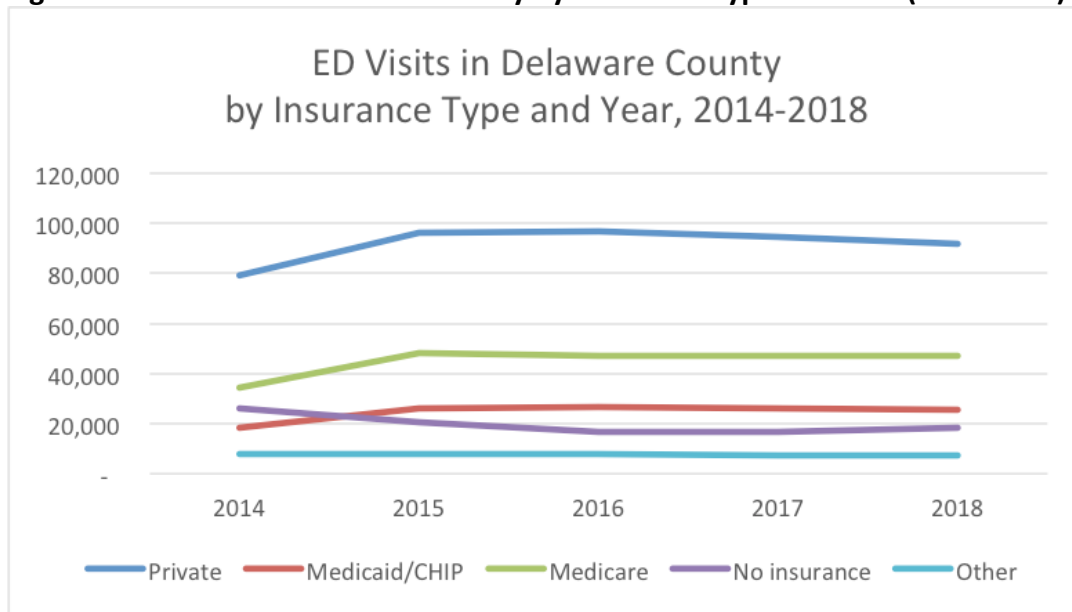
³⁹ American Dental Association – Health Policy Institute. Emergency Department Visits for Dental Conditions – A Snapshot. Accessed June 28, 2020 from https://www.ada.org/~media/ADA/Science_and_Research/HPI/Files/HPIgraphic_0420_1.pdf?la=en

Delaware County reported a significantly higher proportion of ED visits due to alcohol/substance use disorders than the US (26.3% vs. 4.6%). This difference could be due to variations in coding of the underlying reason for a visit. There could be a heightened awareness in Delaware County of the need to identify and treat individuals for alcohol/substance use disorders even if the reported primary reason for the visit was a non-specific but associated symptom.

ED Visits by Insurance Type and Disposition

Nearly half (49%) of ED visits in Delaware County had private insurance as the expected source of payment, followed by Medicare (24%) and then Medicaid/CHIP (13%) (Figure 16). In 2015, Delaware County showed a notable increase in the number of visits reporting Medicaid/CHIP payment (18,334 in 2014 to 26,116 in 2015) making Medicaid/CHIP the third most commonly reported source of payment overtaking “no insurance” from 2015 through 2018. Comparatively, US-wide data⁴⁰ from 2016 showed 38% reporting Medicaid/CHIP as the expected source of payment, followed by 32% with private insurance.

Figure 16: ED Visits in Delaware County by Insurance Type and Year (2014-2018)



Source: ED data from Crozer-Keystone, Mercy Fitzgerald, and Riddle Hospital

Over 75% of visits resulted in the patient being discharged home, and 21% were either admitted or placed under observation. This is relatively similar to US-wide data where 80% of visits resulted in discharge.

⁴⁰ Centers for Disease Control and Prevention – National Center for Health Statistics. National Hospital Ambulatory Medical Care Survey: 2016 Emergency Department Summary Tables. Accessed November 30, 2019 from https://www.cdc.gov/nchs/data/nhamcs/web_tables/2016_ed_web_tables.pdf

Mortality Data from the Delaware County Medical Examiner's Office

The Delaware County Medical Examiner's (DCME) office provided a complete list of deaths that they examined and categorized between 2009 and 2018. Available information on each death for use in this analysis included 1) demographic factors, including age at death, sex, race, year of death, and time and place of death, 2) cause of death and DCME-categorized manner of death, and 3) clinical factors, including presence of toxins at time of death, history of drug use, alcohol use, and tobacco use. Detailed methodology on how DCME data was categorized and analyzed is provided in Appendix B.

Summary of DCME Data Findings

Between 2009-2018, a total of 6,749 deaths were reported to the DCME. The majority of reported deaths occurred among individuals of white race (75.4%), male sex (65.9%), and 45-64 years of age (38.7%) (Table 6). The number of examined deaths increased slightly over the data period, from 602 deaths in 2009 to 738 in 2018.

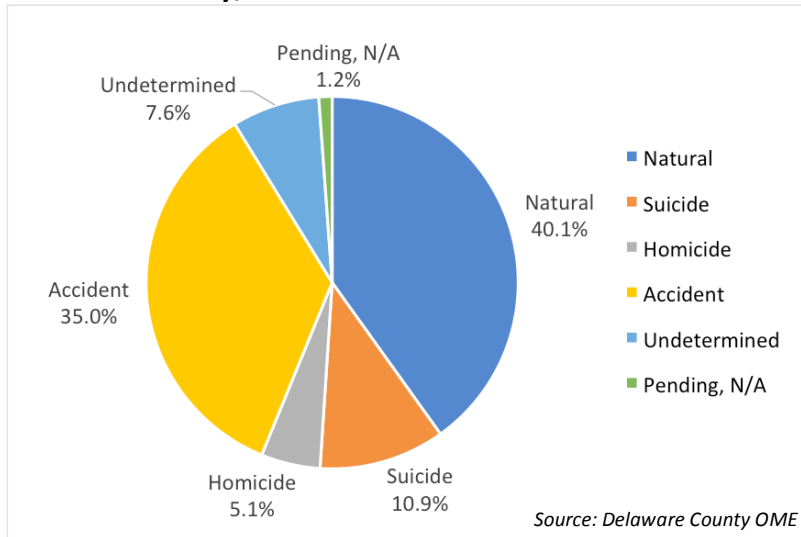
Table 6. Demographic Characteristics of All DCME-Reported Deaths (N=6,749), 2009-2018.

Characteristic	Delaware County Deaths, 2009-2018, N (%)	Delaware County Demographics, 2018, N (%)
Age group (years)		
<18	166 (2.5)	141,188 (25.0)
18-24	376 (5.6)	38,403 (6.8)
25-44	1,573 (23.3)	142,882 (25.3)
45-64	2,614 (38.7)	150,224 (26.6)
≥65	1,997 (29.6)	92,054 (16.3)
(Not reported)	3 (-)	
Gender		
Male	4,445 (65.9)	272,087 (48.2)
Female	2,284 (33.8)	292,664 (51.8)
(Not reported)	20 (0.3)	
Race		
White	5,091 (75.4)	374,084 (66.2)
Black	1,411 (20.9)	121,568 (21.5)
Hispanic	115 (1.7)	22,173 (3.9)
Asian	94 (1.4)	31,150 (5.5)
Other/Multiracial	9 (0.1)	14,602 (2.6)
(Not reported)	29 (0.4)	
Marital status		
Single	2,744 (40.7)	168,613 (36.5)
Married	1,545 (22.9)	222,948 (48.2)
Other	2,026 (30.0)	71,182 (15.4)
(Not reported)	236 (3.5)	

Source: Delaware County OME, U.S. Census Bureau American Community Survey

The most frequent manners of death were natural and accidental causes, at 40.1% (2,707) and 35.0% (2,365), respectively (Figure 17). Suicides comprised 10.9% (738) of all cases, and homicides were 5.1% (347). 7.6% (514) of cases were undetermined in their manner of death.

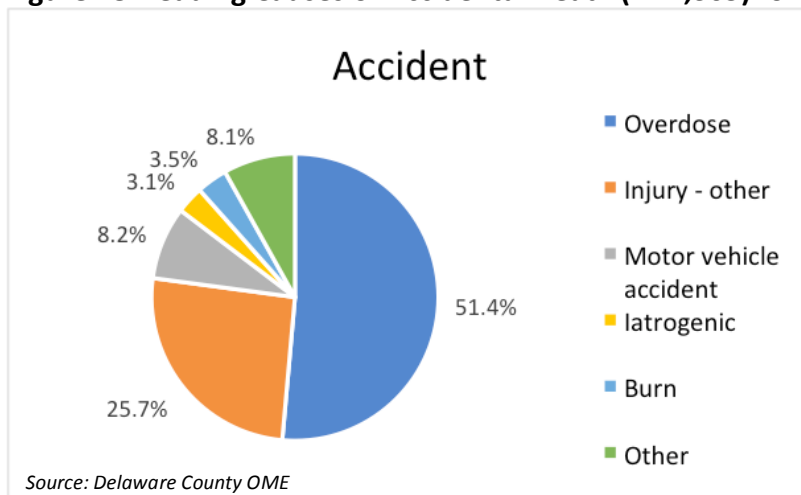
Figure 17. Proportion of DCME-Investigated Deaths by Manner of Death (N=6,749) for Delaware County, 2009-2018.



Accidental Deaths

Among all deaths from 2009-2018, a total of 2,365 (35.0%) were accidental in nature (Figure 18). Overdose was the most common cause (1,216, 51.4%) of accidental death across all demographics. Injuries were common as well, accounting for 608 (25.7%) deaths during this time period.

Figure 18. Leading Causes of Accidental Death (N=2,365) for Delaware County, 2009-2018.



Individuals of white race accounted for 1,962 (83.0%) accidental deaths, and individuals of black race accounted for 329 (13.9%) deaths (Appendix B, Figure B.1). Overdose accounted for 1,056 deaths (53.8%) in white individuals and 137 (41.6%) deaths in black individuals. Injury was the

second most common cause of accidental death in both races, accounting for 526 (26.8%) deaths among white individuals and 67 (20.4%) deaths among black individuals.

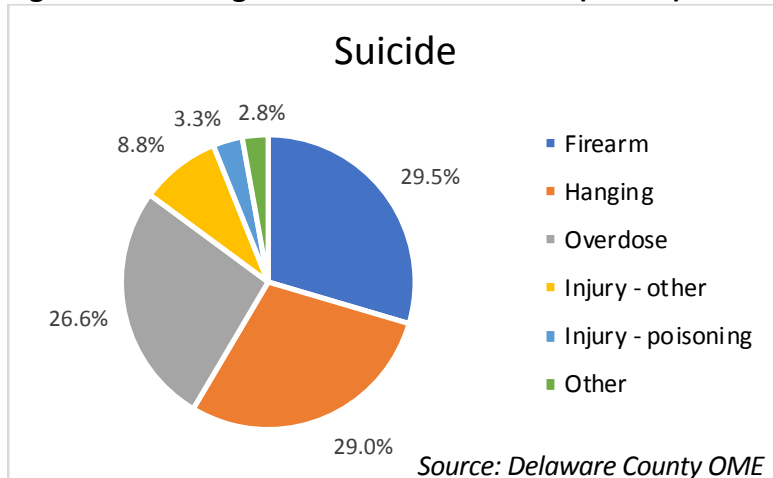
775 (32.8%) accidental deaths between 2009-2018 occurred among females, and 1,587 (67.1%) among males (Appendix B, Figure B.2). Overdose was more common among males, accounting for 906 (57.1%) deaths compared to 308 (39.7%) among females. Injury-related deaths occurred more frequently among females, accounting for 35.4% (274) of deaths versus 21.3% (338) among males. Motor vehicle accidents were the third most common cause of accidental mortality among males (153, 9.6%).

The stratification of accidental deaths by age group in Delaware County is as follows: <18 years, 37 (1.6%); 18-24 years, 151 (6.4%); 25-44 years, 819 (34.6%); 45-64 years, 696 (29.4%); 65+ years, 656 (27.7%) (Appendix B, Figure B.3). Among individuals 18-64 years old, overdose was the most common cause of accidental death (18-24 years, 106, 70.2%; 25-44 years, 657, 80.2%; 45-64 years, 426, 61.2%). Among individuals aged 65 and older, injury was the most common cause of accidental death (451, 68.8%).

Suicide Deaths

Among all DCME-reported deaths from 2009-2018, a total of 738 (10.9%) were attributable to suicide (Figure 19). Suicide deaths by firearm, hanging, and overdose were approximately equally represented, at 218 (29.5%), 214 (29.0%), and 196 (26.6%).

Figure 19. Leading Causes of Suicide Death (N=738) for Delaware County, 2009-2018.



645 (87.4%) suicide deaths occurred in individuals of white race (Appendix B, Figure B.4). Among white individuals, suicide death by firearm (188, 29.1%), overdose (178, 27.6%), and hanging (178, 27.6%) were approximately equally prevalent. Suicide was much less common in black individuals, accounting for 8.7% (64) of all suicides. Firearm and hanging were the most common modalities, accounting for 37.5% (24) and 32.8% (21) of suicide deaths among black individuals.

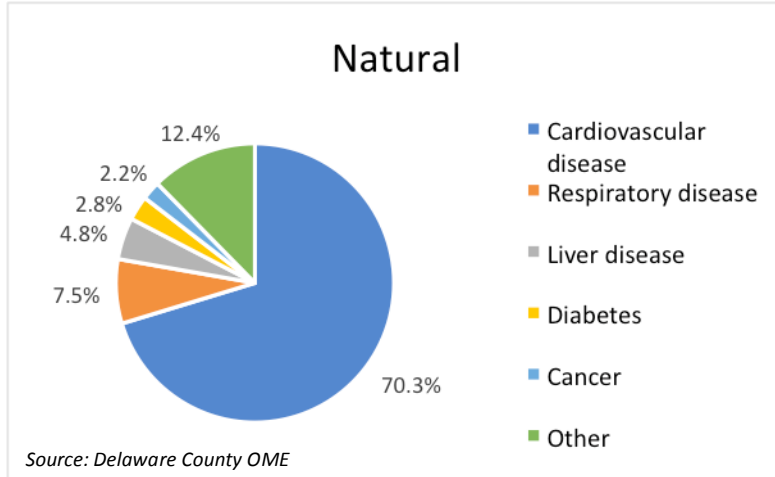
Suicide was more prevalent among males (519, 70.3%) than females (219, 29.7%) (Appendix B, Figure B.5). Among females, overdose accounted for almost half of all suicide deaths (107, 48.9%). Hanging and firearm-related injury accounted for 50 (22.8%) and 35 (16.0%) deaths, respectively. Conversely, among males, firearm-related injury and hanging were the two most common causes of suicide, at 183 (35.3%) and 164 (31.6%), respectively. Overdose was the third most common modality, accounting for 89 (17.1%) suicides among males.

The stratification of suicide deaths by age group in Delaware County is as follows: <18 years, 10 (1.4%); 18-24 years, 76 (10.3%); 25-44 years, 215 (29.1%); 45-64 years, 345 (46.7%); 65+ years, 92 (12.5%) (Appendix B, Figure B.6). Among those aged 18-24 and 25-44, the majority of suicides were via hanging (18-24 years, 36, 47.4%; 25-44 years, 75, 34.9%) and firearm-related injury (18-24 years, 23, 30.3%; 25-44 years, 54, 25.1%). Overdose was the most common cause of suicide death among 45-64 year olds (124, 35.9%). Among individuals 65 years and older, firearm was the most common mechanism of suicide, accounting for 43.5% (40) of deaths.

Natural deaths

Among all deaths from 2009-2018 examined by the DCME, a total of 2,707 (40.1% of all deaths) were classified as due to natural causes (Figure 20). The most common cause of natural death was cardiovascular disease, accounting for 1,903 deaths (70.3%). Respiratory disease and liver disease were the next most frequent, at 202 (7.5%) and 131 (4.8%), respectively.

Figure 20. Leading Causes of Natural Death (N= 2,707) for Delaware County, 2009-2018.



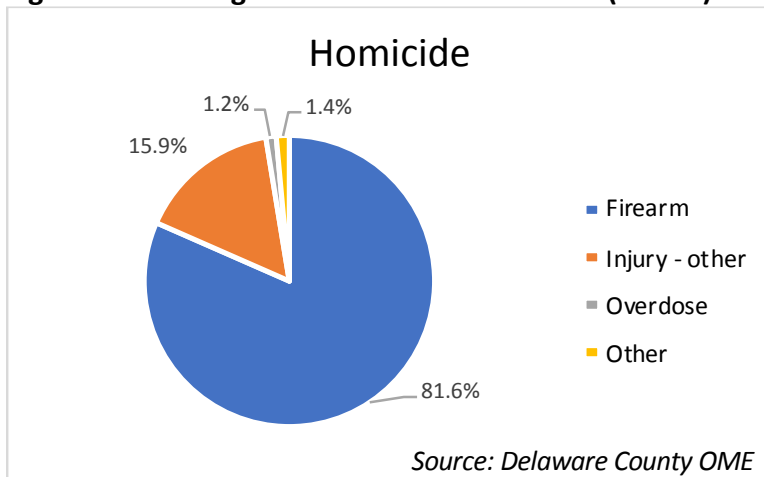
When stratified by race, 1,977 (73.0%) deaths occurred among individuals of white race, and 636 (23.5%) among individuals of black race (Appendix B, Figure B.7). The distribution of mortality causes among white and black individuals were similar, with cardiovascular disease accounting for 71.2% (1,408) and 67.5% (429), respectively. Respiratory disease was the second most prevalent cause among both groups, accounting for 7.4% (147) and 7.4% (47), respectively. Among all natural deaths, 1,746 (64.5%) occurred in males and 957 (35.4%) in females (Appendix B, Figure B.8). Cardiovascular disease was the predominant cause of natural death in both males and females, accounting for 72.6% (1,268) and 66.1% (633), respectively, followed by respiratory disease at 7.0% (122) and 8.3% (79), respectively.

The stratification of natural deaths by age group is as follows: <18 years, 64 (2.4%); 18-24 years, 27 (1.0%); 25-44 years, 239 (8.8%); 45-64 years, 1,283 (47.4%); 65+ years, 1,083 (40.0%) (Appendix B, Figure B.9). Infantile causes of death (20, 31.3%) and respiratory disease (20, 31.3%) were the two most common causes of natural death among those less than 18 years of age. Cardiovascular disease represented the majority of deaths among all age groups greater than 25 years, and represented a greater proportion of all natural deaths with increasing age (25-44 years, 142, 59.4%; 45-64 years, 872, 68.0%; 65+ years, 866, 80.0%).

Homicide Deaths

Among all deaths from 2009-2018, a total of 347 (5.1%) occurred as a result of homicide (Figure 21). Firearm-related injury was the leading cause of homicide deaths, accounting for 81.6% (283). The second leading cause was other causes of injury (including blunt force injury), accounting for 15.9% (55) of homicide deaths.

Figure 21. Leading Causes of Homicide Death (N=347) for Delaware County, 2009-2018.



When stratified by race, individuals of black race accounted for the majority of homicide deaths (265, 76.4%), whereas individuals of white race accounted for 60 (17.3%) deaths (Appendix B, Figure B.10). Among black individuals, the vast majority of homicide deaths were secondary to firearm injury (232, 87.5%). Among white individuals, firearm injury (35, 58.3%) and other injury (20, 33.3%) were both common causes of homicide death. Among all homicide deaths, 295 (85.0%) occurred in males, and 51 (14.7%) in females (Appendix B, Figure B.11). Among males, firearm injury was the predominant cause, accounting for 256 (86.8%) deaths, whereas both firearm-related (27, 52.9%) and other injuries (20, 39.2%) were prevalent among females.

The stratification of homicide deaths by age group is as follows: <18 years, 26 (7.5%); 18-24 years, 105 (30.3%); 25-44 years, 156 (45.0%); 45-64 years, 47 (13.5%); 65+ years, 12 (3.5%) (Appendix B, Figure B.12). The majority of homicide-related deaths among individuals aged <18 (17, 65.4%), 18-24 (101, 96.2%), and 25-44 (133, 85.3%) were due to firearm injury. Among 45-64 year olds, firearm-related deaths (19, 40.4%) and deaths from other injuries (27, 57.4%) were common.

Community Health Status Profile: Delaware County & Comparable Jurisdictions

Comparison County Selection

Comparison counties for this study were selected via a multi-step process. The JHSPH research team conducted a socio-demographic variable analysis of counties across the eastern seaboard, with an emphasis on comparable counties within the state of Pennsylvania. Data was obtained from multiple national databases including the Census, Behavioral Risk Factor Surveillance System, and the National Center for Health Statistics. Variables assessed included population size, life expectancy, geographic similarity, and general health outcomes. Researchers then worked closely with Delaware County leadership to finalize and complete the selection of the comparison counties.

Within Pennsylvania, five comparison counties were selected for inclusion based on data comparability, demographic similarity, and proximity to Delaware County: Berks County, Chester County, Lancaster County, Montgomery County, and York County. Demographic characteristics for these five comparison counties, Delaware County, and the state of Pennsylvania can be found in Appendix C, Table C.1. Chester and Montgomery Counties have their own county health departments, whereas Berks, Lancaster, and York Counties do not. Comparison counties from the 2010 study that were also included in the current study include Montgomery County, Pennsylvania as well as Baltimore County, Maryland and New Haven County, Connecticut. Both Baltimore and New Haven Counties have their own local health departments, at the county and district levels, respectively. Beyond the selected comparison counties, data are also presented for the state of Pennsylvania as well as the United States.

Indicator Selection

To comprehensively characterize community health in Delaware County, 37 community health status indicators were selected for inclusion in this profile (Appendix C, Table C.2).

In selecting these indicators, researchers consulted Healthy People 2020 (HP 2020), a national tool that presents measurable 10-year targets and objectives for strategic disease prevention and health promotion. These objectives are based on four overarching goals: (1) increase length and quality of healthy life lived, (2) attain health equity and eliminate health disparities, (3) create healthy communities via positive physical and social environments, and (4) promote health and well-being at all ages. Within these objectives, HP 2020 identified 26 Leading Health Indicators (LHIs)⁴¹, priority public health issues deemed crucial for a healthy nation.

Building on the HP 2020 LHIs, the JHSPH research team identified 14 key public health areas to provide a comprehensive profile of the health status of Delaware County that includes a focus on socioeconomic determinants of health.

List of key public health areas examined:

⁴¹ Office of Disease Prevention and Health Promotion. Healthy People 2020 - Leading Health Indicators. Updated July 6, 2020. Accessed June 5, 2020 from <https://www.healthypeople.gov/2020/Leading-Health-Indicators>

1. Socioeconomic Determinants of Health
2. Access to Health Services
3. Adult Chronic Disease
4. Disease Prevention
5. Environmental Quality
6. Food Safety
7. Injury & Violence
8. Maternal, Infant, and Child Health
9. Mental Health
10. Obesity & Physical Activity
11. Oral Health
12. Reproductive and Sexual Health
13. Substance Use and Abuse
14. Tobacco Use

Using the HP 2020 LHIs as a foundation, with added input from public health researchers and officials, the JHSPH research team then identified one to four indicators within each of these categories to feature in the overall profile, for a total of 37 indicators. Collectively, the selected indicators provide a broad yet comprehensive view of community health, inclusive of measures relating to health access and outcomes, preventable health risks, environmental conditions, and behavioral factors. JHSPH researchers elected to limit disease-related indicators to those with existing effective preventive or treatment interventions, such as vaccinations, omitting any indicators relating to diseases for which there currently is no cure nor any effective treatment options (e.g. Alzheimer’s disease). Indicator data was compiled only after completion of the indicator selection process to ensure that critical health issues were not omitted due to data availability or potential post-analysis implications.

Summary of Community Health Status Indicator Findings

Detailed summaries of each indicator including graphs and figures as well as an explanation of the methodology used to assemble and assess the data, are provided in the **Appendix D: Community Health Status Profile: Delaware County & Comparable Jurisdictions – Full Report**. Each of the public health areas also includes a section highlighting current programmatic and policy actions and efforts to address that topic area within Delaware County. The profile reflects the most current data researchers were able to obtain; however, the data time periods varied considerably both by county and by indicator, and there were some indicators for which available county-level data was not very recent.

Table 7 presents a summary of the community health status indicators across all Pennsylvania-based comparison counties and the state overall, inclusive of trends within Delaware County over time. Given the focus on evaluating Delaware County’s performance relative to its neighboring counties within the state of Pennsylvania, the non-Pennsylvania comparison counties are not included in this table. Data on these counties (Baltimore County and New Haven County) are included in the full indicator report in Appendix D. Following the table is a discussion of the overall indicator findings.

TABLE 7: Delaware County Community Health Status Indicator Trend and Comparison Summary

Public Health Indicator	Delaware County trend over time ^a	Current status of Delaware County in comparison to: ^b					
		Berks County	Chester County	Lancaster County	Montgomery County	York County	PA
Socioeconomic Determinants of Health							
Unemployment (% 16+yrs unemployed but seeking work)	Improving	Better	Worse	Worse	Worse	Worse	Better
4-year High School Graduation (% of 9 th grade cohort graduating in 4 years)	Improving	Better	Worse	Worse	Better	Worse	Better
Median Household Income (\$)	Improving	Better	Worse	Better	Worse	Better	Better
Access to Health Services							
Adults without Health Insurance (% <65yrs reporting no health insurance)	Improving	Better	Equal	Better	Worse	Equal	Better
Adult General Health Status (% adults reporting fair or poor health)	Worsening	Better	Worse	Worse	Worse	Worse	Better
Primary Care Provider Prevalence (population size to PCP ratio)	Worsening	Better	Better	Better	Worse	Better	Better
Adult Chronic Disease							
Cancer Prevalence (% ever dx with cancer, excl. skin cx)	Unchanged	Equal	Better	Worse	Better	Better	Better
Cardiovascular Disease Prevalence (% ever dx with heart disease)	Worsening	Worse	Equal	Worse	Worse	Equal	Worse
Diabetes Prevalence (% ever dx with diabetes)	Unchanged	Better	Better	Better	Equal	Better	Better
Asthma Prevalence (% 18+yrs report having asthma)	Worsening	Equal	Worse	Worse	Worse	Better	Worse
Disease Prevention							
Colorectal Cancer Screening (% 50+yrs ever had sigmoidoscopy / colonoscopy)	N/A	Better	Worse	Better	Worse	Better	Better
Breast Cancer Screening (% 40+yrs w/mammogram in past 2yrs)	N/A	Better	Better	Better	Better	Better	Better
MMR Vaccine (% kindergartners rec MMR vaccine 2+ doses)	Improving	Worse	Better	Better	Better	Better	Better
Pneumonia Vaccination (% 65+yrs ever vaccinated for pneumonia)	Improving	Better	N/A	N/A	Better	Better	Better
Environmental Quality							
Good AQI (number of days w/good AQI, def. as AQI≤50)	Improving	Worse	Better	Better	Worse	Worse	N/A
Lead Poisoning in Children (% <72mo w/confirmed lead poisoning >5μG)	Improving	Better	Better	Better	Worse	Better	Better
Food Safety							
Salmonella Incidence Rate (Salmonella poisoning rate per 100,000)	Improving	Better	Better	Worse	Better	Better	Better
Campylobacter Incidence Rate (Campylobacter infection rate per 100,000)	Worsening	Better	Better	Better	Better	Worse	Better
Injury & Violence							
Motor Vehicle Crashes (motor vehicle crash death rate per 100,000)	Worsening	Better	Better	Better	Worse	Better	Better
Child Maltreatment (number of cases per 1,000 individs. <18yrs)	Worsening	Better	Worse	Better	Worse	Better	Better
Firearm-related Deaths (firearm-related death rate per 100,000)	Worsening	Equal	Worse	Worse	Worse	Better	Better
Violent Crime (reported violent crime offenses per 100,000)	Improving	Worse	Worse	Worse	Worse	Worse	Worse

^a Trend reports (*improving/worsening/unchanged*) indicate how Delaware County performed over time for a given indicator. Time periods vary depending on years of data available per indicator.

^b Status reports (*better/worse/equal*) indicate how Delaware County compares to its comparison counties and the state of Pennsylvania as of the most recent data year available per indicator. All data reported here reflects pre-COVID-19 pandemic conditions.

TABLE 7: Delaware County Community Health Status Indicator Trend and Comparison Summary

Public Health Indicator	Delaware County trend over time ^a	Current status of Delaware County in comparison to: ^b					
		Berks County	Chester County	Lancaster County	Montgomery County	York County	PA
Maternal, Infant, and Child Health							
First Trimester Prenatal Care (% receiving prenatal care in 1 st trimester)	Improving	Worse	Better	Worse	Worse	Worse	Worse
Low Birth Weight (% live births with low birth weight)	Worsening	Worse	Worse	Worse	Worse	Worse	Worse
Infant Mortality Rate (deaths per 1,000 live births)	Improving	Worse	Worse	Worse	Worse	Worse	Worse
Mental Health							
Depression (% ever told they have a depressive disorder)	Worsening	Equal	Worse	Worse	Worse	Better	Equal
Poor Mental Health (% reporting fair or poor MH 1+ days in past mo.)	Improving	Worse	Worse	Worse	Worse	Worse	Equal
Suicide Rate (age-adjusted suicide rate per 100,000)	Worsening	Better	Worse	Worse	Worse	Better	Better
Obesity & Physical Activity							
Overweight and Obesity Prevalence (% reporting BMI 25+)	Worsening	Better	Worse	Better	Worse	Equal	Better
No Physical Activity (% adults w/no physical activity in past mo.)	Improving	Better	Worse	Better	Worse	Equal	Better
Oral Health							
Dentist Prevalence (population size to dentist ratio)	Improving	Better	Better	Better	Worse	Better	Better
Reproductive and Sexual Health							
Teen Birth Rate (birth rate per 1,000 females ages 15-19)	Improving	Better	Worse	Better	Worse	Better	Better
Chlamydia Infections (Chlamydia infection rate per 100,000)	Worsening	Worse	Worse	Worse	Worse	Worse	Worse
Gonorrhea Infections (Gonorrhea infection rate per 100,000)	Worsening	Worse	Worse	Worse	Worse	Worse	Worse
Substance Use and Abuse							
Deaths from Drug Use (age-adjusted drug-related deaths per 100,000)	Worsening	Worse	Worse	Worse	Worse	Worse	Worse
Binge Drinking (% 18+yrs report binge drinking)	Improving	Worse	Better	Worse	Better	Worse	Worse
Tobacco Use							
Adult Smoking (% current smokers [every day or some days])	Improving	Better	Equal	Worse	Worse	Better	Better

^a Trend reports (*improving/worsening/unchanged*) indicate how Delaware County performed over time for a given indicator. Time periods vary depending on years of data available per indicator.

^b Status reports (*better/worse/equal*) indicate how Delaware County compares to its comparison counties and the state of Pennsylvania as of the most recent data year available per indicator. All data reported here reflects pre-COVID-19 pandemic conditions.

Discussion of Community Health Status Indicator Findings

While Delaware County shows improving trends for a number of indicators, there remain some key areas of concern. There are a number of indicators for which the County reflects improvement over time, yet still lags behind the progress of its neighboring counties as well as the state. These include infant mortality rate, receipt of first trimester prenatal care, violent crime offenses, self-reported poor mental health, and binge drinking. The improving trend in binge drinking is a positive change from the 2010 study findings. Similarly, Delaware County has also seen an improvement in smoking prevalence compared to the previous study findings.

Worsening trends for Delaware County center around the areas of maternal and child health, chronic disease, mental and sexual health, and injury and violence. Indicators of particular concern for the County include low birth weight babies, asthma, cardiovascular disease, depression, suicide, chlamydia and gonorrhea infections, drug-induced as well as firearm-related deaths, and prevalence of adults reporting fair or poor health. Most of these were also identified as worsening trends of concern in the 2010 study as well, with the exception of cardiovascular disease and suicide, which had both previously shown improving trends. Depression, gonorrhea infections, and firearm-related deaths are new indicators that were not examined in the 2010 study.

It is important to address a wide variety of health outcomes for all Delaware County residents in order to promote optimal health, well-being, and health equity. Though there are ongoing public health efforts and initiatives throughout the County and some progress has been made in certain areas, there is a need for more granular and accessible data at the municipal level in order to more accurately assess health within specific communities, particularly groups that may be more disproportionately impacted and subjected to increased burden of disease. Additionally, a collaborative and cross-sectoral approach is necessary to bring together key stakeholders including County leadership (elected and municipal), residents, health providers, coalitions, businesses, and governmental, nonprofit, philanthropic, and other agencies and organizations in a unified effort to advance the health and well-being of all Delaware County community members.

Recommendations

The recommendations are framed around the core public health functions and 10 essential public health services to assure conditions in Delaware County that are conducive to health and quality of life for all Delaware County residents.

The recommendations are offered in the context of establishing and sustaining a **local governmental public health presence in Delaware County that serves as the voice** for public health and the local entity responsible for coordinating the provision of the essential public health services for all Delaware County residents.

1. Monitoring and Evaluation

Data should be regularly made available to the public to monitor and evaluate the health of all Delaware County residents and direct actions to protect and promote health and advance health equity.

There needs to be sufficient data at both the county and municipal levels to enable the analysis and tracking of health disparities and emerging issues within and across specific populations and geographical areas.

2. Coordination, Communication, and Collaboration

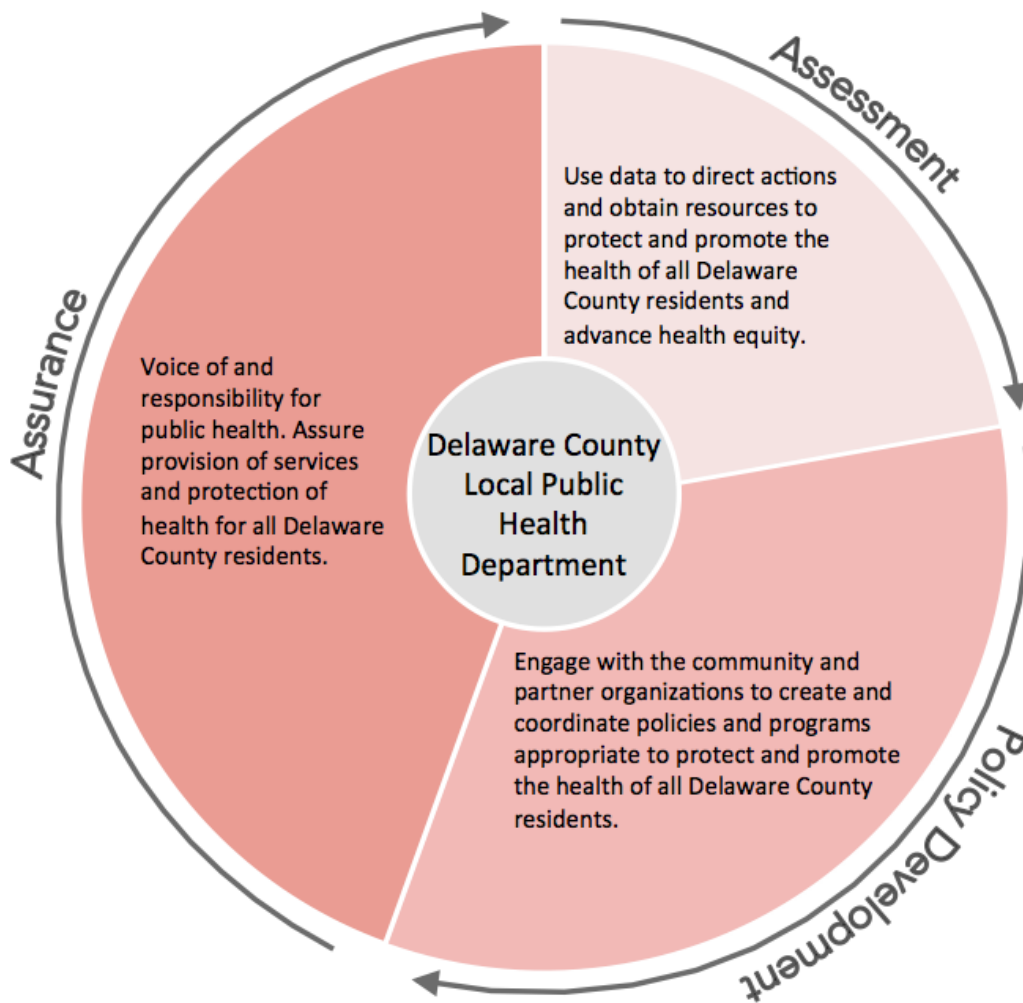
Though the County has various ongoing public health efforts in place, study findings indicate the general community is often unaware of these initiatives. The local health department should be the centralized entity tasked with coordinating and communicating public health information and delivery of the essential public health services available to all County residents.

The local health department should build on the work of existing organizations and agencies across all sectors to develop collaborative and coordinated public health service structures, with input from the public. All residents should have access to available public health services and resources, with tailored, culturally competent information available to underserved and minority populations. To assure the success of these efforts, evaluation mechanisms should be integrated into the planning and implementation processes.

3. Accountability, Resources, and Reporting

To ensure that all members of the Delaware County community can access resources and achieve progress toward improved health outcomes, public health needs to be a priority. This requires a clear sustainable vision and leadership for public health with built-in mechanisms for oversight and accountability. Support and training in public health skills should be integrated to assure the capacity of the County's public health workforce to respond to residents' needs and seek available resources. The local public health department should have the responsibility and authority to develop, track, and report regularly on specific data and performance measures to County officials and the public, to help guide obtainment and targeting of resources, maintain and improve the quality and effectiveness of the County's

health and public health service delivery, and advance health equity for all Delaware County residents.



Appendix

Appendix A: [Public Health Community Survey Questions](#)

Appendix B: [Methodology and Figures for Data from the Delaware County Medical Examiner's Office](#)

Appendix C: [Comparison County and Indicator Selection, Community Health Status Profile: Delaware County & Comparable Jurisdictions](#)

Appendix D: [Community Health Status Profile: Delaware County & Comparable Jurisdictions – Full Report](#)

Appendix A: Public Health Community Survey Questions

This appendix reflects the questions that were asked in the public health community survey.

Delaware County Public Health Survey Questions

1) Over the last two years have you always been able to receive health care when needed?

- Yes
- No

2) Where do you receive the majority of your health care services?

- Doctor's office
- Public health clinic
- Urgent Care or walk-in clinic
- Emergency Room
- Hospital (inpatient or outpatient)
- Telemedicine (mobile health communications)
- Other (please specify) _____

3) Over the last two years, have you received any direct health services and/or health education via mobile communication technology (e.g. telehealth, e-visits with a medical provider, mobile apps for recording or managing health information, mobile monitoring or tracking devices, etc.)? *Note: online patient portals and electronic medical records do not count as mobile communication technology.*

- Yes
- No

3a) ***If you answered YES to Question 3 above:*** Please briefly describe what types of mobile health communication technology you have used or received services from.

4) Over the past 2 years have you received any of the following services? (Please check all that apply).

- Breast Exam by a Medical Provider
- Blood Pressure Check
- Cholesterol Check
- Colorectal Test for Cancer
- Dental Exam
- Eye Exam
- Flu Vaccine (shot or nasal spray)
- Immunizations/Vaccinations (other than flu)
- Mammogram
- Pap Smear
- Prostate Exam
- Tuberculosis (TB) Test
- HIV/AIDS Test

Other (Please Specify) _____

5) Over the past 2 years have you received any form of information or education (from any source) on any of the following topics? *Note: this question pertains to information received, not anything that you actively sought out on your own.* (Please check all that apply)

Chronic Conditions and Indicators

- Asthma
- Cancer
- Cholesterol
- Diabetes/Pre-Diabetes
- Heart Disease
- High Blood Pressure
- Stroke

Environmental Health Risks

- Food Safety
- Lead Poisoning
- Drinking Water Testing in your Home
- Radon Testing

Infectious Diseases

- Sexually Transmitted Diseases (STDs)
- HIV/AIDS (including HIV testing)
- Ebola Virus
- West Nile and/or Zika Virus
- Lyme Disease

Injury Prevention and Violence

- Bicycle Helmet Use
- Carseat/Child Restraints
- Drunk Driving
- Seat Belts
- Trauma (including gun violence)

Mental Health

Depression, Anxiety, Mental Health

Nutrition and Physical Activity

- Exercise
- Nutrition

Preventative Care

- Antibiotic Resistance
- Cancer Screening (e.g. mammogram, colonoscopy, PSA, etc.)
- Flu Vaccine (shot or nasal spray)
- Hand Washing
- Immunizations/Vaccinations (other than flu, includes measles)
- Rabies Vaccinations for Pets

Reproductive Health

- Pregnancy

Substance Use/Abuse

- Alcohol Misuse/Abuse
- Drug Use/Opioids/Addiction

Tobacco

- Smoking/Tobacco Use (including e-cigarettes/vaping)

Other

Other (Please Specify)

6) Do you currently have any children under 5 years of age in your household?

- Yes
- No

6a) **If you answered YES to question 6 above:** Please indicate which services your family has received. (Please check all that apply)

- Prenatal Care
- Postpartum Physical Care for the Mother
- Car Seat Information/Installation
- Governmental Assistance (e.g. SNAP, WIC, Medicaid, CHIP)
- Immunizations/Vaccinations
- Well Baby Check Up
- Blood Lead Testing
- Breast Feeding Instruction
- Early Intervention Services
- Mental Health Information/Services (including postpartum depression)
- Nutritional Information
- Other (Please Specify) _____

7) In the list of the following public health issues, please indicate **up to five** that are of the most personal concern to you.

- Access to Health Care
- Access to Healthy Foods
- Alcohol and Drug Abuse (inclusive of opioids)
- Climate Change
- Drinking Water Quality
- Drunk Driving
- Emergency Preparedness
- Food Safety
- Housing Conditions (e.g. lead paint, bugs, etc.)
- Immunizations/Vaccinations
- Mental Health
- Neighborhood Nuisances (e.g., noise, garbage, weeds, etc.)
- Obesity/Healthy Lifestyles/Physical Activity
- Outdoor/Indoor Air Quality
- Violence/Crime/Domestic Abuse/Safety
- Social Determinants of Health (e.g. homelessness, employment, education, etc.)
- Other (Please Specify) _____

8) Are there any local health-related organizations/entities/agencies that you are aware of that currently address the issue(s) you selected in the previous question? If yes, please list them here.

9) In the past 2 years have you had any type of interaction (e.g. website, email, call, in-person exchange, attended event, etc.) with a local or state public health agency (PA only)?

Examples of public health agencies include, but are not limited to: city or township health department, public health clinic, emergency management, Delaware County Intercommunity Health Coordination, Department of Human Services [inclusive of Behavioral Health, Early Intervention, Adult & Family, Office of Intellectual & Developmental Disabilities, Early Learning Resource Center, and Children and Youth], Pennsylvania Department of Health, etc.

- Yes
- No

9a) **If you answered YES to question 9 above:** Please list the public health agencies you have interacted with in the past 2 years.

10) In the past 2 years, what sources have you used to obtain information and resources relating to health and public health-related issues (such as immunizations, food safety, mental health, drunk driving, etc.)? (Please select all that apply)

- Hospital/Clinic/Medical center (inclusive of medical/dental providers, pharmacists, etc.)
- Public health agency (city/county/state department or authority, Delaware County Intercommunity Health Coordination, etc.)
- Community-based organization
- Library and/or public community center
- Friends/Family
- Social media
- Internet/Websites

11) Are you aware of any county emergency response planning in Delaware County (i.e., response plans for events such as a hurricane, disease outbreak, bombing, etc.)?

- Yes
- No

11a) **If you answered YES to question 11 above:** Please list the response plans you are aware of in Delaware County.

12) Have you discussed/developed a plan for your response to an emergency event with any members of your family and/or community?

- Yes
- No

13) What is your age?

- Under 20
- 21-30
- 31-40
- 41-50
- 51-60
- 61-70
- 71-80
- 81+

14) What is your gender?

- Female
- Male
- Other (please specify) _____
- Prefer not to say

15) How long have you lived in Delaware County?

- 1 year or less
- 2 to 5 years
- 6 to 10 years
- More than 10 years

16) What zip code do you currently live in?

17) What option best describes your current employment status?

- Employed for wages, Full Time (≥ 30 hours/week)
- Employed for wages, Part Time (≤ 29 hours/week)
- Self-employed or family business
- Active Duty in the U.S. Armed Forces (military, National Guard, Reserve Unit, etc.)
- On paid/unpaid leave and expect to return (e.g. maternity/paternity leave, family leave, sick leave)
- Not working outside the home
- Unemployed or laid off, looking for work
- Unemployed, not currently looking for work
- Retired
- Student
- Other (Please Specify) _____

18) Please indicate your highest level of education.

- Some High School
- High School
- Some College
- Associates Degree
- Bachelor's Degree
- Graduate Degree
- Professional Degree
- Other (Please Specify) _____

19) Please indicate your type of residence.

- Apartment (rent)
- Condominium (own)
- Condominium (rent)
- Single-Family or Town Home (own)
- Single-Family or Town Home (rent)
- Retirement Community
- Shelter
- Other (Please Specify) _____

20) What is your race/ethnicity?

- White
- Black
- Asian
- Hispanic
- Mixed Race
- Other (Please Specify) _____

21) In general, how would you rate your health?

- Excellent
- Good
- Fair
- Poor

22) Which of the following describes your health care insurance?

- Employer-based private insurance
- Purchase your own private insurance (includes insurance purchased through the Health Insurance Marketplace)
- Medicaid
- Medicare
- Medicare and Medicaid (Dual Eligible beneficiary)
- No health insurance
- Other (please specify) _____

23) How did you learn about this survey? Please select all that apply.

Email message

Flyer (please indicate where you saw the flyer)

Word of mouth

Website (e.g. local/municipal/county sites, community organization webpage, etc.)

Social media (e.g. Facebook, Twitter, etc.)

Print media (e.g. newspaper, magazine, billboards, etc.)

Other (please specify) _____

24) Do you have any other comments about public health in Delaware County that you would like to share?

Appendix B: Methodology and Figures for Data from the Delaware County Medical Examiner’s Office

This appendix describes the methodology used to categorize and analyze mortality data from the Delaware County Medical Examiner’s Office, and includes additional figures depicting racial, gender, and age-group analyses for each manner of death.

Methodology

In most circumstances, sudden or unexpected deaths require additional investigation by a medical examiner in order to elucidate the specific etiologies. The resulting reports are a valuable source of epidemiological information that can be utilized to assess population-level prevalence and trends in mortality because they often include detailed demographic, clinical, and other information that is not readily available in other formats.

The Delaware County Medical Examiner’s (DCME) office provided a complete list of deaths that they examined and categorized between 2009 and 2018. Available information on each death for use in this analysis included 1) demographic factors, including age at death, sex, race, year of death, and time and place of death, 2) cause of death and DCME-categorized manner of death, and 3) clinical factors, including presence of toxins at time of death, history of drug use, alcohol use, and tobacco use.

For this report, causes of death were categorized using the DCME’s free text description for each individual’s cause of death. Cause of death was derived using standardized disease definitions based on the International Statistical Classification of Disease (ICD)⁴². The ICD is a classification tool designed and maintained by the World Health Organization (WHO) for the purposes of mapping health conditions to corresponding generic categories. Here, each free text entry for cause of death was manually matched to an ICD code of the closest fit. Each code was subsequently sorted based on broad categories that aligned with those described in the CDC’s report Leading Causes of Death in the US⁴³.

For certain causes in which a more detailed breakdown could be of interest, additional subgroupings were developed. Injuries were sub-divided as 1) overdose, 2) iatrogenic, 3) burn, 4) drowning, 5) hanging, 6) firearm, 7) motor vehicle accident (MVA), 8) poisoning, 9) injury-other. Of note, suicide-related deaths were classified based on the type of self-injury given that “suicide” is a category within “manner of death”, and not considered a cause of death in and of itself.

⁴² World Health Organization. International Statistical Classification of Disease. Accessed April 10, 2020 from <https://www.who.int/classifications/icd/en/>

⁴³ Centers for Disease Control and Prevention – National Center for Health Statistics. Leading Causes of Death. Updated March 17, 2017. Accessed April 10, 2020 from <https://www.cdc.gov/nchs/fastats/leading-causes-of-death.htm>

Notably, DCME independently conducted an analysis of deaths from overdoses of illicit substances. Using our categorization system, we report a remarkably similar number of overdose-related deaths, with only a 0.95% discrepancy for cumulative deaths over 2009-2018.

Figures (organized by manner of death)

Figure B.1. Proportion of Reported Accidental Deaths by Race for Delaware County, 2009-2018.

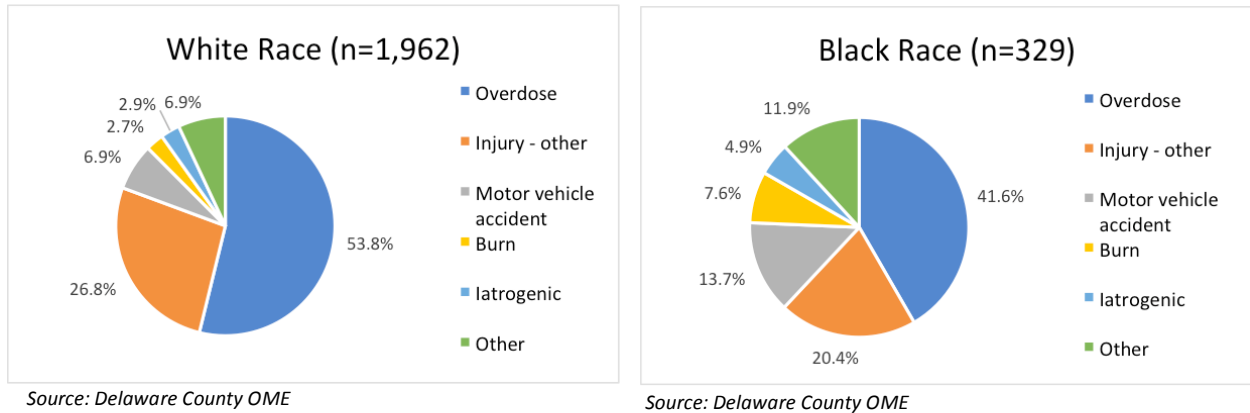


Figure B.2. Proportion of Reported Accidental Deaths by Sex for Delaware County, 2009-2018.

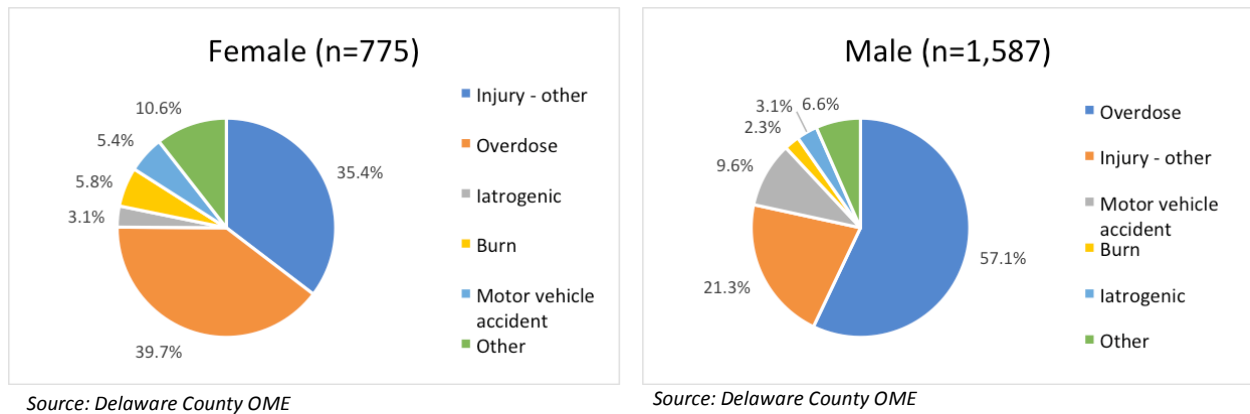


Figure B.3. Proportion of Reported Accidental Deaths by Age Group for Delaware County, 2009-2018.



Figure B.4. Proportion of Reported Suicide Deaths by Race for Delaware County, 2009-2018.

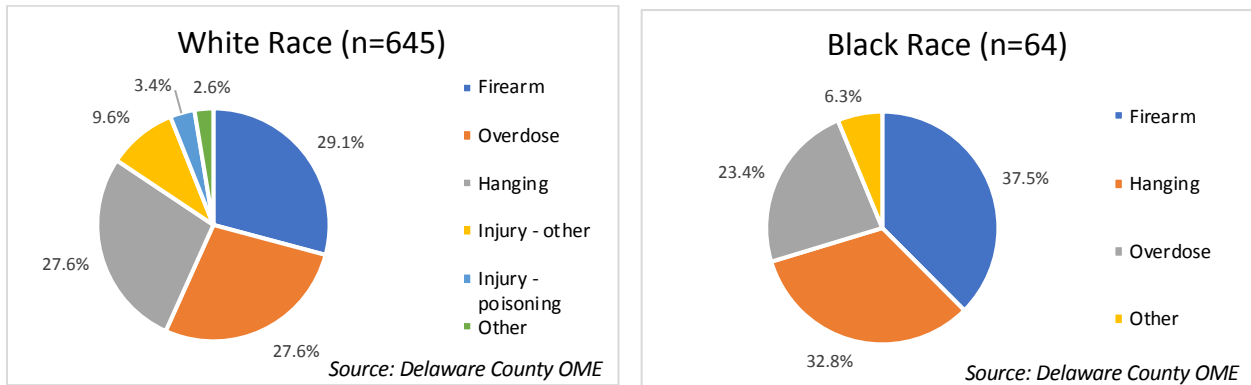


Figure B.5. Proportion of Reported Suicide Deaths by Sex for Delaware County, 2009-2018.

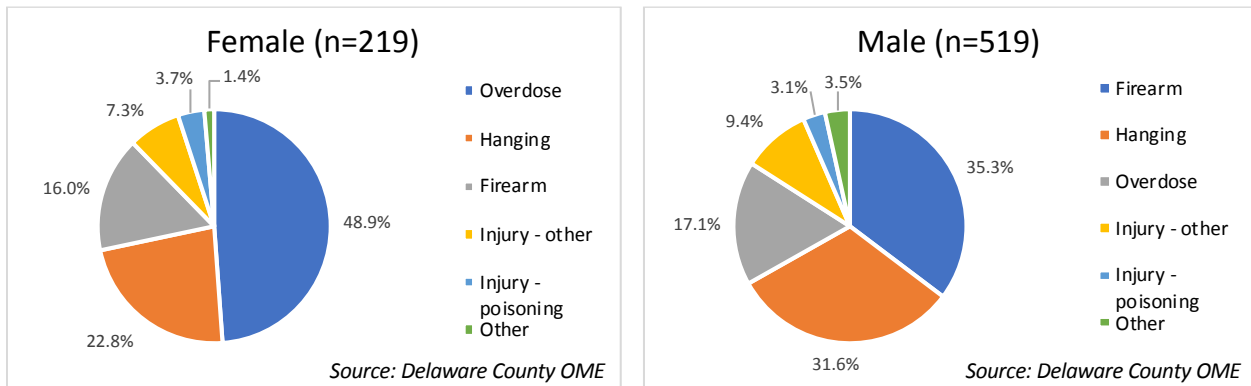


Figure B.6. Proportion of Reported Suicide Deaths by Age Group for Delaware County, 2009-2018.

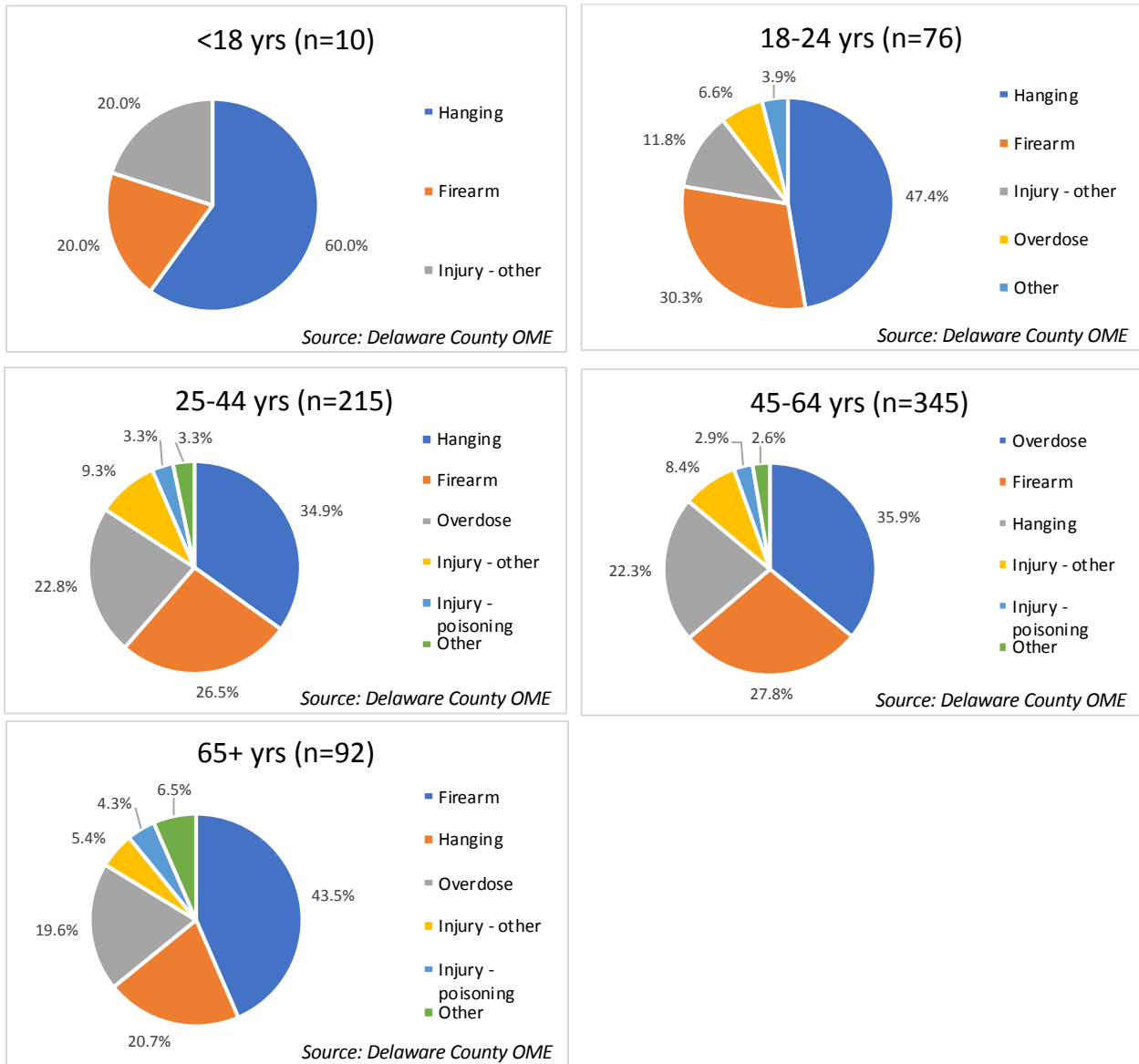


Figure B.7. Proportion of Reported Natural Deaths by Race for Delaware County, 2009-2018.

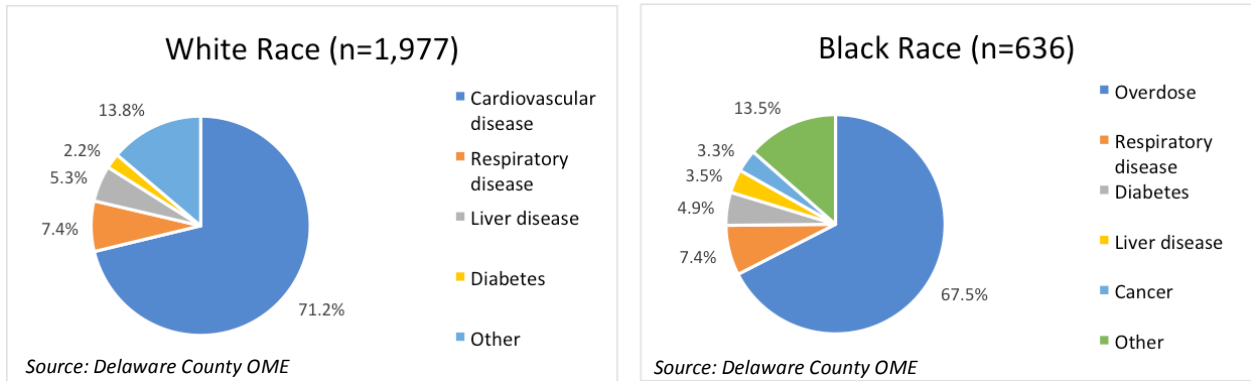


Figure B.8. Proportion of Reported Natural Deaths by Sex for Delaware County, 2009-2018.

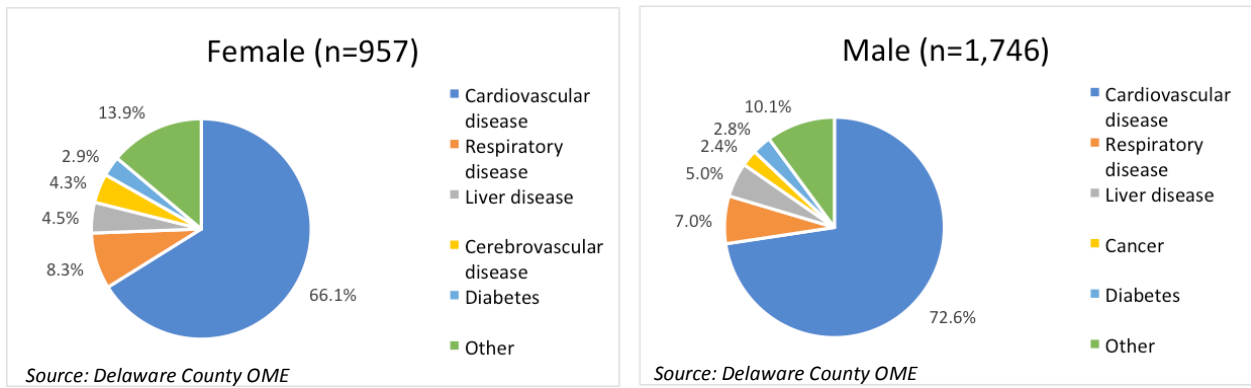


Figure B.9. Proportion of Reported Natural Deaths by Age Group for Delaware County, 2009-2018.

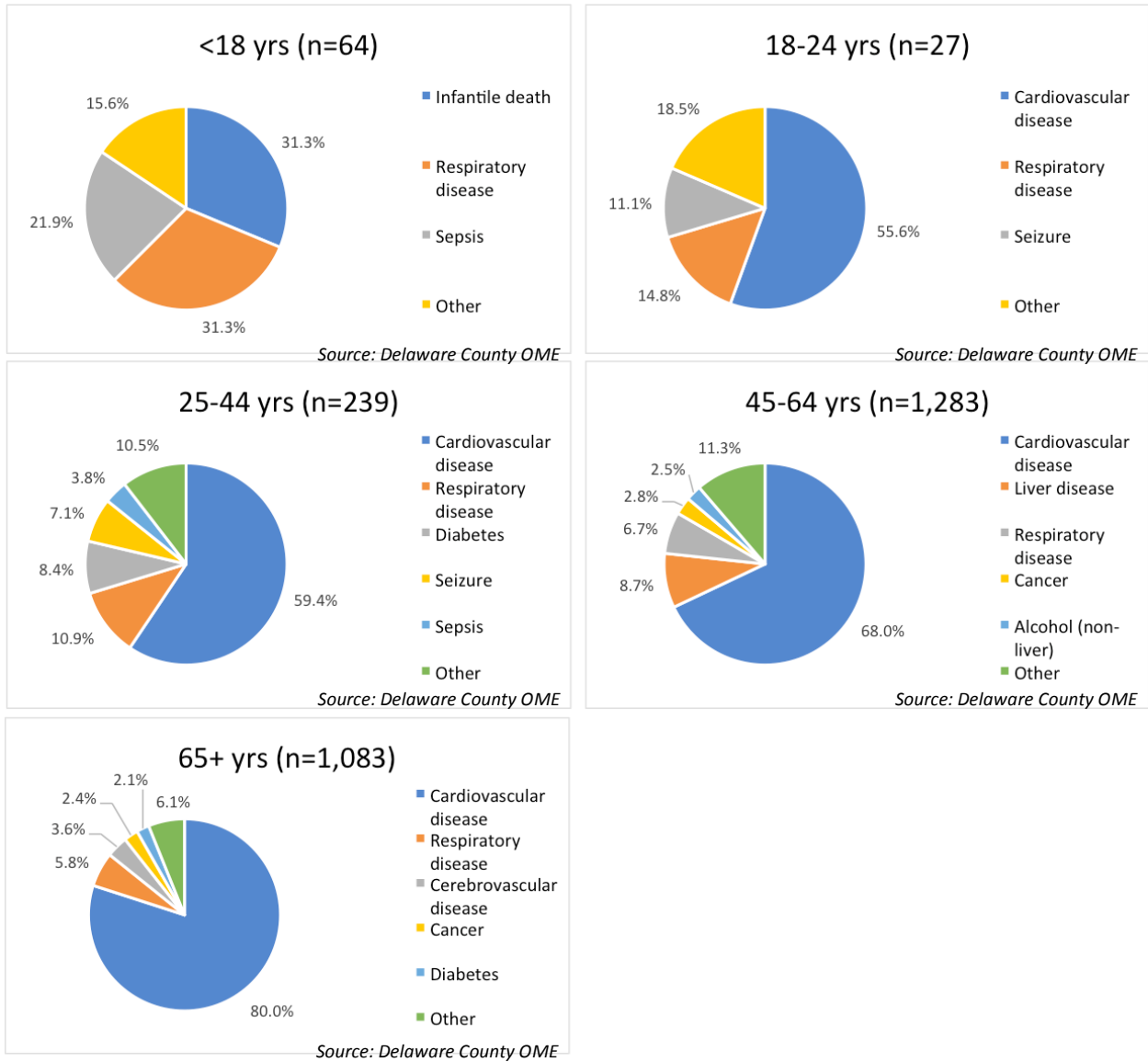


Figure B.10. Proportion of Reported Homicide Deaths by Race for Delaware County, 2009-2018.

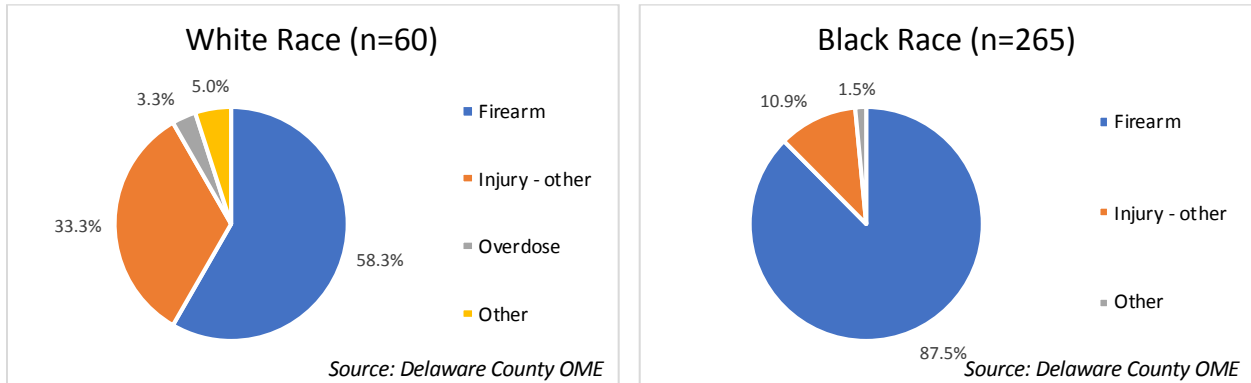


Figure B.11. Proportion of Reported Homicide Deaths by Sex for Delaware County, 2009-2018.

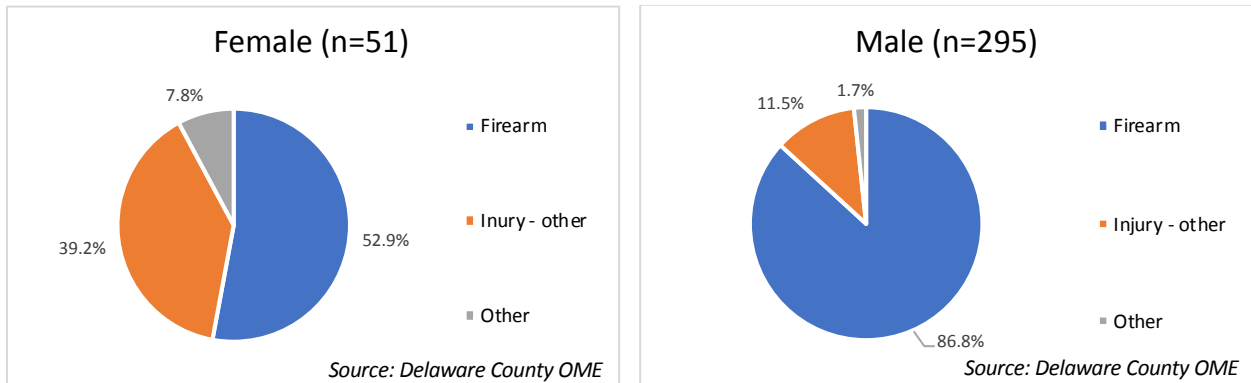
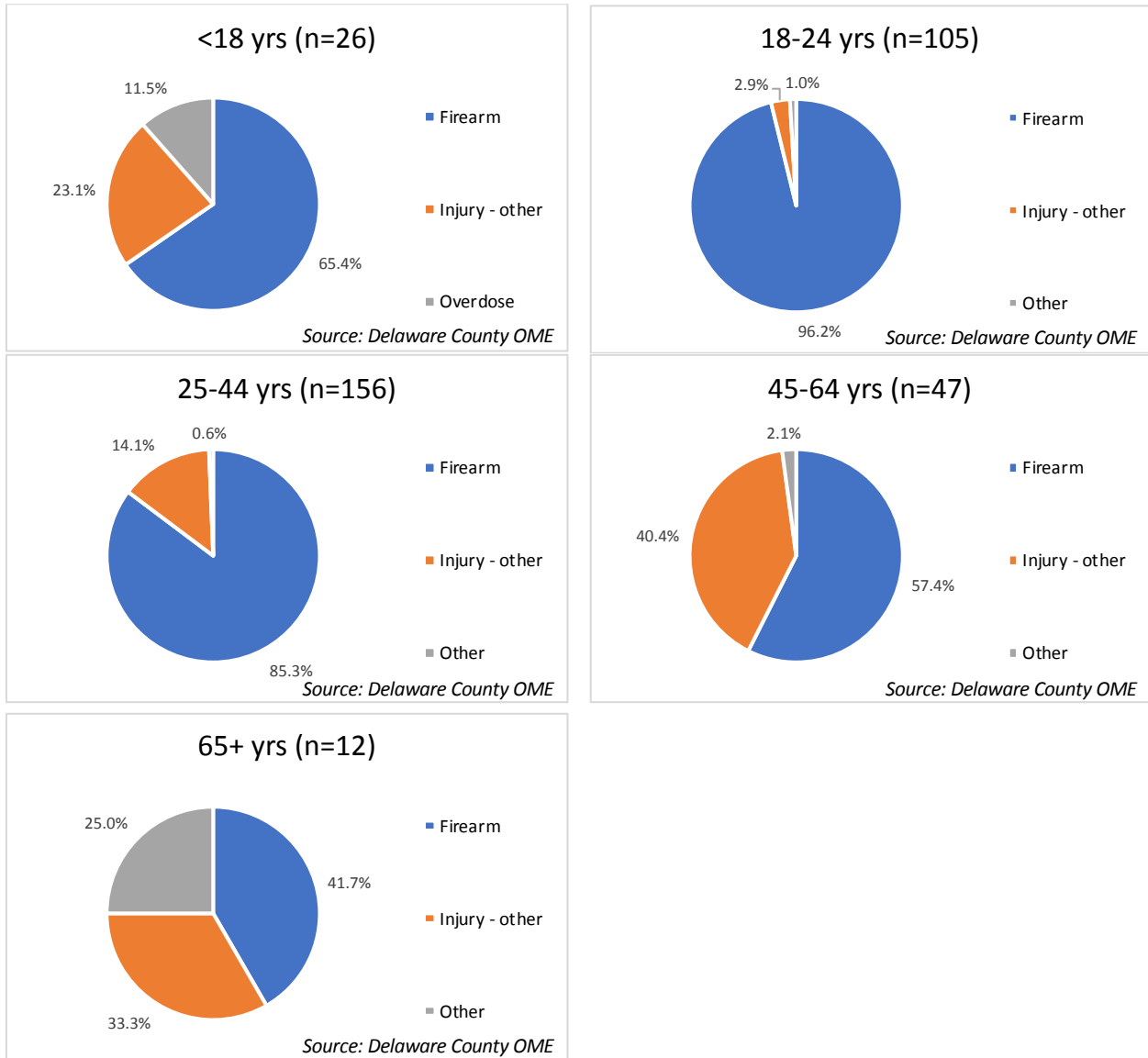


Figure B.12. Proportion of Reported Homicide Deaths by Age Group for Delaware County, 2009-2018.



Appendix C: Comparison County and Indicator Selection, Community Health Status Profile: Delaware County & Comparable Jurisdictions

This appendix describes the demographic characteristics of Delaware County and other Pennsylvania-based comparison counties used to identify comparison counties for inclusion in the Community Health Status Profile of Delaware County & Comparable Jurisdictions. This appendix also provides a list of all community health status indicators examined in the health status profiles.

Table C.1. Demographic Characteristics of Delaware County and Other Comparison Counties within Pennsylvania

Area Characteristics	Delaware County	Berks County	Chester County	Lancaster County	Montgomery County	York County	PA
Total Population, 2018	565,000	420,000	522,000	544,000	829,000	448,000	12,800,000
Population under 18 (%)	22%	22%	23%	24%	22%	22%	21%
Population over 65 (%)	16%	17%	16%	18%	18%	17%	18%
White (%)	66.2%	70.8%	78.9%	81.4%	75.1%	82.8%	75.9%
Black (%)	21.5%	4.2%	5.8%	3.5%	9.0%	4.7%	10.6%
Hispanic/Latino (%)	3.9%	21.9%	7.6%	10.8%	5.3%	7.9%	7.6%
Asian (%)	5.5%	1.4%	5.7%	2.2%	7.9%	1.6%	3.5%
Living below poverty level (%)	10.4%	13.6%	7.0%	10.4%	6.39%	10.3%	13.1%
Median household income (2018)	\$72,045	\$62,564	\$99,119	\$66,277	\$90,122	\$65,239	\$60,905
High school graduate (%)	29.8%	35.4%	20.2%	34.0%	23.9%	39.1%	34.6%
Bachelor's degree or higher (%)	38.6%	25.1%	54.0%	28.5%	48.7%	25.6%	31.9%
Non-English language spoken at home, adults 18+ (%)	13%	18%	13%	18%	14%	8%	12%

Source: Census Bureau ACS 2018

Table C.2: Community Health Status Indicators

<i>Socioeconomic Determinants of Health</i>
Unemployment (% 16+yrs unemployed but seeking work)
4-year High School Graduation (% of 9 th grade cohort graduating in 4 years)
Median Household Income (\$)
<i>Access to Health Services</i>
Adults without Health Insurance (% <65yrs reporting no health insurance)
Adult Health (% adults reporting fair or poor health)
Primary Care Provider Prevalence (population size to PCP ratio)
<i>Adult Chronic Disease</i>
Cancer Prevalence (% ever dx with cancer, excl. skin cx)
Cardiovascular Disease Prevalence (% ever dx with heart disease)
Diabetes Prevalence (% ever dx with diabetes)
Asthma Prevalence (% 18+yrs report having asthma)
<i>Disease Prevention</i>
Colorectal Cancer Screening (% 50+yrs ever had sigmoidoscopy / colonoscopy)
Breast Cancer Screening (% 40+yrs w/mammogram in past 2yrs)
MMR Vaccine (% kindergartners rec MMR vaccine 2+ doses)
Pneumonia Vaccination (% 65+yrs ever vaccinated for pneumonia)
<i>Environmental Quality</i>
Good AQI (number of days w/good AQI, def. as AQI≤50)
Lead Poisoning in Children (% <72mo w/confirmed lead poisoning >5μG)
<i>Food Safety</i>
Salmonella Incidence Rate (Salmonella poisoning rate per 100,000)
Campylobacter Incidence Rate (Campylobacter infection rate per 100,000)
<i>Injury & Violence</i>
Motor Vehicle Crashes (motor vehicle crash death rate per 100,000)
Child Maltreatment (number of cases per 1,000 individs. <18yrs)
Firearm-related Deaths (firearm-related death rate per 100,000)
Violent Crime (reported violent crime offenses per 100,000)
<i>Maternal, Infant, and Child Health</i>
First Trimester Prenatal Care (% receiving prenatal care in 1 st trimester)
Low Birth Weight (% live births with low birth weight <2.5kg)
Infant Mortality Rate (deaths per 1,000 live births)
<i>Mental Health</i>
Depression (% ever told they have a depressive disorder)
Poor Mental Health (% reporting fair or poor MH 1+ days in past mo.)
Suicide Rate (age-adjusted suicide rate per 100,000)
<i>Obesity & Physical Activity</i>
Overweight and Obesity Prevalence (% adults reporting BMI 25+)
No Physical Activity (% adults w/no physical activity in past mo.)
<i>Oral Health</i>
Dentist Prevalence (population size to dentist ratio)
<i>Reproductive and Sexual Health</i>
Teen Birth Rate (birth rate per 1,000 females ages 15-19)
Chlamydia Infections (Chlamydia infection rate per 100,000)
Gonorrhea Infections (Gonorrhea infection rate per 100,000)
<i>Substance Use and Abuse</i>
Deaths from Drug Use (age-adjusted drug-related deaths per 100,000)
Binge Drinking (% 18+yrs report binge drinking)
<i>Tobacco Use</i>
Adult Smoking (% current smokers [every day or some days])

Appendix D: Community Health Status Profile: Delaware County & Comparable Jurisdictions – Full Report

Overview

This report includes detailed community health status indicator profiles for Delaware County and comparable jurisdictions across Pennsylvania and the Eastern Seaboard. Within Pennsylvania, five comparison counties were selected for inclusion based on data comparability, demographic similarity, and proximity to Delaware County: Berks County, Chester County, Lancaster County, Montgomery County, and York County. In addition, Baltimore County in Maryland and New Haven County in Connecticut were selected for inclusion based on their similarity to Delaware County and their use as comparison counties in the original 2010 study. Beyond the selected comparison counties, data are also presented for the state of Pennsylvania as well as the United States.

To comprehensively characterize community health in Delaware County, 37 community health status indicators were selected for inclusion in this profile. Indicators are organized into 14 key public health areas that include a focus on socioeconomic determinants of health.

List of key public health areas examined:

1. [Socioeconomic Determinants of Health](#)
2. [Access to Health Services](#)
3. [Adult Chronic Disease](#)
4. [Disease Prevention](#)
5. [Environmental Quality](#)
6. [Food Safety](#)
7. [Injury & Violence](#)
8. [Maternal, Infant, and Child Health](#)
9. [Mental Health](#)
10. [Obesity & Physical Activity](#)
11. [Oral Health](#)
12. [Reproductive and Sexual Health](#)
13. [Substance Use and Abuse](#)
14. [Tobacco Use](#)

Together, the selected indicators provide a broad yet comprehensive view of community health, inclusive of measures relating to health access and outcomes, preventable health risks, environmental conditions, and behavioral factors. Investigators elected to limit disease-related indicators to those with existing effective preventive or treatment interventions, omitting any indicators relating to diseases for which there currently is no cure nor any effective treatment options. Of note, indicator data was compiled only after completion of the indicator selection process to ensure that critical health issues were not omitted due to data availability or potential post-analysis implications.

Data Assembly and Assessment

Obtaining reliable, valid, and comparable data for Delaware County and the selected comparison counties proved to be a significant challenge in developing this profile. Depending on the data source, data for New Haven and Baltimore Counties sometimes did not align with Delaware County and the other PA counties in terms of available years of data. Additionally, differences in data reporting systems across counties made it difficult to find comparable data for some indicators, particularly for New Haven County given the state of Connecticut tends to report data at the district level rather than by county. As consistent county-level data pertaining to child and adolescent health was challenging to find, many of the indicators included in this profile therefore reflect adult health. The profile reflects the most current data investigators were able to obtain, though this varied considerably both by county and by indicator, and there were some indicators for which available county-level data was not very recent.

To ensure comparability, investigators used data from Federal sources when possible, including the U.S. Census Bureau, Environmental Protection Agency (EPA), Federal Bureau of Investigation's Uniform Crime Reporting Program (UCR), and the Centers for Disease Control and Prevention (CDC)'s disease surveillance databases and Behavioral Risk Factor Surveillance System (BRFSS). Investigators supplemented national data with datasets from the Pennsylvania, Maryland, and Connecticut Departments of Health, including the Pennsylvania Department of Health's Enterprise Data Dissemination Informatics Exchange (EDDIE) and Maryland's Indicator Based Information System (IBIS), as well as other sources as needed. All data sources are referenced accordingly throughout the report.

Data for each indicator were depicted in two ways when possible: (1) bar graph comparing county-level indicator values derived from the latest available year and (2) line graph depicting trends in indicator values by year. Data is primarily presented as multi-year averages since single-year data at the county and jurisdictional levels can vary widely year-to-year and may not accurately depict the status of a given indicator. Multi-year average data for Delaware County and all PA-based comparison counties as well as the state of PA is readily accessible from EDDIE. Comparable data for Baltimore and New Haven Counties was unfortunately not as readily available, and therefore is not presented for some indicators due to differences in data collection methodology, indicator definition, and time frame.

Delaware County-specific data is depicted in red across all indicator graphs and figures. When feasible, investigators also included state and national reference points for each indicator, reflecting equivalent data for the state of PA and the nation as a whole. In the bar graphs, these are depicted as colored vertical lines (blue for PA and green for the US). National comparison data was omitted for any indicators where available national data was not comparable in terms of indicator definition or other data parameters.

All data presented in the figures reflect county-level information that is not stratified by race, ethnicity, gender, sex, or residence. Written summaries are provided to explain the findings for

each indicator. Figures depicting significant data findings are retained in the report body, with all other figures referenced and provided in the Appendix.

As noted previously, indicators are organized into 14 key public health areas. With the exception of the first area, Socioeconomic Determinants of Health, each public health area culminates with a “Data to Action” section highlighting current programmatic and policy actions and efforts to address this particular topic area within Delaware County. Information for the “Data to Action” sections was obtained from various online sources, including Delaware County organizational and governmental agency websites as well as Delaware County Council meeting minutes.

SOCIOECONOMIC DETERMINANTS OF HEALTH

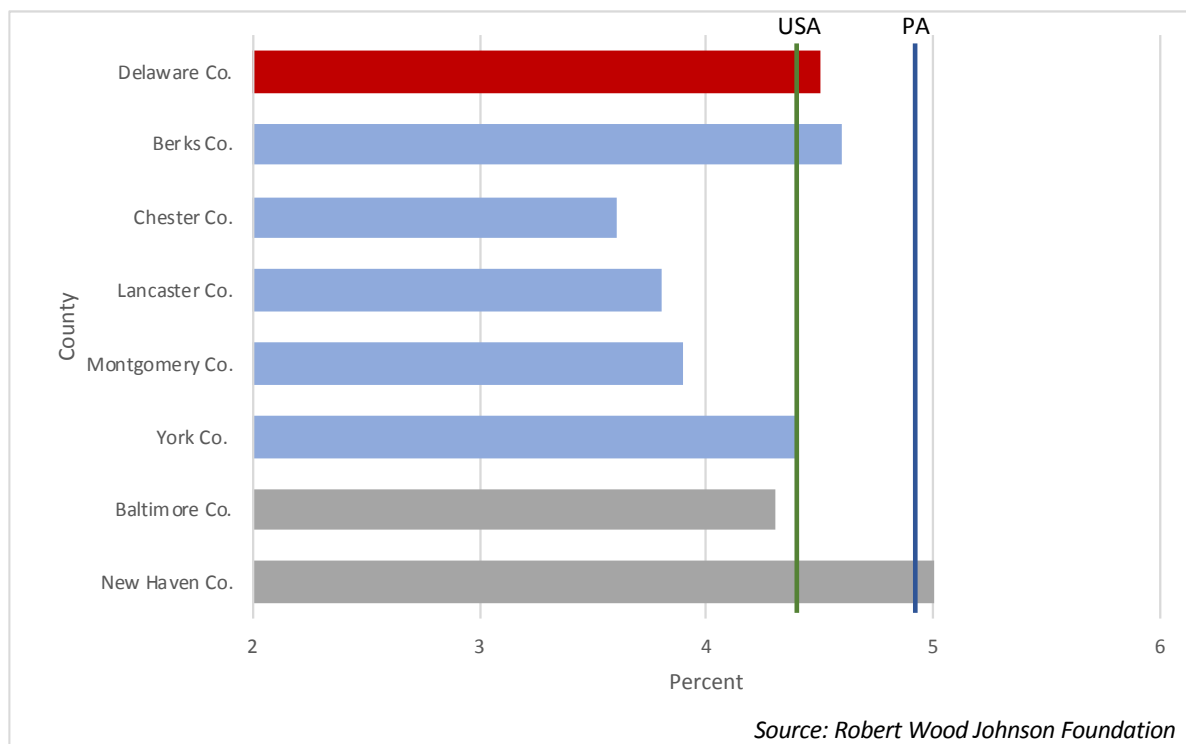
It is widely recognized that an individual’s social and physical environment plays an essential role in determining their health and well-being. Healthy People 2020 identifies many of these societal factors that play an integral role, including the resources and support available within one’s home, neighborhood, and community, the quality of schooling, one’s ability to access fair and safe work, as well as others. Better understanding and addressing shortcomings in these areas may help to ameliorate the growing health disparities seen at both state and national levels, and equip Delaware County residents with the tools they need in order to better take charge of their own health.

UNEMPLOYMENT

In 2019, approximately 4.5% of Delaware County residents age 16 years and older were classified as unemployed but seeking work (**Figure 1**). This unemployment rate was comparable to the national reported average of 4.4%, but slightly lower than the PA average of 4.9%. The rate was higher than that of neighboring counties Chester, Lancaster, and Montgomery, and approximately equal to that of Berks and York Counties, at 4.6% and 4.4%, respectively.

FIGURE 1. PERCENTAGE OF INDIVIDUALS AGE 16 AND OLDER UNEMPLOYED, BUT SEEKING WORK, 2019.

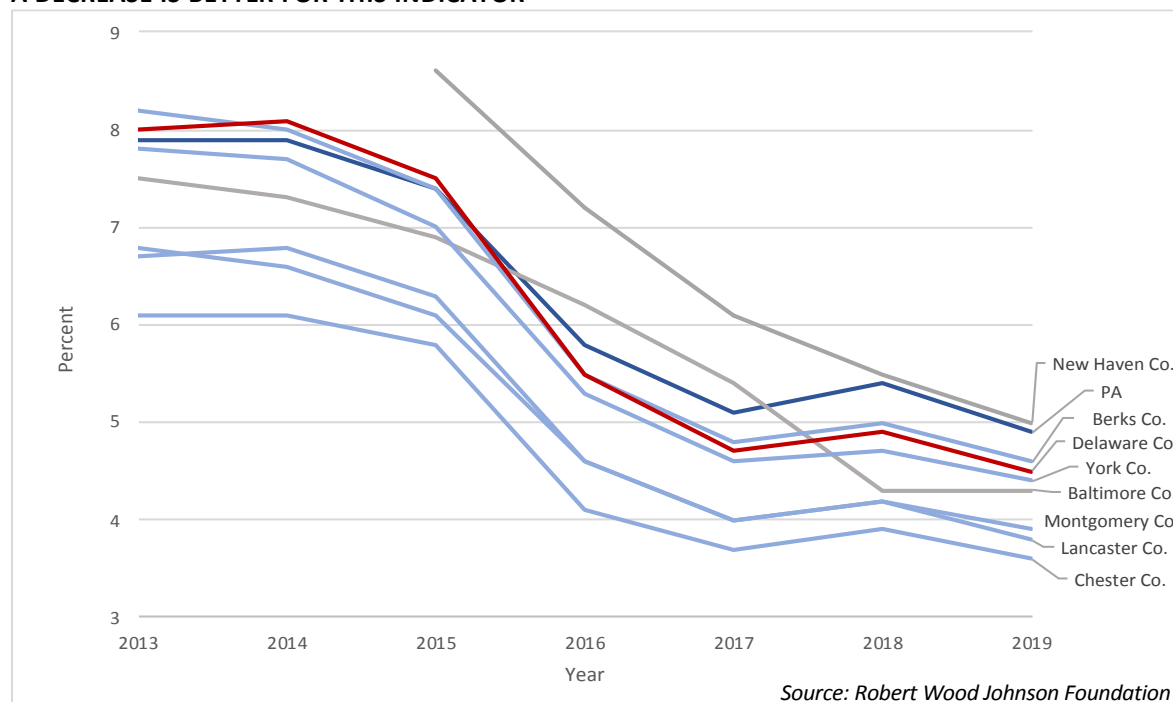
A LOWER VALUE IS BETTER FOR THIS INDICATOR



From 2013-2019, there has been a dramatic decrease in the unemployment rate among individuals age 16 years and older among all counties assessed in our study (**Figure 2**). Delaware County experienced a consistent decline from a peak of about 8% in 2014 to 4.5% in 2019. Throughout this time period, its unemployment rate has largely remained consistent with that of the state of PA. Notably, Chester County's rate of unemployment has been lowest among the assessed counties over the entire duration of this time period.

FIGURE 2. TRENDS IN PERCENTAGE OF INDIVIDUALS AGE 16 AND OLDER UNEMPLOYED, BUT SEEKING WORK, 2013-2019.

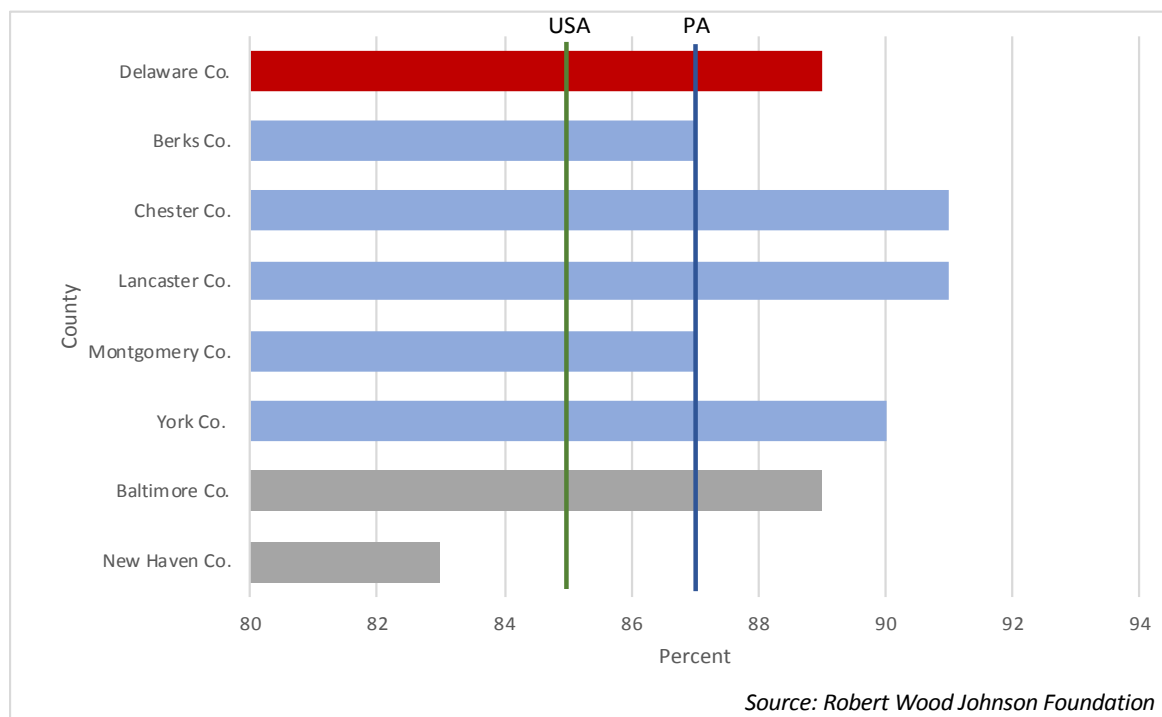
A DECREASE IS BETTER FOR THIS INDICATOR



EDUCATION

In 2019, 89% of high schoolers entering ninth grade in Delaware County graduated within four years (**Figure 3**). Compared to neighboring counties, Delaware County's 4-year graduation rate is marginally higher than that of Berks and Montgomery at 87%, and slightly lower than Chester, Lancaster, and Montgomery, at 91%, 91%, and 90%, respectively. Delaware County's rate was above both the state (87%) and national averages (85%).

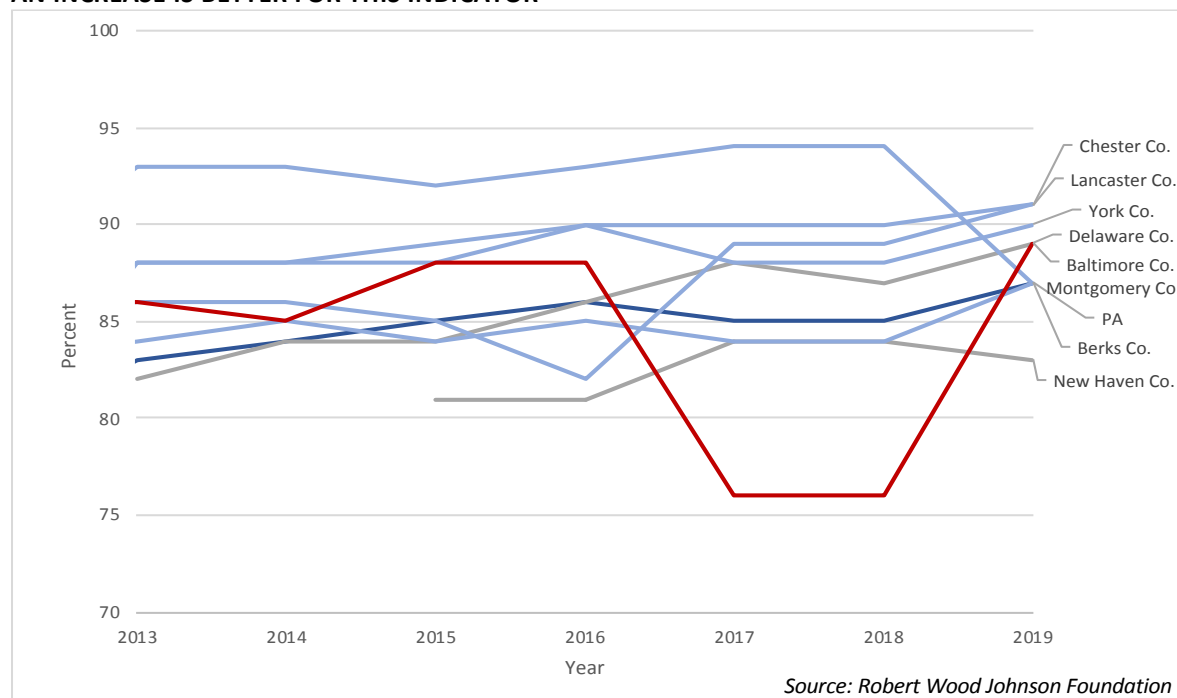
**FIGURE 3. PERCENTAGE OF NINTH GRADE COHORT GRADUATING IN FOUR YEARS, 2019.
A HIGHER VALUE IS BETTER FOR THIS INDICATOR**



The trend in percentage of 4-year high school graduation in Delaware County has remained largely constant from 2013-2019 at approximately 85-89%, with the exception of a marked decrease in 2017 and 2018, during which it fell to 76% (**Figure 4**). This two-year decrease was not observed in neighboring PA counties and comparator counties New Haven and Baltimore, which largely remained constant or slightly increased within the same time period. Statewide, the 4-year high school graduation rate experienced a gradual increase, from 83% in 2013 to 87% in 2019.

FIGURE 4. TRENDS IN PERCENTAGE OF NINTH GRADE COHORT THAT GRADUATES IN FOUR YEARS, 2013-2019.

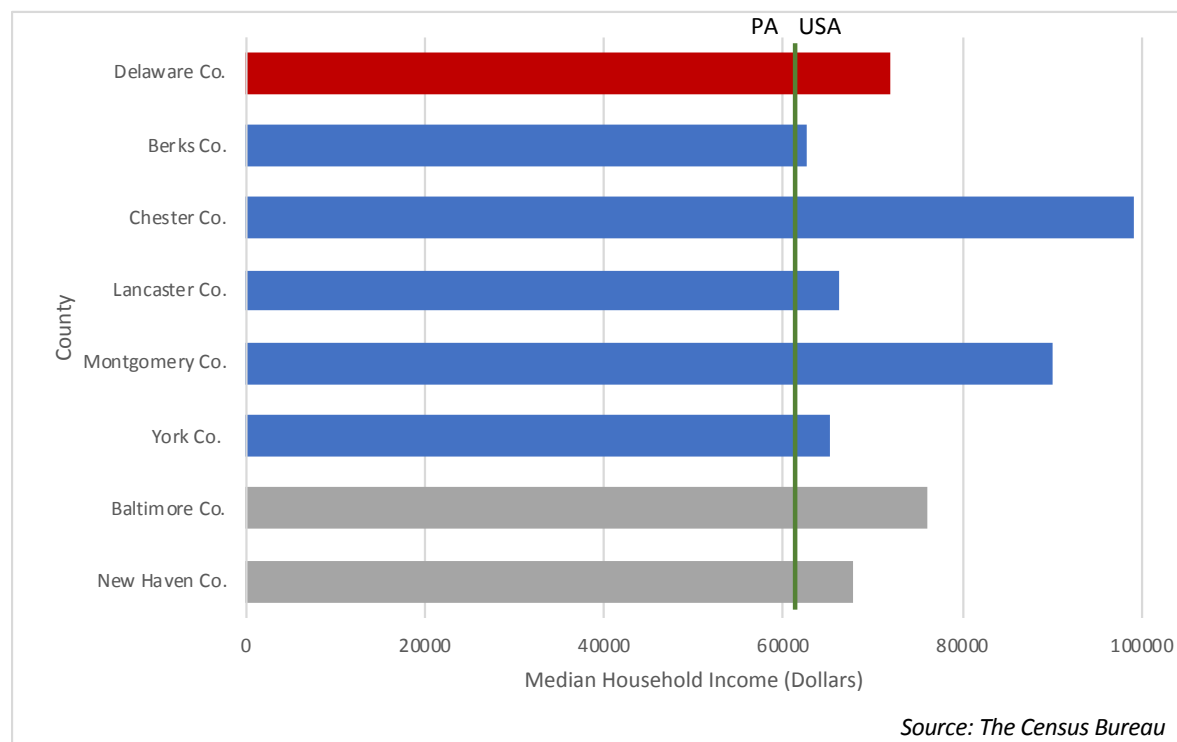
AN INCREASE IS BETTER FOR THIS INDICATOR



MEDIAN HOUSEHOLD INCOME

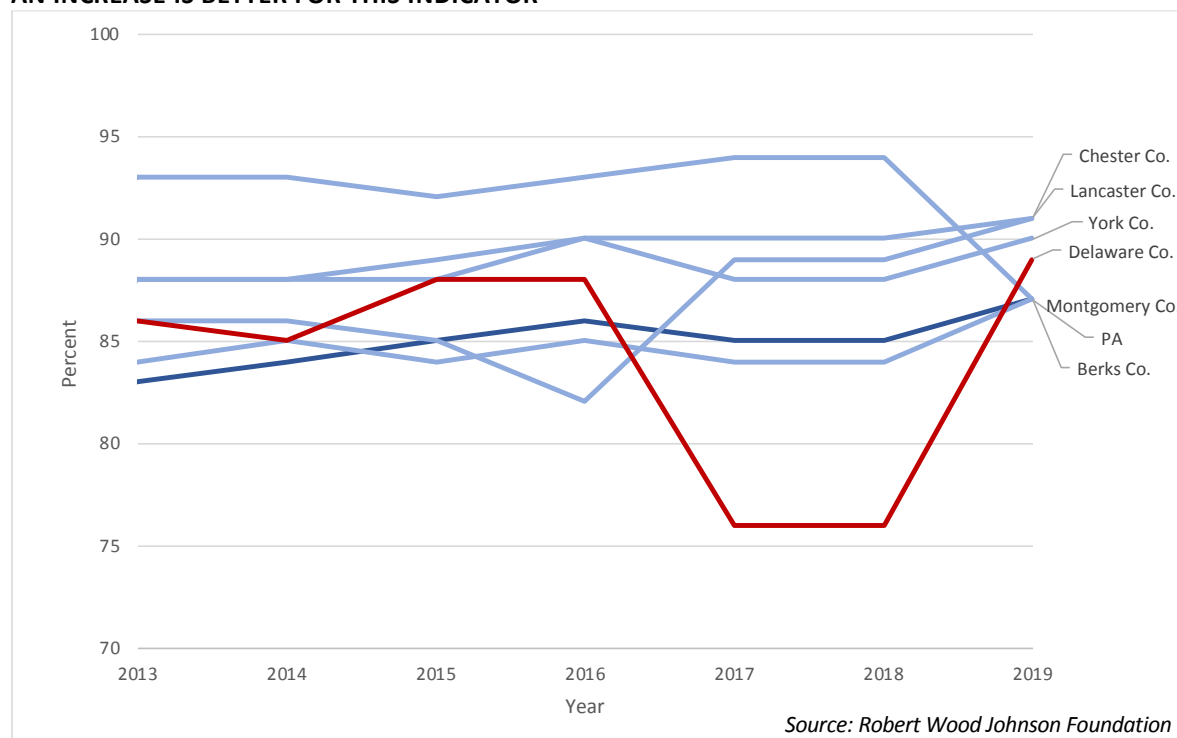
In 2018, the median household income for families in Delaware County was \$72,045 (**Figure 5**). This was higher than both the state and nationwide medians of \$60,905 and \$63,179. Significant disparity exists among neighboring counties, with Chester and Montgomery Counties having the highest median household income at \$99,199 and \$90,122, respectively. Berks, York, and Lancaster Counties had median household incomes that were lower than that of Delaware County, at \$62,564, \$65,239, and \$66,277, respectively.

FIGURE 5. MEDIAN HOUSEHOLD INCOME, 2018.
A HIGHER VALUE IS BETTER FOR THIS INDICATOR



For Delaware County as well as all other comparator counties, median household income experienced a gradual and consistent increase across 2012-2018 (**Figure 6**). During this period, median household income in Delaware County increased from \$61,065 to \$72,045. It remained among the middle when compared to neighboring counties, with Chester and Montgomery Counties having the highest median household income and Berks, York, and Lancaster Counties having the lowest. Delaware County also remained consistently higher than the PA state average, which increased from \$51,230 to \$60,905 during this time period.

FIGURE 6. TRENDS IN MEDIAN HOUSEHOLD INCOME, 2012-2018.
AN INCREASE IS BETTER FOR THIS INDICATOR



ACCESS TO HEALTH SERVICES

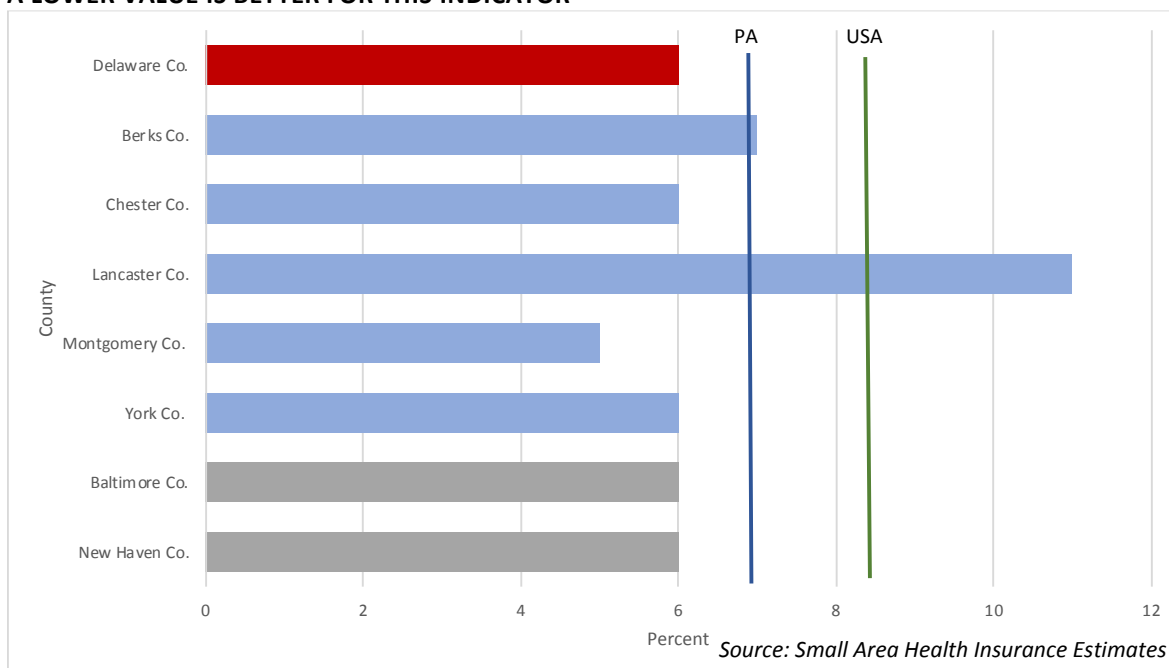
Proper and timely access to healthcare services is a basic right and necessary step in achieving equality for all Americans. Failure to do so can lead to consequences including 1) unmet health needs, 2) delays in receiving appropriate care, 3) inability to receive preventative services (such as immunizations), 4) personal and institutional financial burden, and 5) preventable hospitalizations¹. Millions of Americans across the nation are still living without health insurance and no means to access basic health services², such as primary and emergency care.

ADULTS WITHOUT HEALTH INSURANCE

In the latest report, 6% of adults in Delaware County under the age of 65 were without health insurance (**Figure 7**). This is comparable to its surrounding counties, all of which range between 5-7%, with the exception of Lancaster County at 11%. Delaware County falls marginally below the state average of 7% as well as the national average of 8.5%.

¹ Access to Health Services. HealthyPeople.gov. ODPHP. (n.d.) Retrieved May 2020 from <https://www.healthypeople.gov/2020/leading-health-indicators/2020-lhi-topics/access-to-health-services>
² Uberoi, N., K. Finegold, and E. Gee. "ASPE Issue Brief: Health Insurance Coverage and the Affordable Care Act 2010-2016." ASPE. U.S. Department of Health and Human Services (2016).

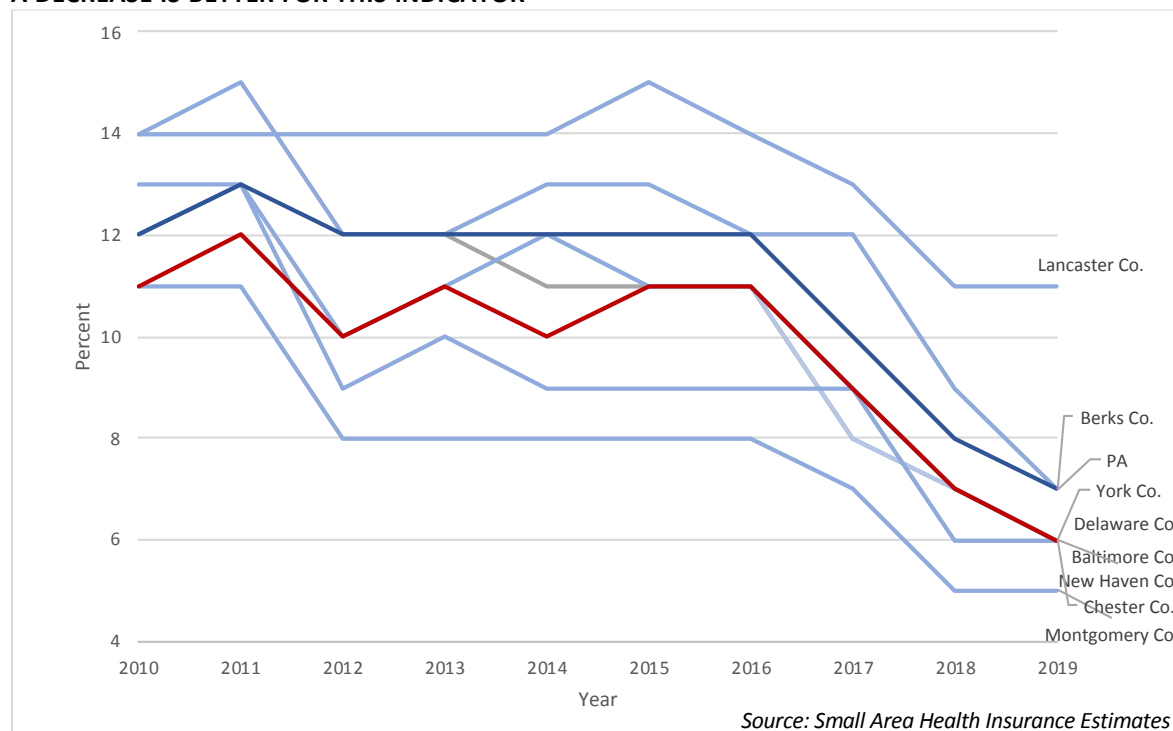
FIGURE 7. PERCENT OF ADULTS UNDER 65 YEARS OLD WITHOUT HEALTH INSURANCE, 2019.
A LOWER VALUE IS BETTER FOR THIS INDICATOR



Since 2010, there has been a statewide downtrend of uninsured adults in the state of PA, from 12% in 2010 to 7% in 2019 (**Figure 8**). Delaware County has consistently remained under the state average while following this trend, from 11% to 6% uninsured in the same time period. It is comparable to neighboring counties, again with the exception of Lancaster County.

FIGURE 8. TRENDS IN PERCENT OF ADULTS UNDER 65 YEARS OLD WITHOUT HEALTH INSURANCE, 2010-2019.

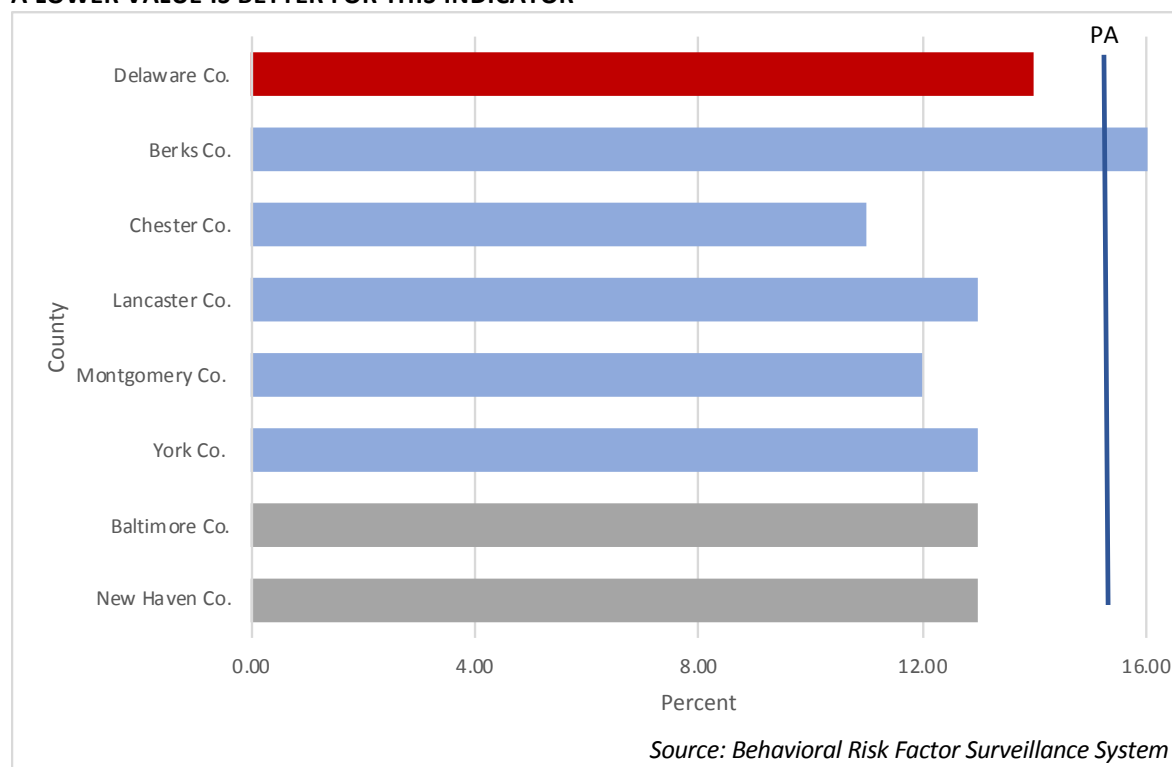
A DECREASE IS BETTER FOR THIS INDICATOR



ADULT HEALTH

In 2019, 14% of adults residing in Delaware County reported their physical health as “fair/poor,” slightly lower than the state average of 15% (**Figure 9**). However, with the exception of Berks County (16%), Delaware County is marginally higher than many of its neighboring counties, which range from 11-13%.

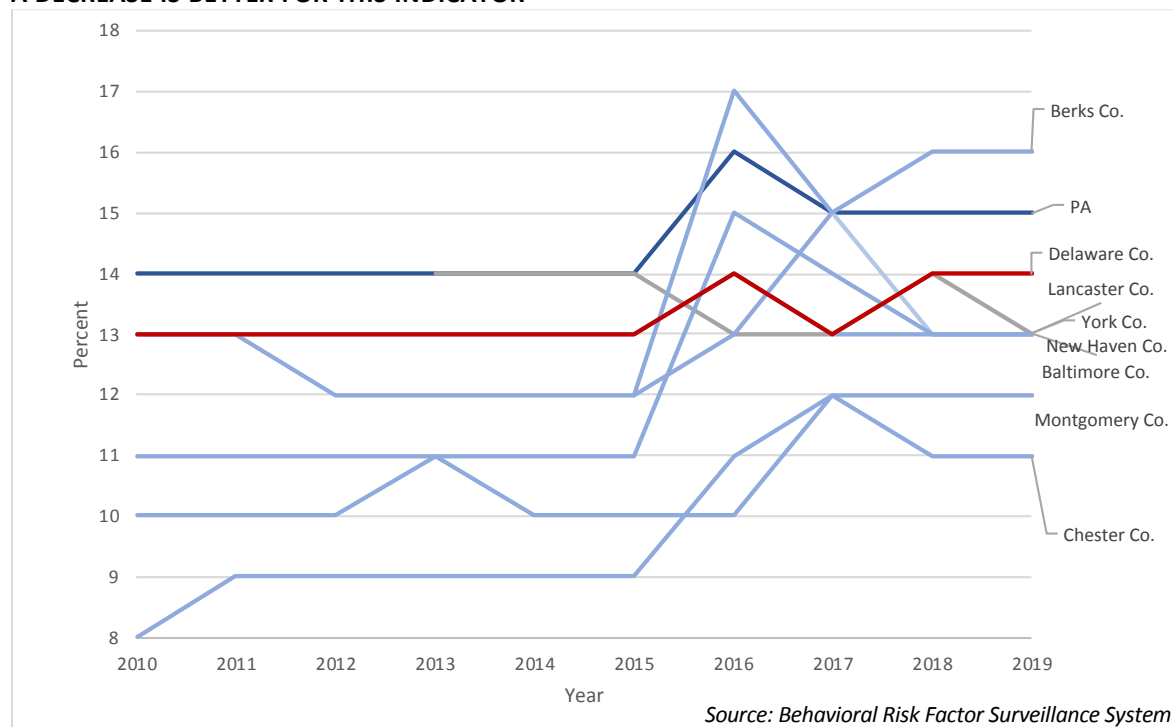
FIGURE 9. PERCENT OF ADULTS THAT REPORT FAIR OR POOR HEALTH, 2019.
A LOWER VALUE IS BETTER FOR THIS INDICATOR



The proportion of adults who reported fair or poor health in Delaware County increased slightly between 2010-2019, from 13-14%, respectively (**Figure 10**). This is representative of the general trend seen in surrounding counties, as well as the state as a whole. Though there is significant fluctuation throughout this time period, it is notable that Delaware County generally falls above its neighbors in this metric.

FIGURE 10. TRENDS IN PERCENT OF ADULTS REPORTING FAIR OR POOR HEALTH, 2010-2019.

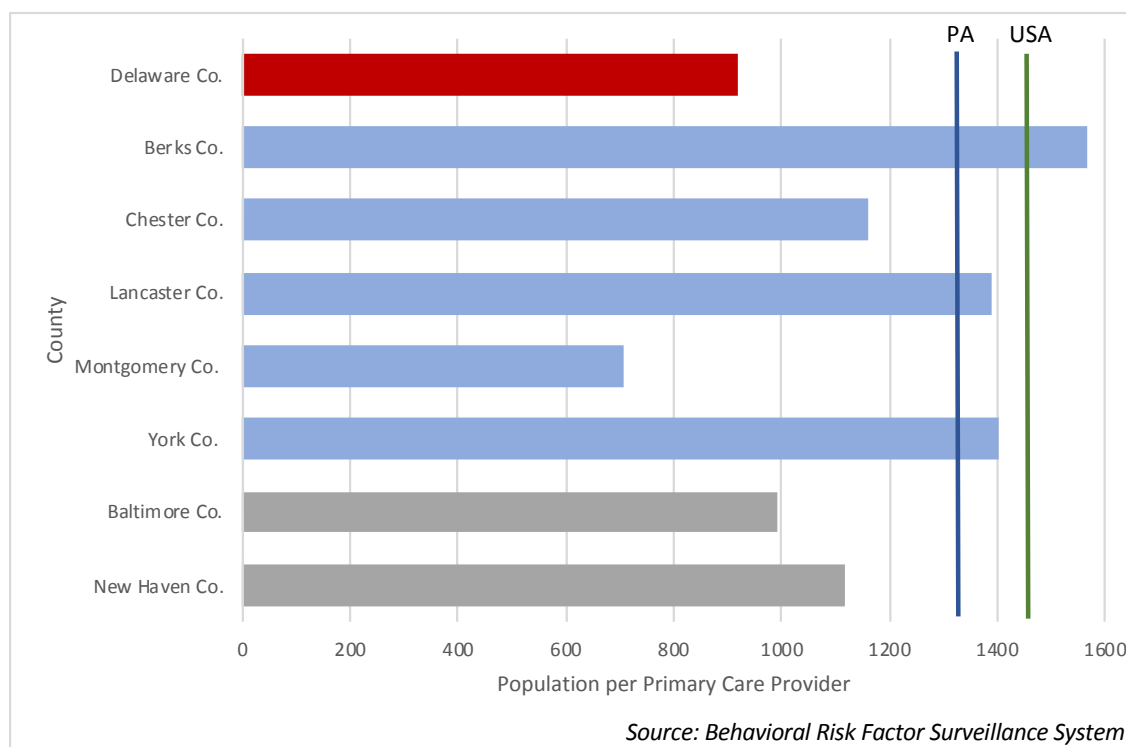
A DECREASE IS BETTER FOR THIS INDICATOR



PRIMARY CARE PROVIDER (PCP) PREVALENCE

Population size to PCP ratio is a measure that assesses the availability and ease of access of healthcare resources in a given area. In 2019, Delaware County excelled in this metric, with a ratio of 921:1 (**Figure 11**). It is significantly lower than the state and national averages of 1234:1 and 1460:1. With the exception of Montgomery County at 706:1, PCP density is also higher in Delaware than its surrounding counties.

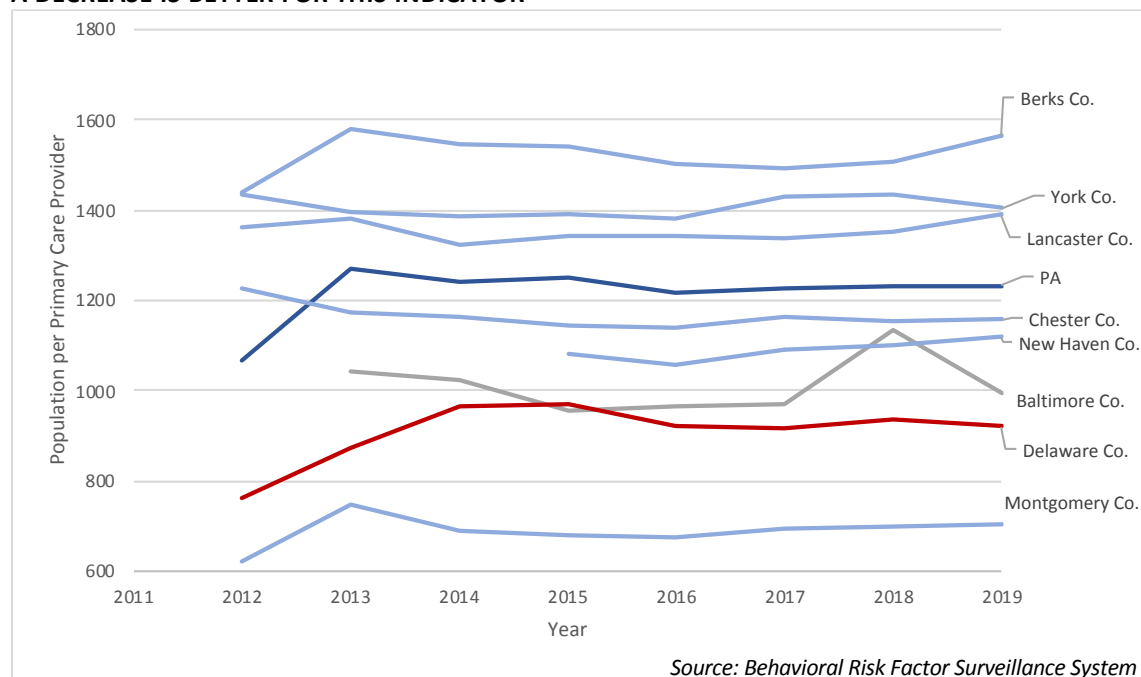
FIGURE 11. RATIO OF POPULATION SIZE TO NUMBER OF PRIMARY CARE PROVIDERS, 2019.
A LOWER VALUE IS BETTER FOR THIS INDICATOR



Since 2012, the ratio of population to number of PCPs in Delaware County experienced a gradual increase between 2012-2015 and has mostly leveled since (**Figure 12**). This is consistent with neighboring counties, which have also remained largely consistent throughout the years. It has also consistently remained lower than the state average in the given period.

FIGURE 12. TRENDS IN RATIO OF POPULATION SIZE TO NUMBER OF PRIMARY CARE PROVIDERS, 2012-2019.

A DECREASE IS BETTER FOR THIS INDICATOR



DATA TO ACTION

In the past decade, Delaware County has taken significant steps in order to ensure its residents are able to access the health care services that they need. Notably the Department of Intercommunity Health Coordination offers a myriad of resources in order to expand equitable access to health care, including free and reduced-cost clinics, prescription discount card services, as well as its partnership with Holcomb Behavioral Health Systems³. Free clinics across Delaware County offer primary care services such as comprehensive routine checkups for adults and children as well as specialty services such as prenatal care, HIV/STD testing, and dentistry. The County's Department of Human Services also offers many local-level resources for children to adults of all needs and backgrounds tackling a variety of health and social issues ranging from foster care to addiction treatment, easily accessible through its website⁴.

³ Resources. *Delaware County, Pennsylvania*. (n.d.) Retrieved January 2020 from <https://www.delcopa.gov/ich/resources.html>

⁴ Delaware County Department of Human Services. *Delaware County, Pennsylvania*. (n.d.) Retrieved February 2020 from <http://www.delcohsa.org/index.html>.

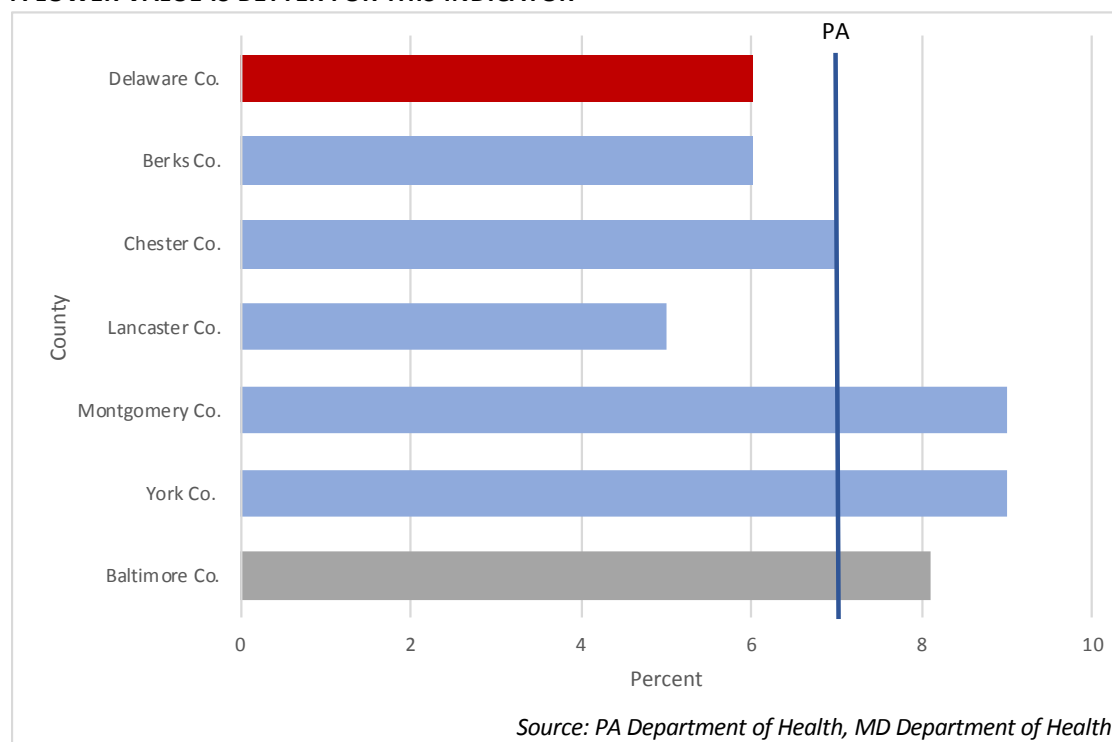
ADULT CHRONIC DISEASE

Chronic diseases, such as cancer, cardiovascular disease, diabetes, and asthma, are the leading causes of morbidity and mortality in the United States⁵. Broadly defined as an illness or condition that lasts one year or longer in duration and requires ongoing medication attention and limits one’s activities of daily living, it is estimated that nationwide, six in ten adults have a chronic disease, and over four in ten have two or more⁶. Particularly in a population growing in age, chronic illness and its prevention is a pervasive and expanding issue that warrants significant attention across all health sectors.

CANCER

In assessing cancer diagnoses (excluding skin cancer) in Delaware County, the reported prevalence of “ever being diagnosed with cancer” was 6% in 2018 (**Figure 13**). This is comparable to the state average of 7%, and also to its neighboring counties, with prevalence ranging from 5% in Lancaster County to 9% in Montgomery and York Counties.

FIGURE 13. PERCENT OF INDIVIDUALS EVER DIAGNOSED WITH CANCER, 2018.
A LOWER VALUE IS BETTER FOR THIS INDICATOR



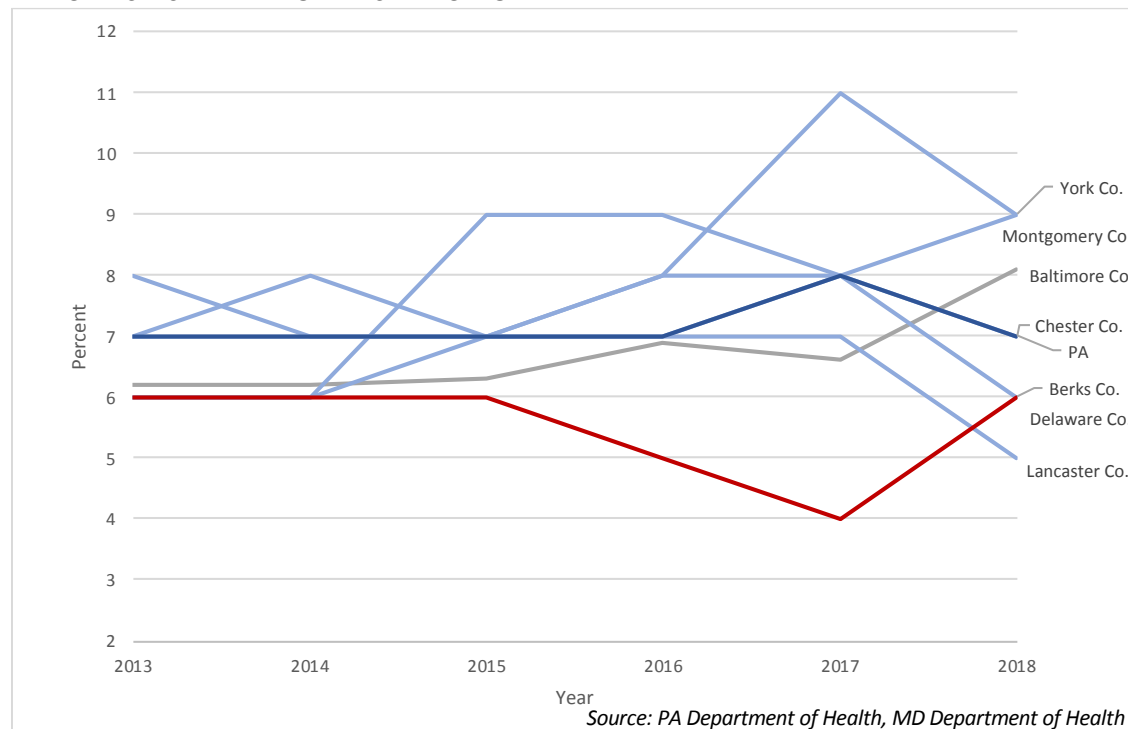
⁵ About Chronic Diseases | [National Center for Chronic Disease Prevention and Health Promotion \(NCCDPHP\)](https://www.cdc.gov/chronicdisease/about/index.htm). CDC. (23 Oct 2019) Retrieved February 2020 from <https://www.cdc.gov/chronicdisease/about/index.htm>

⁶ Ibid

Over the period 2013-2018, Delaware County's prevalence of cancer (excluding skin cancer) stayed fairly constant at 6%, with the exception of a minor drop from 2016-2017 in which the trend reached a minimum of 4% (**Figure 14**). It was marginally lower than the state average, which remained largely consistent at 7% throughout time span. Neighboring counties demonstrated fluctuations without significant trend, with Montgomery County having the highest prevalence, notably peaking at 11% in 2017 from 8% in the year prior.

FIGURE 14. TRENDS IN PERCENT OF INDIVIDUALS EVER DIAGNOSED WITH CANCER (EXCLUDING SKIN CANCER), 2013-2018.

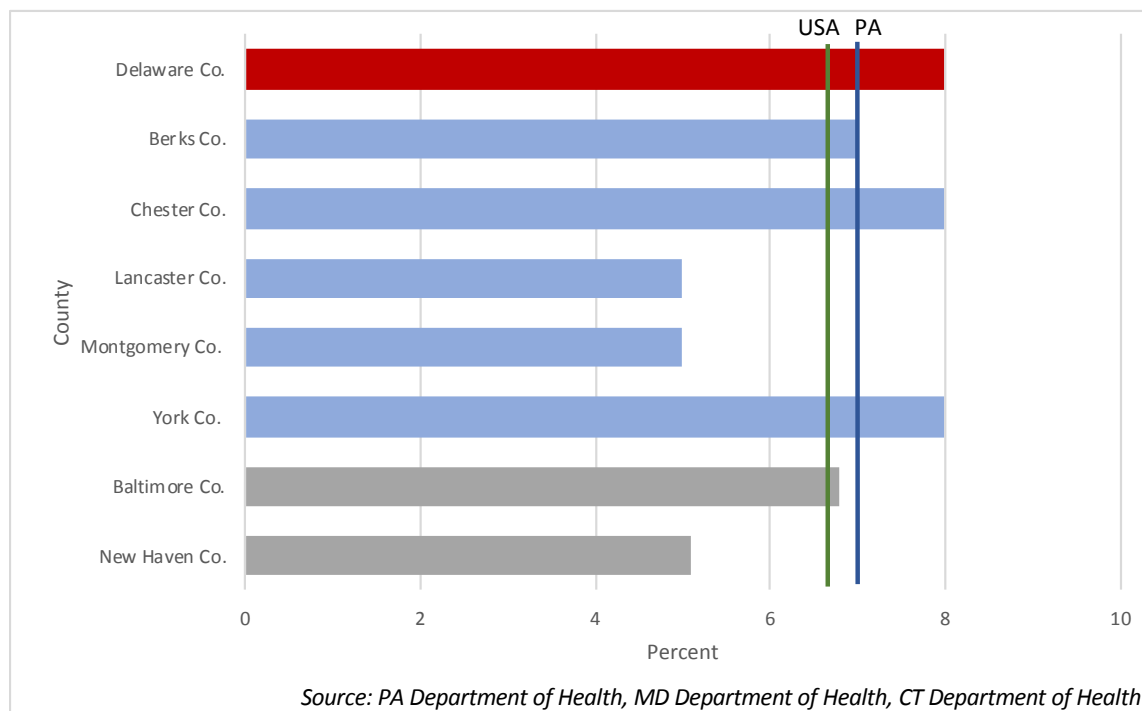
A DECREASE IS BETTER FOR THIS INDICATOR



CARDIOVASCULAR DISEASE

Cardiovascular disease (CVD), defined by ever having a diagnosis of coronary heart disease (CHD) or heart attack, is the single leading cause of morbidity in the United States. In 2018, 8% of individuals in Delaware County had been diagnosed with some form of CVD in their lifetime (**Figure 15**). This prevalence is similar to that of Chester and York Counties, and is the highest among its neighboring counties. It is marginally higher than the state and nationwide percentages of 7% and 6.7%, respectively.

FIGURE 15. PERCENT OF INDIVIDUALS EVER DIAGNOSED WITH HEART DISEASE, 2018.
A LOWER VALUE IS BETTER FOR THIS INDICATOR



There has been a significant increase in the percentage of individuals with ever diagnosis of CVD in Delaware County from 2013-2018, from 5% to 8%, respectively (**Figure 16**). A similar trend is seen in neighboring Berks and Chester Counties as well as comparator Baltimore County; however, the overall statewide rate has remained relatively unchanged at 7% through this period. Other counties have largely fluctuated without significant trend, ranging from 4% to 8% across the 5-year data period.

FIGURE 16. TRENDS IN PERCENT OF INDIVIDUALS EVER DIAGNOSED WITH HEART DISEASE, 2013-2018.

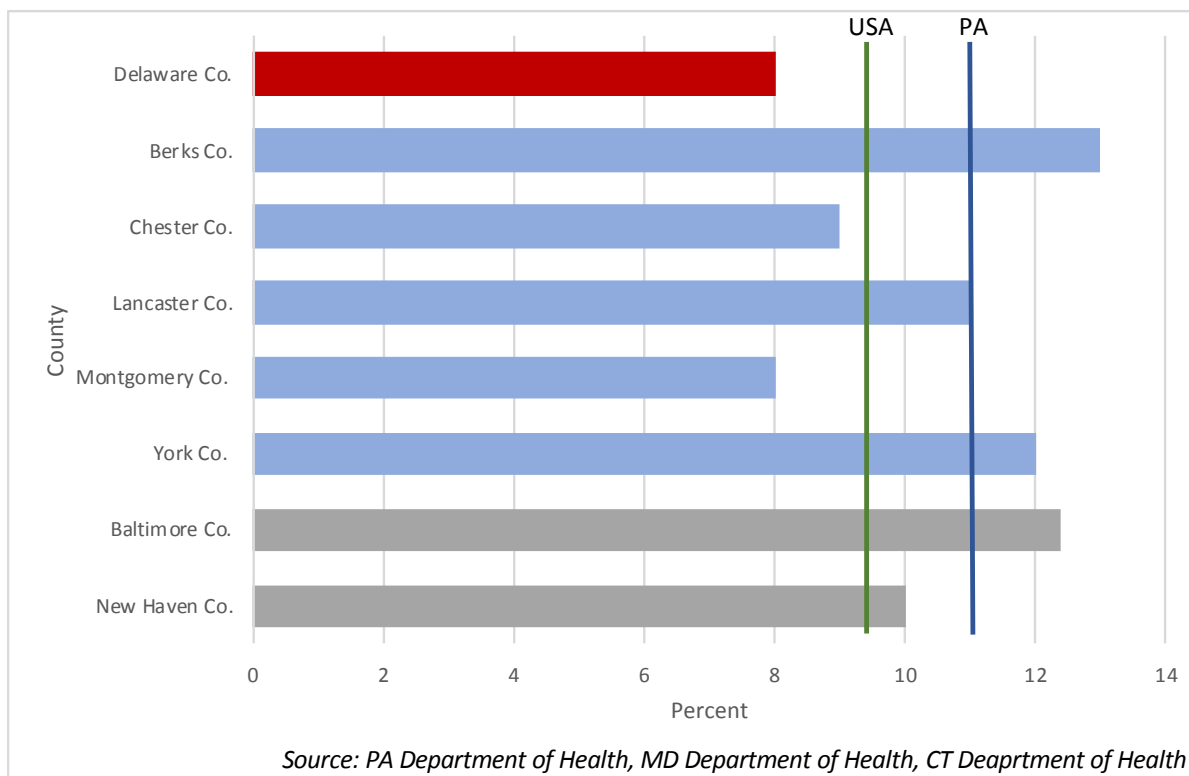
A DECREASE IS BETTER FOR THIS INDICATOR



DIABETES

In 2018, approximately 8% of Delaware County residents had ever been diagnosed with diabetes (**Figure 17**). This rate, along with that of Montgomery County, is the lowest among its neighboring counties, which range from 8-13%. It is significantly lower than both the national and PA averages of 9.4% and 11%, respectively, as well as comparator counties New Haven and Baltimore, at 10% and 12.4%, respectively.

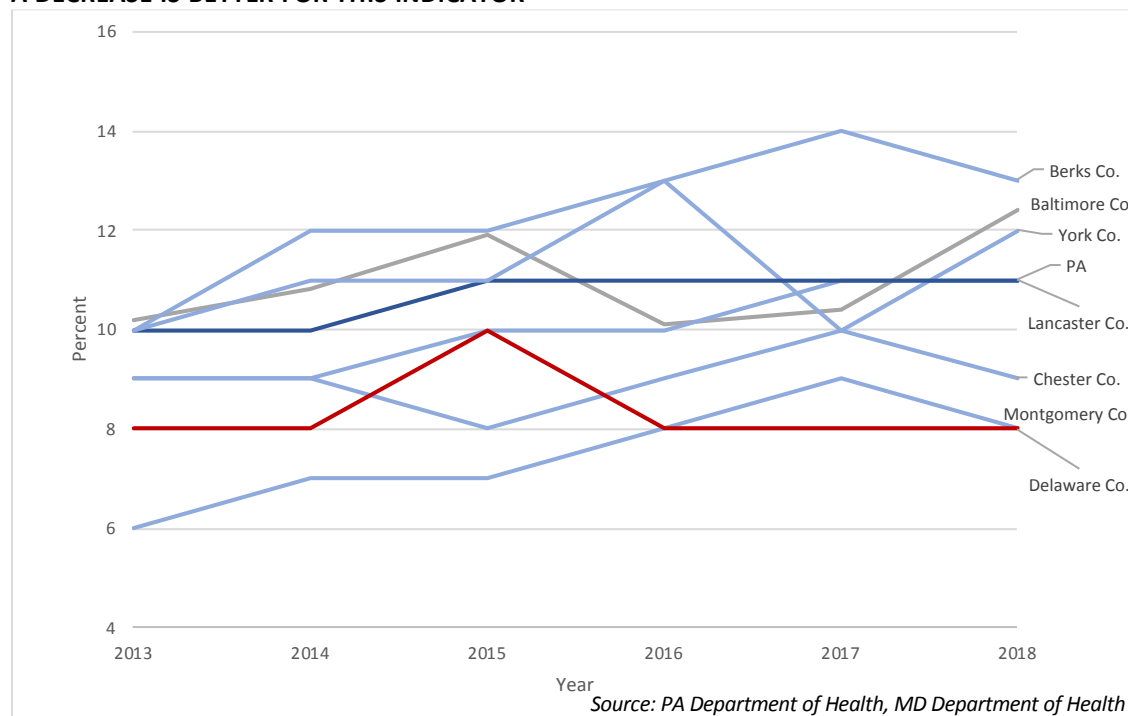
FIGURE 17. PERCENT OF INDIVIDUALS EVER DIAGNOSED WITH DIABETES, 2018.
A LOWER VALUE IS BETTER FOR THIS INDICATOR



From 2013-2018, the percent of individuals with a diagnosis of diabetes in Delaware County has remained relatively unchanged at 8%, with a slight increase in 2015 to 10% (**Figure 18**). It has remained lower than the state average, which remained relatively stable at 10-11% throughout the same time period. A notable uptrend was noted in neighboring Berks County, which went from 10% in 2013 to a maximum of 14% in 2017, but others remained largely stable over these years.

FIGURE 18. TRENDS IN PERCENT OF INDIVIDUALS EVER DIAGNOSED WITH DIABETES, 2013-2018.

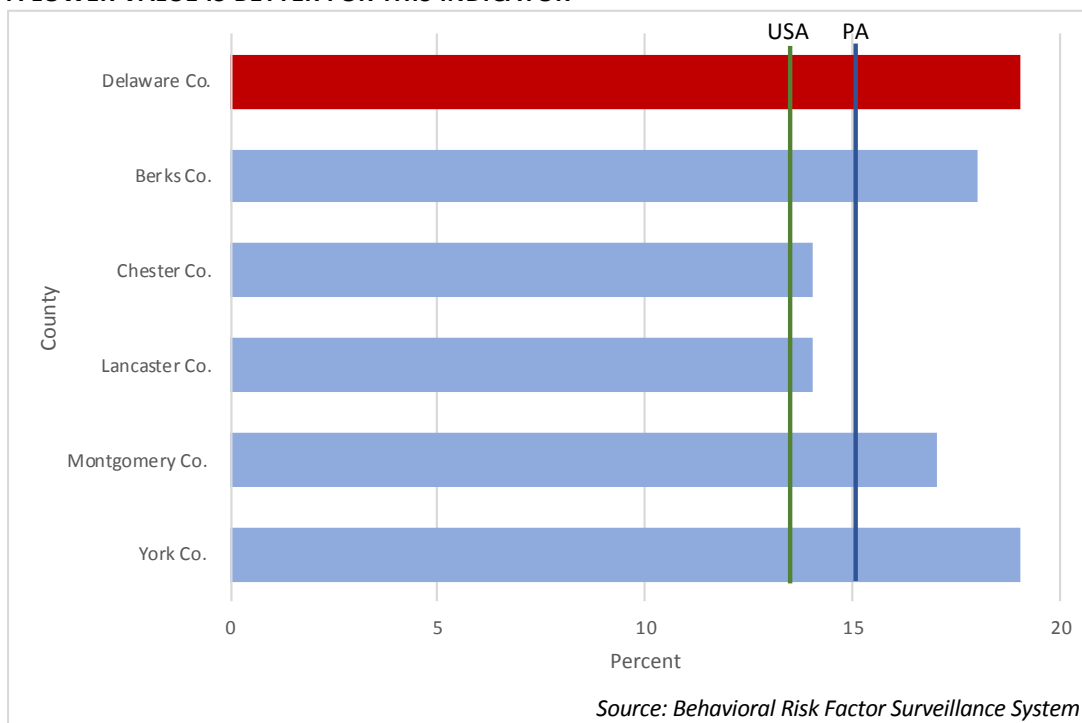
A DECREASE IS BETTER FOR THIS INDICATOR



ADULT ASTHMA

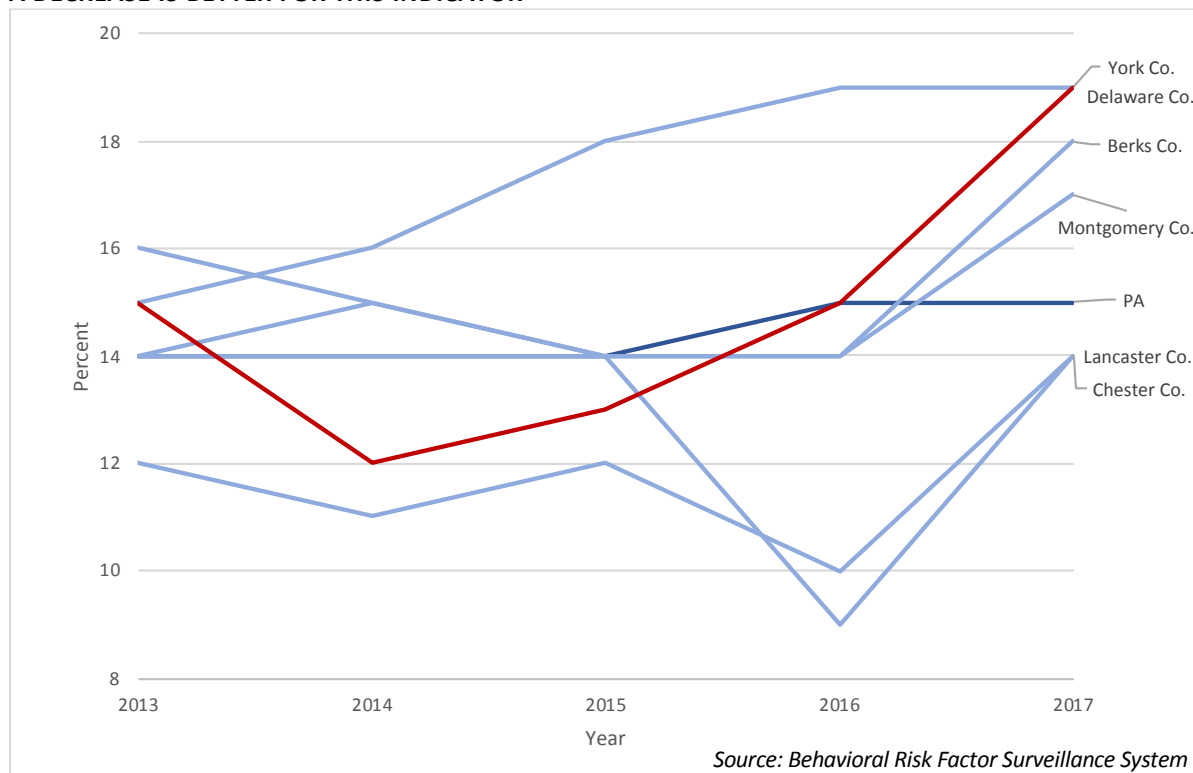
Asthma is one of the most common chronic diseases in children, but also has a significant morbidity burden in adults. Genetic, environmental, and occupational factors all play a role in the incidence and exacerbation of asthma. Exposure to mold, dampness, certain allergens, and secondhand smoke have been linked to the development of asthma. In 2017, 19% of adults (18+) had asthma in Delaware County (**Figure 19**). This is higher than the national (13.5%) and PA statewide (15%) rates, as well as that of most neighboring PA counties (which ranged from 14-18%), with the exception of York County, which shared the same prevalence as Delaware County (19%).

FIGURE 19. PERCENT OF ADULTS (≥ 18 YEARS) EVER TOLD THEY HAVE ASTHMA, 2017.
A LOWER VALUE IS BETTER FOR THIS INDICATOR



The percentage of adults in Delaware County who reported having asthma increased overall from 15% to 19% from 2013 to 2017, though it initially saw a decrease between 2013-2014 (**Figure 20**). Most of the neighboring PA counties examined also saw an overall increase in asthma prevalence over this time period with the exception of Lancaster County, which saw a slight decrease. Comparatively, the state of PA has remained relatively stable during this time.

FIGURE 20. TRENDS IN PREVALENCE OF ASTHMA IN ADULTS (≥18 YEARS), 2013-2017. A DECREASE IS BETTER FOR THIS INDICATOR



DATA TO ACTION

Delaware County is already taking steps to ensure that chronic disease in its population is mitigated through improving access to healthcare as well as through the promotion of preventative tools. Through its Department of Intercommunity Health Coordination, Delaware County has multiple clinics that offer free and low-cost health services, such as outpatient primary care for management of chronic conditions including heart disease and diabetes, as well as immunizations for vaccine-preventable illnesses such as pneumococcal pneumonia. Additionally, the Foundation for Delaware County, one of the County’s largest philanthropic organizations, organizes the “Comprehensive breast care to the women of Delaware County” initiative, which strives to provide one-on-one education, screening exams, and diagnostic testing in order to reduce the disease burden of breast cancer. The organization received a grant in 2018 from Susan G. Komen Philadelphia in order to fund the efforts of this program.

The County’s three predominant hospital systems: Main Line Health, Crozer-Keystone, and Mercy Catholic Medical Center, also have a multitude of sites throughout the County that offer primary care as well as specialty services that to patients of all age groups.

DISEASE PREVENTION

Preventive medicine is defined as the protection, promotion, and maintenance of health in order to prevent disease, disability, and premature death⁷. Though modern advancements in medical detection and treatment have resulted in generally improved health outcomes, conditions that can be significantly attenuated with proper prevention and early detection, such as cancer and infectious disease, remain among the biggest killers in the US to date⁸. Routine screening for certain highly prevalent cancers and proper utilization of vaccination are well known to prevent disease morbidity and mortality; however, individuals still do not pursue these options due to reasons such as inaccessibility of healthcare resources, financial barriers, and misinformation. Understanding the usage of preventive disease measures is essential and could help identify key areas in which health processes could be improved within a population.

COLORECTAL CANCER SCREENING

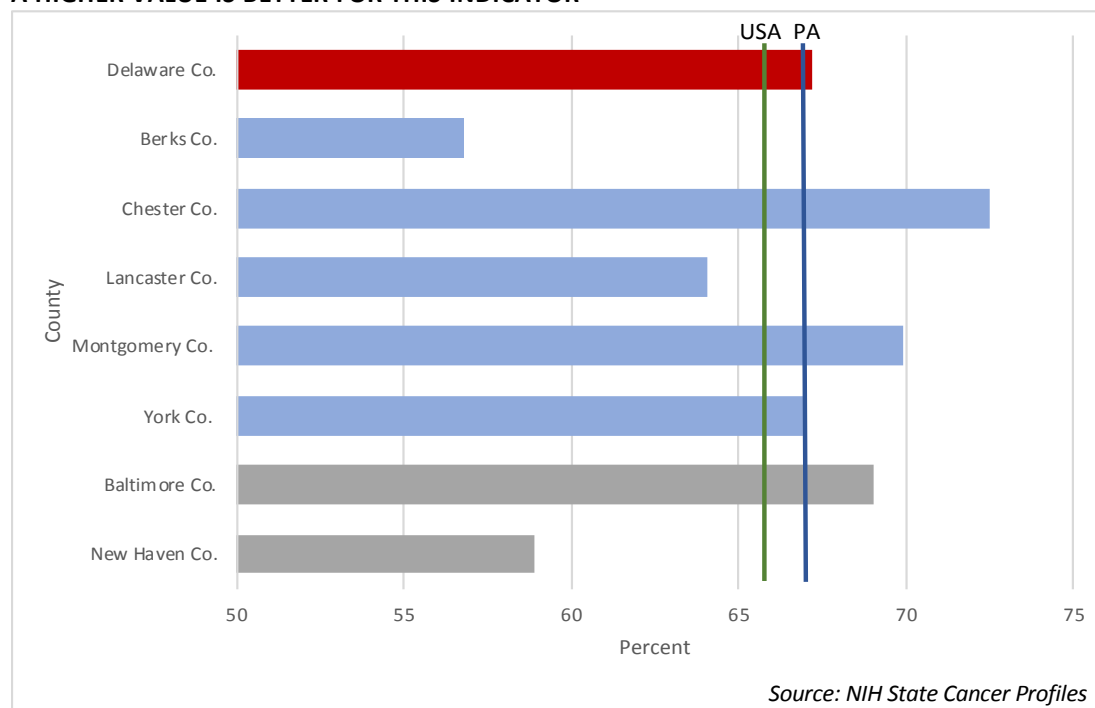
The US Preventive Services Task Force (USPSTF) rates routine screening for colorectal cancer, primarily accomplished through colonoscopy or sigmoidoscopy, as having “high certainty” to be beneficial. In 2010, 67.2% of individuals in Delaware County age 50 years or older reported ever having a colorectal endoscopy (**Figure 21**). This percentage is similar to the statewide average of 66.9%, and marginally higher than the national average of 65.5%. It is average among its neighboring counties, with Chester County having the highest rate at 72.5% and Berks County the lowest at 56.8%.

⁷ Preventive Medicine. *American Medical Association*. (n.d.). Retrieved March 2020 from <https://www.ama-assn.org/specialty/preventive-medicines>

⁸ Leading Causes of Death | National Center for Health Statistics. *CDC*. (17 Mar 2017) Retrieved February 2020 from <https://www.cdc.gov/nchs/fastats/leading-causes-of-death.htm>

FIGURE 21. PERCENT OF INDIVIDUALS (≥ 50 YEARS) WHO EVER HAD A COLORECTAL ENDOSCOPY, 2010.

A HIGHER VALUE IS BETTER FOR THIS INDICATOR



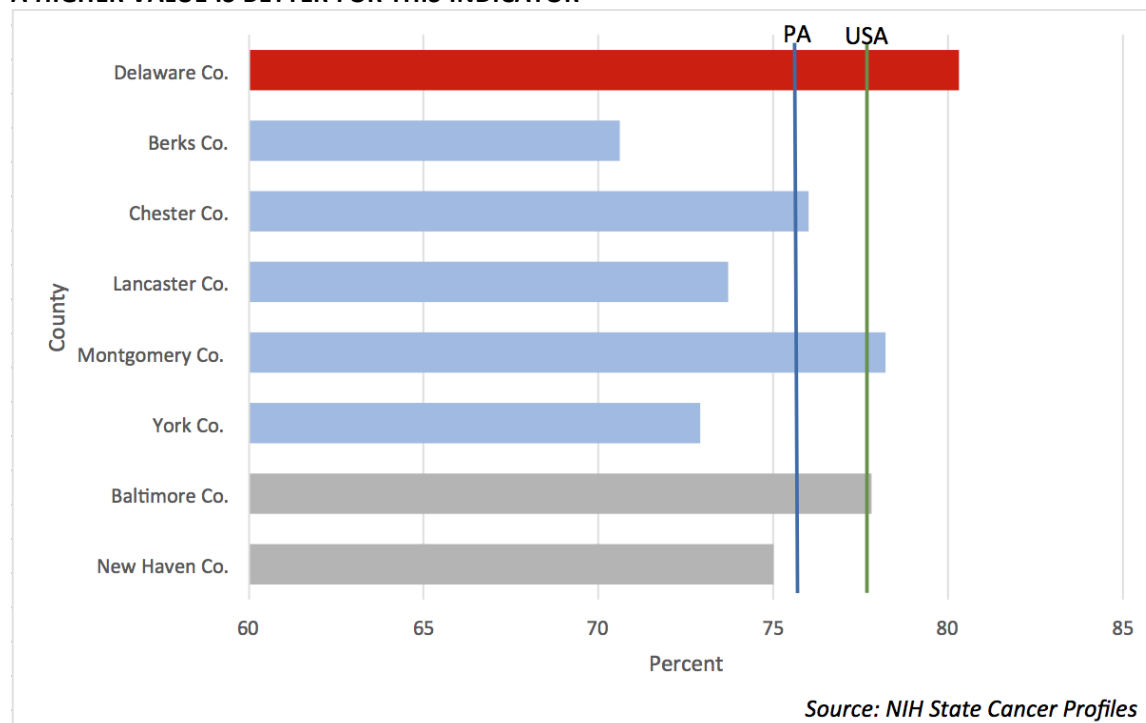
BREAST CANCER SCREENING

Annual breast cancer screening is highly recommended among women ages 40 years and up, with strong evidence that it results in earlier detection of cancer resulting in reduced morbidity and mortality burden⁹. In 2010, 80.3% of women in Delaware County age 40 years or greater reported having had a mammogram in the past two years (**Figure 22**). This is significantly greater than those of its neighboring counties, which range from 70.6% to 78.2%, as well as comparator counties New Haven and Baltimore, at 75% and 77.8, respectively. The rate of coverage is also significantly higher than both the state and national averages, at 75.6% and 77.6%, respectively.

⁹ Cancer Screening Guidelines | Detecting Cancer Early. *American Cancer Society*. (30 May 2018) Retrieved February 2020 from <https://www.cancer.org/healthy/find-cancer-early/cancer-screening-guidelines/american-cancer-society-guidelines-for-the-early-detection-of-cancer.html>

FIGURE 22. PERCENT OF WOMEN (≥ 40 YEARS) WHO HAD A MAMMOGRAM IN THE PAST 2 YEARS, 2010.

A HIGHER VALUE IS BETTER FOR THIS INDICATOR



MMR VACCINATION

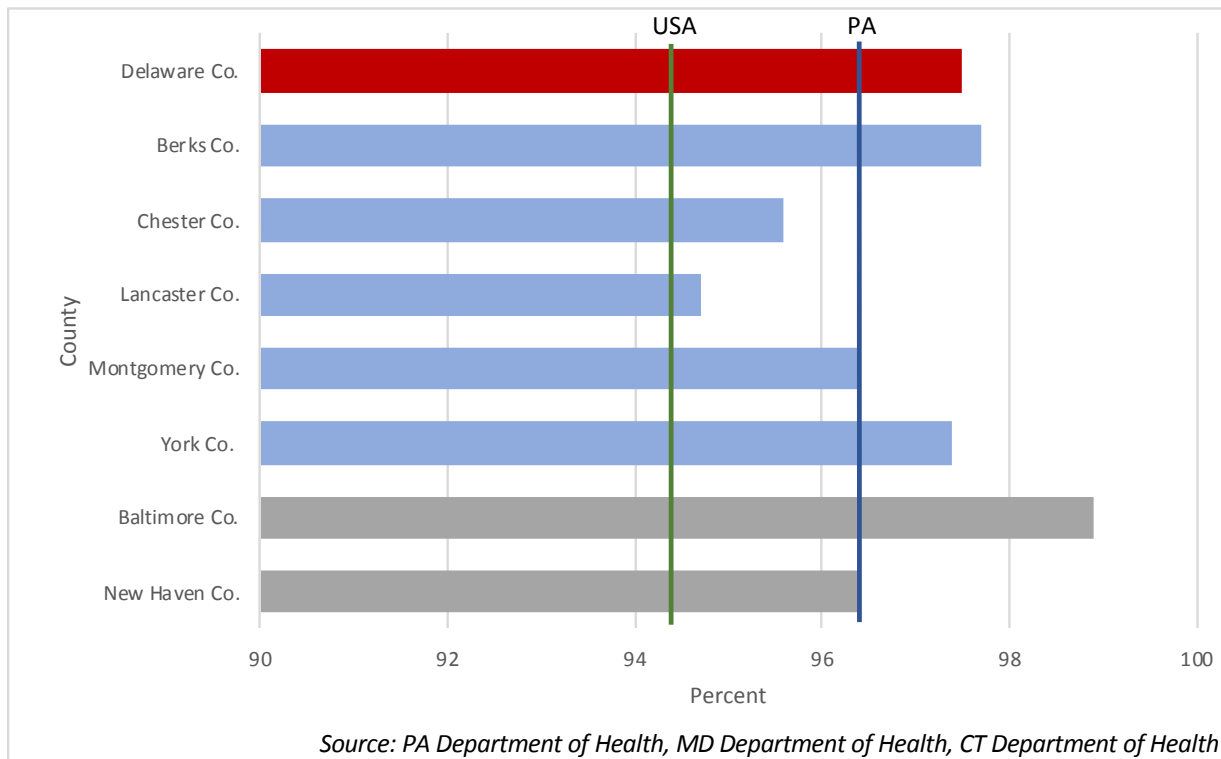
The MMR vaccine protects individuals against three highly contagious and dangerous infections: measles, mumps, and rubella. The Centers for Disease Control and Prevention (CDC) recommends two doses for all children, administered before the age at which they start school¹⁰. Despite the immense potential harm of contracting one of these diseases and the relatively benign side effects of the vaccine, many parents still decline to vaccinate their children, citing reasons such as personal or religious belief.

The percent of kindergarten enrollees in Delaware County who received the MMR vaccine series in 2019 was 97.5% (**Figure 23**). This was higher than the PA average of 96.4%, as well as the national average of 94.3%. Compared to its neighboring counties, which ranged from Lancaster County at 94.7% to Berks County at 97.7%, Delaware County remained among the most vaccinated.

¹⁰Measles, Mumps, and Rubella (MMR) Vaccination: What Everyone Should Know | Vaccines and Preventable Diseases. CDC. (28 Mar 2019) Retrieved February 2020 from <https://www.cdc.gov/vaccines/vpd/mmr/public/index.html>

FIGURE 23. PERCENT OF KINDERGARTNERS WHO RECEIVED MMR VACCINE (2 DOSES OR MORE), 2019.

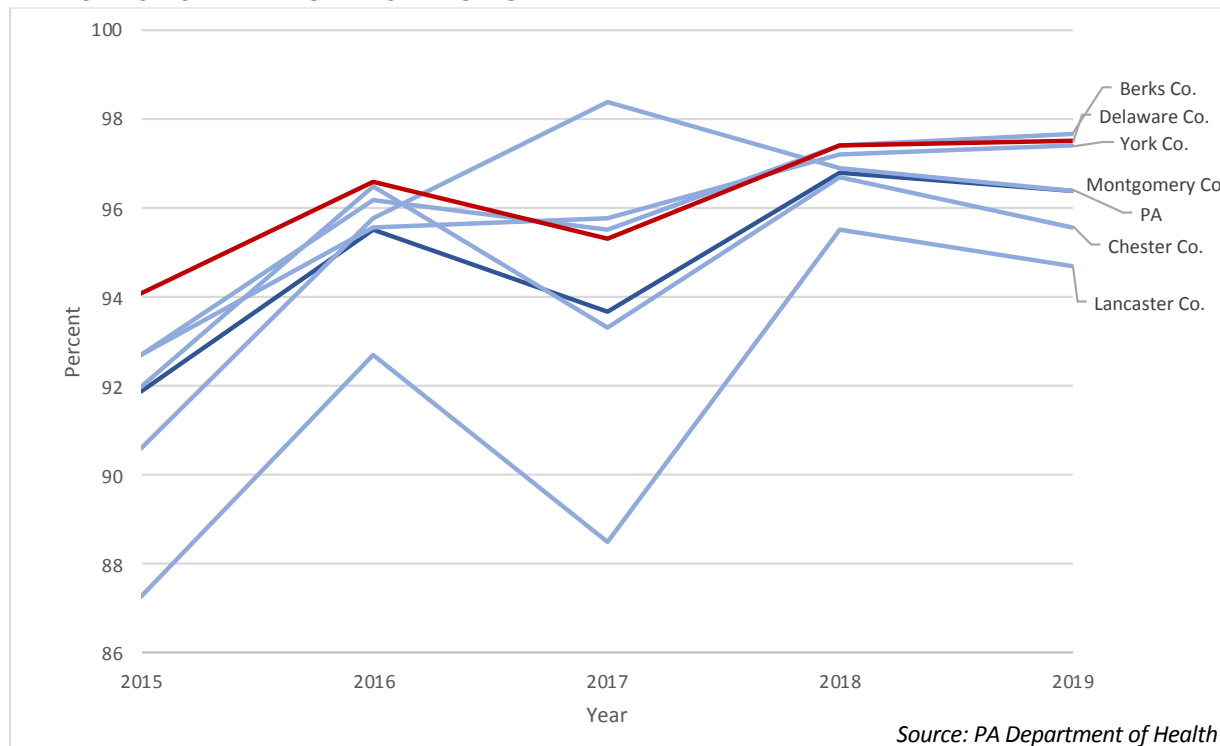
A HIGHER VALUE IS BETTER FOR THIS INDICATOR



From 2015-2019, MMR vaccination rates have gradually increased across all geographical regions (**Figure 24**). In Delaware County, the proportion of kindergartners who received the MMR vaccine series prior to enrollment increased from 94% in 2015 to 96.4% in 2019. Across this time period, Delaware County had one of the highest rates of vaccination among its neighboring counties, and significantly surpassed the statewide average, which rose from 91.9% to 96.4%.

FIGURE 24. TRENDS IN PERCENT OF KINDERGARTNERS WHO RECEIVED MMR VACCINE (2 DOSES OR MORE), 2015-2019.

AN INCREASE IS BETTER FOR THIS INDICATOR

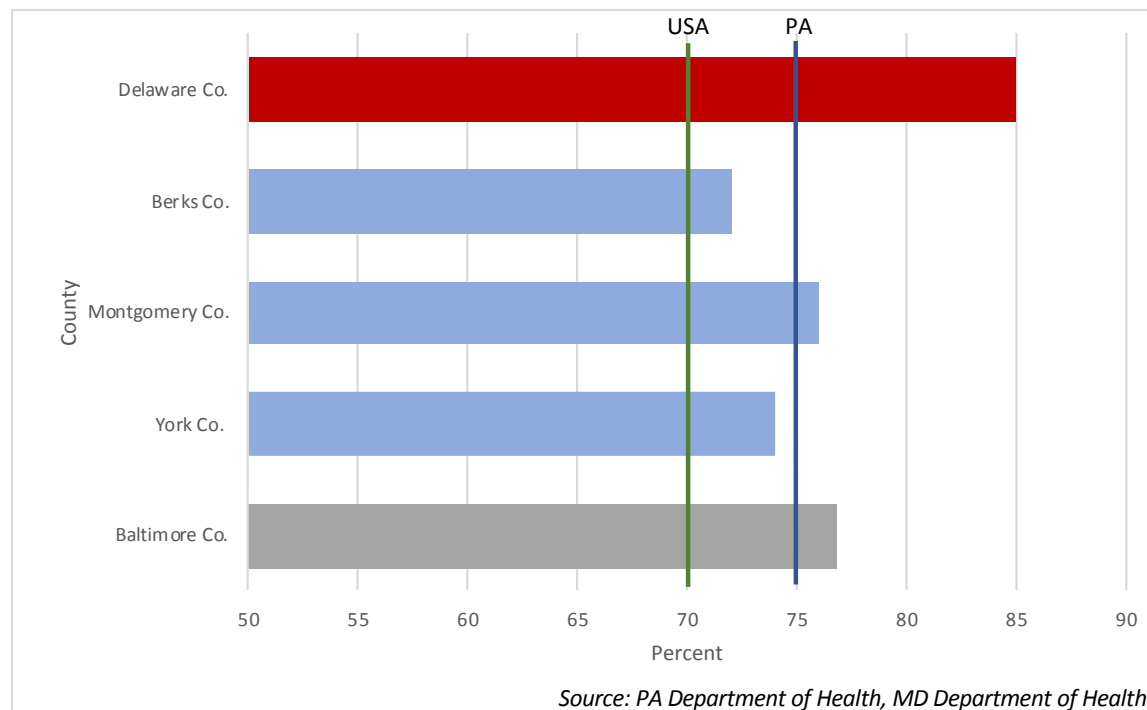


PNEUMOCOCCAL PNEUMONIA VACCINATION

Pneumococcal pneumonia is a major killer in older adults that can be significantly attenuated with proper vaccination of at-risk age groups. In 2018, 85% of Delaware County adults age 65 years or older reported receiving vaccination for pneumococcal pneumonia (**Figure 25**). This is significantly higher than rates seen in neighboring counties, ranging from 72-78%. This coverage rate is also much higher than that seen across the US and PA, at 70% and 75%, respectively.

FIGURE 25. PERCENT OF INDIVIDUALS (≥ 65 YEARS) EVER VACCINATED FOR PNEUMONIA, 2018.

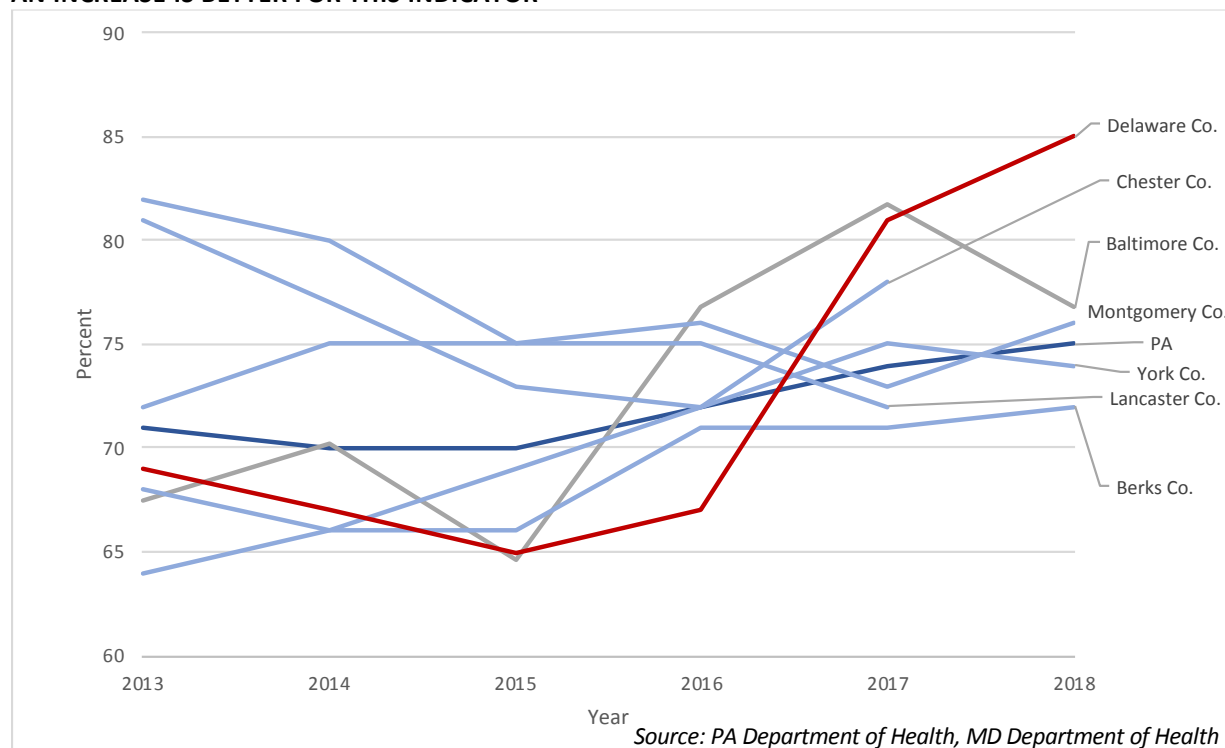
A HIGHER VALUE IS BETTER FOR THIS INDICATOR



The rate of pneumococcal pneumonia vaccination in Delaware County residents age 65 years and older was fairly constant until 2016, after which it experienced a significant increase from 67% in 2016 to 85% in 2018 (**Figure 26**). A similar increasing trend can be observed in neighboring Chester and Berks Counties as well as comparator Baltimore County, but rates have remained largely consistent in others. Overall, the state of PA experienced a slight increase in vaccination coverage, from 71% in 2013 to 75% in 2018.

FIGURE 26. TRENDS IN PERCENT OF INDIVIDUALS EVER VACCINATED FOR PNEUMONIA (AGE 65 OR OLDER), 2013-2018.

AN INCREASE IS BETTER FOR THIS INDICATOR



DATA TO ACTION

Delaware County currently offers many services designated towards the mission of preventive medicine and disease prevention and detection. Crozer-Keystone, one of Delaware County's largest health systems, sponsors the HealthyWoman Project. This program, supported by the CDC, provides free mammograms, breast exams, and pelvic exams to women age 50-64 who lack health insurance¹¹. The County's Department of Intercommunity Health Coordination also supports free clinics across the county which provide pediatric and geriatric vaccinations to those who could not afford them otherwise, free of charge¹². Notably, Pennsylvania currently does not require students entering school to be vaccinated, as parents are able to cite either religious or moral/ethical reasons for exemption¹³.

¹¹ Cancer Prevention & Wellness Programs. *Crozer-Keystone Health System*. Retrieved June 2020 from <https://www.crozerkeystone.org/services/cancer-care/prevention-wellness/>

¹² Health Clinics. *Delaware County Pennsylvania*. (2019) Retrieved June 2020 from <https://www.delcopa.gov/ich/resources/healthclinics.html>

¹³ Pennsylvania State Vaccine Requirements. *National Vaccine Information Center*. (27 Jan 2020 retrieved June 2020 from <https://www.nvic.org/Vaccine-Laws/state-vaccine-requirements/pennsylvania.aspx>

ENVIRONMENTAL QUALITY

Environmental quality can directly impact health outcomes in addition to influencing health disparities, premature mortality, and overall quality of life¹⁴. Two factors relating to environmental health include outdoor air quality and the hazards within one's home and community. Over 40,000 deaths per year in the US can be attributed to poor outdoor air quality,¹⁵ which has been linked to negative clinical outcomes including systemic cardiovascular and respiratory issues and cancer. Exposure to indoor hazards such as lead-based paint can also negatively impact health outcomes, and is important to consider given the significant amount of time individuals spend at home, work and/or school. According to the Department of Housing and Urban Development, one in three homes with children under the age of six have significant lead-based paint hazards¹⁶.

GOOD AIR QUALITY INDEX

The Air Quality Index (AQI) is an index for reporting daily air quality. The AQI measures how clean or polluted an area is, specific to the five most common air pollutants regulated by the Clean Air Act and their related health effects. An AQI value up to 50 represents good air quality with little potential to affect public health, while an AQI value over 300 represents hazardous air quality.¹⁷

According to the Environmental Protection Agency (EPA), in 2017 Delaware County had 244 days with a good AQI (**Figure 27**). This falls in the middle of AQI reports for surrounding counties, with Montgomery (268) and York (266) Counties having more days with a good AQI, while Chester (221) and Lancaster (205) Counties reported fewer good AQI days. Compared to all PA counties examined, both New Haven and Baltimore Counties had more days with a good AQI rating, at 287 and 290 days, respectively.

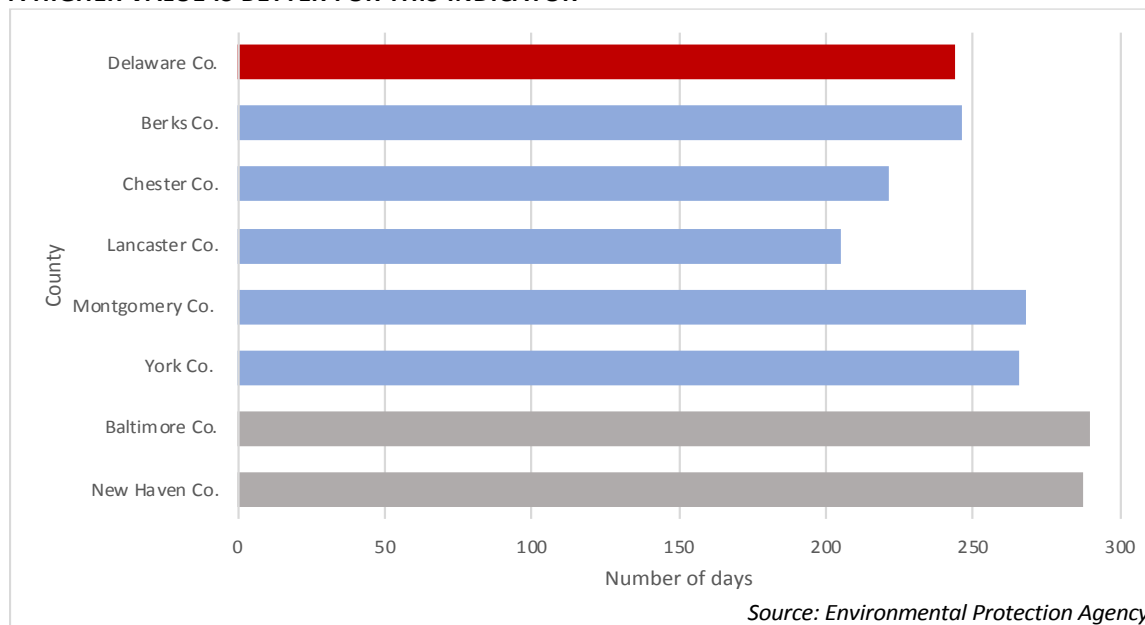
¹⁴Prüss-Üstün, A., & Corvalán, C. (2006). Preventing Disease Through Healthy Environments: Towards an estimate of the environmental burden of disease. *WHO*. Retrieved January 2020 from https://www.who.int/quantifying_ehimpacts/publications/preventingdisease.pdf

¹⁵Country profile of Environmental Burden of Disease - United States of America. *WHO*. (2009). Accessed from https://www.who.int/quantifying_ehimpacts/national/countryprofile/unitedstatesofamerica.pdf?ua=1

¹⁶American Healthy Homes Survey – Lead and Arsenic Findings. *U.S. Department of Housing and Urban Development*. (2011). Accessed from https://www.hud.gov/sites/documents/AHHS_REPORT.PDF

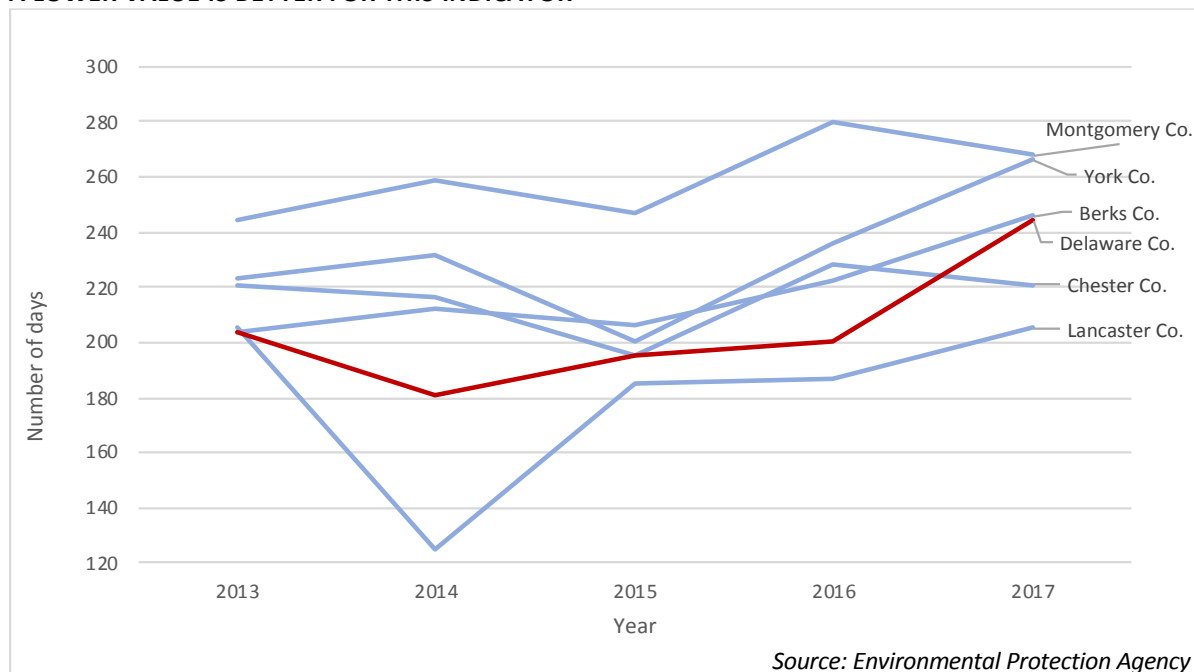
¹⁷AQI Basics. *AirNow*. (n.d.) Retrieved 2 February 2020 from <https://www.airnow.gov/aqi/aqi-basics>

**FIGURE 27. NUMBER OF DAYS WITH GOOD AIR QUALITY INDEX (AQI≤50), PER YEAR.
A HIGHER VALUE IS BETTER FOR THIS INDICATOR**



Delaware County saw an increase in its number of days with good AQI from 204 to 244 between 2013 and 2017 (**Figure 28**). Other neighboring counties have likewise seen an increase in the number of good AQI days over the same time period, with the biggest improvements observed in Berks, Delaware, and York Counties. Comparatively, Lancaster and Chester Counties have on average remained relatively constant over time, with some fluctuations in certain years.

**FIGURE 28. TRENDS IN NUMBER OF DAYS WITH GOOD AQI, 2013-2017
A LOWER VALUE IS BETTER FOR THIS INDICATOR**



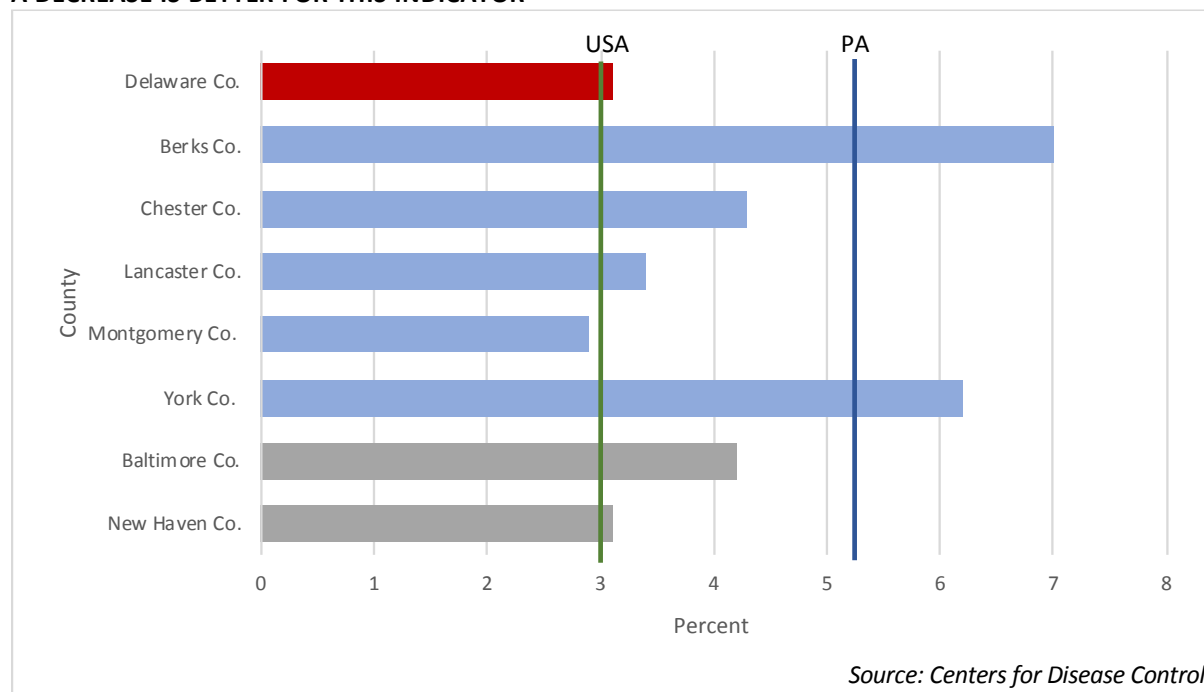
LEAD POISONING

Lead poisoning is known to be particularly detrimental to children, as even low levels of lead in blood can negatively impact IQ, educational attainment, and attention span. Lead can be found throughout a child's environment, including in homes built before 1978 (when lead-based paints were banned). When lead-based paint peels and cracks, it creates lead dust, which can poison children if breathed in or swallowed. Lead can also be found in products such as toys and jewelry, as well as outdoors in soil or dirt.

In 2017, blood lead levels were tested for 22.2% of children under 72 months old in Delaware County (**Figure 29**). This is higher than that of neighboring Pennsylvania counties. 3.1% of children tested in Delaware County had confirmed lead poisoning at a blood lead level of $>5\mu\text{g}$. This is lower than the state prevalence (5.2%) as well as that of most surrounding PA counties, with the exception of Montgomery County (2.9%)

FIGURE 29. PERCENT OF CHILDREN (<72 MO) WITH CONFIRMED LEAD POISONING ($>5\mu\text{G}$), 2017

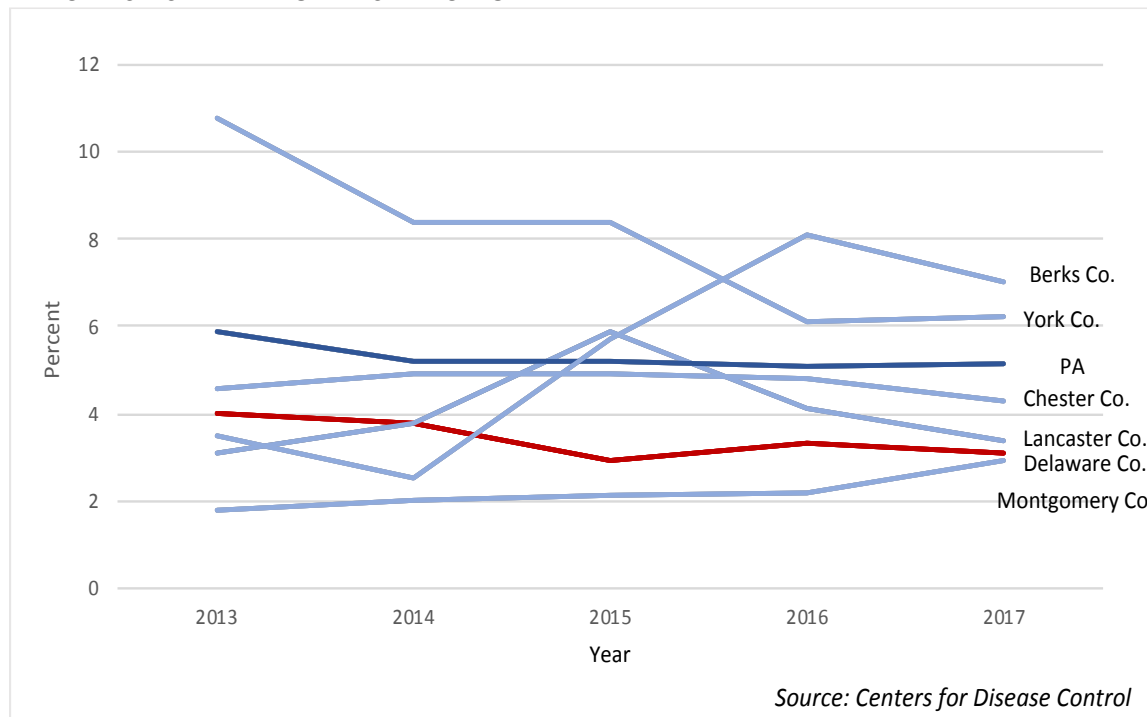
A DECREASE IS BETTER FOR THIS INDICATOR



The percentage of children with lead poisoning (blood lead level $>5\mu\text{g}$) has slightly decreased in Delaware County from 2013-2017, from 4% to 3.1% (**Figure 30**). Most neighboring counties as well as the state of PA have remained fairly constant with slight deviations over this time period, though a marked decrease was noted in York County (10.8% to 6.2%) while Berks County saw an increase from 3.5% to 7%.

FIGURE 30. TRENDS IN PERCENT OF CHILDREN (<72 MO) WITH CONFIRMED LEAD POISONING (>5µG), 2013-2017

A DECREASE IS BETTER FOR THIS INDICATOR



DATA TO ACTION

There are many groups and efforts throughout Delaware County dedicated toward improving the environmental quality in the area. The Delaware County Lead Poisoning Prevention Coalition, initiated by Public Citizens for Children and Youth (PCCY), spreads awareness and advocates for lead testing in the area. PCCY also offers a lead resource directory for Delaware County residents. The Community Action Agency and the Office of Housing and Community Development offer lead hazard control programs that remove lead-based paint hazards from low-income family homes with children under the age of six, as well as homes with pregnant women. In addition, as of February 2020, the District Attorney’s office has established a new environmental crimes unit¹⁸. This is the first county-level unit of its kind in the history of PA, working in partnership with the Department of Emergency Management Services, County Council, and other offices to investigate and address environmental hazards in the County.

¹⁸ Tribune News Report. (2020, January 28). Delco D.A. announces new environmental crime unit. *The Philadelphia Tribune*. Retrieved February 2020 from https://www.phillytrib.com/metros/delaware_county/delco-d-a-announces-new-environmental-crime-unit/article_d3d1a0d6-7dbd-55c7-a984-6f9b65d7721a.html

FOOD SAFETY

Foodborne illnesses are a burden on public health and contribute significantly to the cost of health care. Each year, approximately 17% of Americans become ill with a foodborne illness, leading to 128,000 hospitalizations and 3,000 deaths annually. *Salmonella* bacteria are a common cause of foodborne illness. The bacteria can contaminate a variety of food, such as meat, eggs, milk, seafood, vegetables, and fruits¹⁹. The CDC estimates that *Salmonella* bacteria cause about 1.35 million infections, 26,500 hospitalizations, and 420 deaths in the US every year²⁰. Another relatively frequent cause of foodborne illness is from the bacteria *Campylobacter*, which causes an estimated 1.5 million illnesses each year in the US. People can become infected with *Campylobacter* by eating raw or undercooked poultry or other foods, drinking untreated water, or via contact with infected animals²¹.

SALMONELLA

In 2015-2017, the incidence rate for salmonella in Delaware County was 9.8 per 100,000 population (**Figure 31**). This is lower than the state and national salmonella incidence rates as well as those of most neighboring PA counties, with the exception of Lancaster County (8.6). Notably, Berks County had the highest incidence rate with 17.7 cases per 100,000.

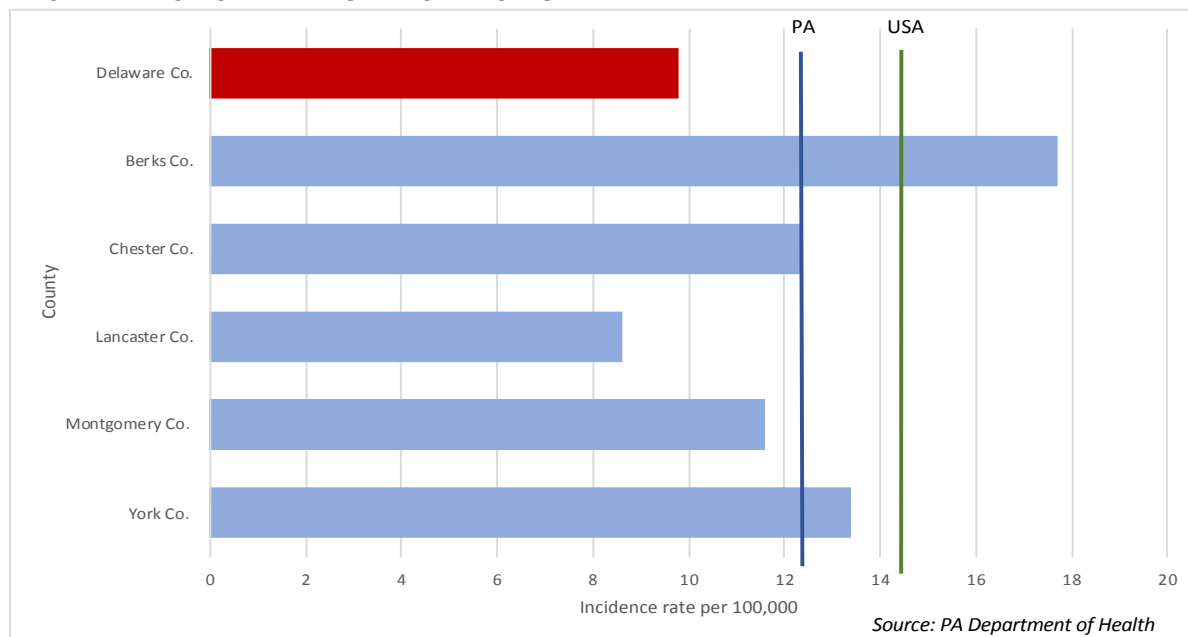
¹⁹Food Safety | HealthyPeople.gov. ODPHP. (n.d.) Retrieved March 2020 from <https://www.healthypeople.gov/2020/topics-objectives/topic/food-safety>

²⁰Salmonella. CDC. (25 Mar 2020). Retrieved March 2020 from <https://www.cdc.gov/salmonella/index.html>

²¹ *Campylobacter* (Campylobacteriosis). CDC. (23 Dec 2019) Retrieved January 2020 from <https://www.cdc.gov/campylobacter/index.html>

FIGURE 31. INCIDENCE RATE OF SALMONELLA POISONING (PER 100,000 POPULATION), 2015-2017

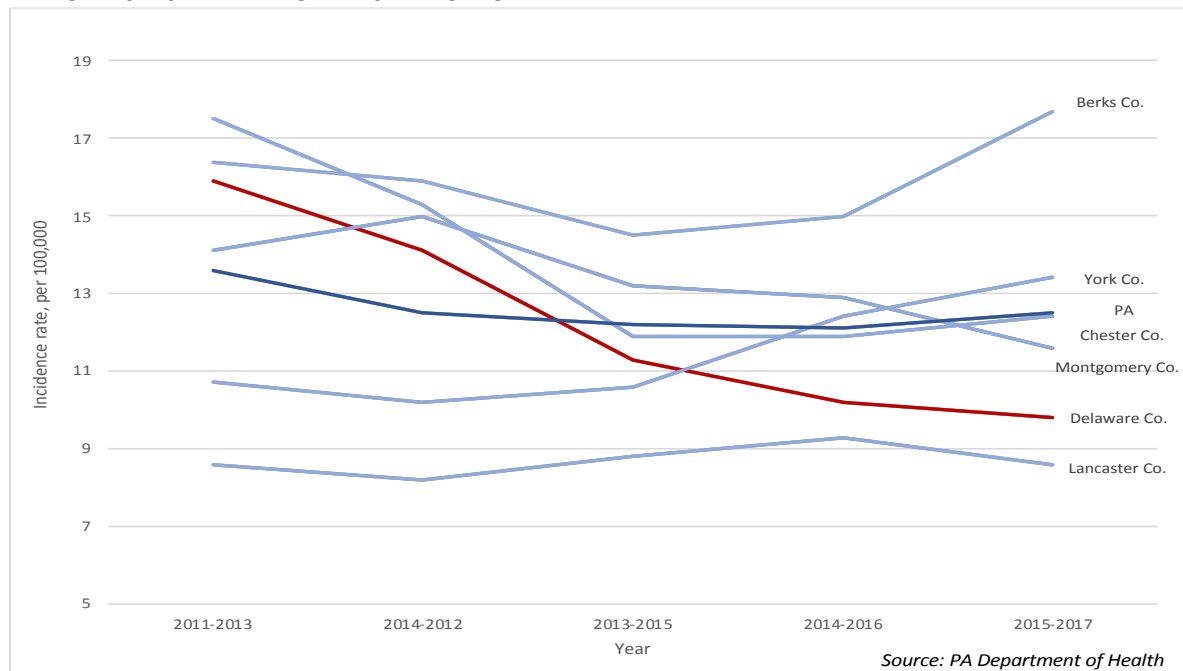
A LOWER VALUE IS BETTER FOR THIS INDICATOR



Between 2011-2017, the salmonella incidence rate decreased in Delaware County from 15.9 to 9.8 cases per 100,000 (Figure 32). Chester and Montgomery Counties saw decreases in their incidence rates over this time period, while Berks and York Counties saw an increase. At the state level, PA’s salmonella incidence rate decreased slightly over this period.

FIGURE 32. TRENDS IN INCIDENCE RATE OF SALMONELLA POISONING (PER 100,000 POPULATION), 2011-2013 TO 2015-2017

A DECREASE IS BETTER FOR THIS INDICATOR

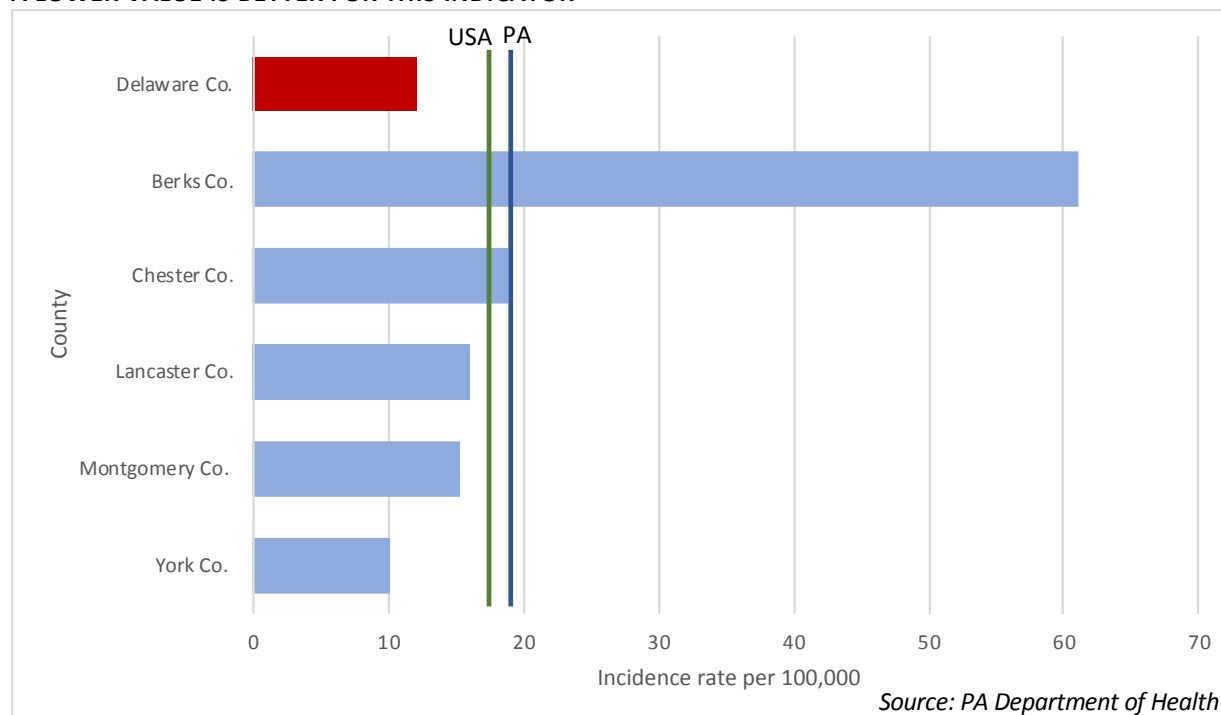


CAMPYLOBACTER

In 2015-2017, the incidence rate for *Campylobacter* in Delaware County was 12 per 100,000 population (**Figure 33**). This was lower than that of the state and the nation as a whole, at 19 and 17.5 cases per 100,000 respectively. Delaware County's incidence rate was also lower than Chester (18.8), Lancaster (16.1), and Montgomery (15.3) Counties. Notably, Berks County had the highest incidence rate with 61.1 cases per 100,000. Comparatively, York County had the lowest incidence rate at 10.1 cases per 100,000.

FIGURE 33. INCIDENCE RATE OF *CAMPYLOBACTER* INFECTIONS (PER 100,000 POPULATION), 2015-2017

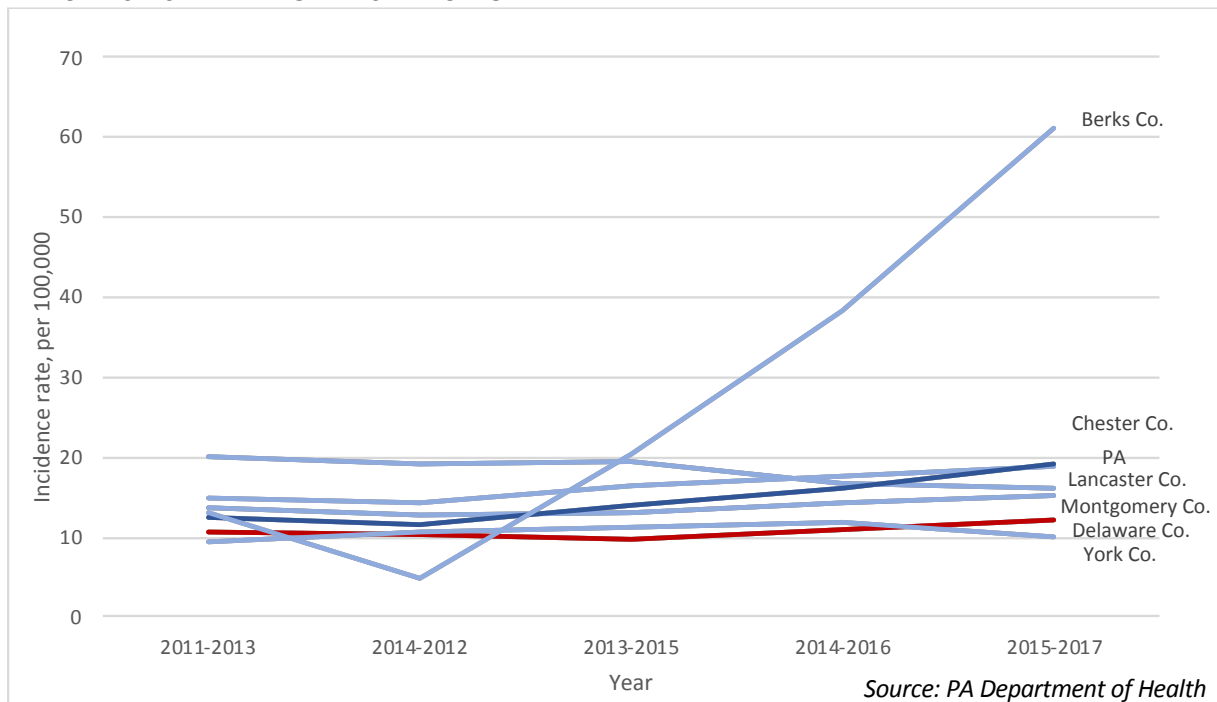
A LOWER VALUE IS BETTER FOR THIS INDICATOR



Between 2011-2017, the *Campylobacter* infection incidence rate has slightly increased in Delaware County (**Figure 34**). In 2011-2013, Delaware County had 10.6 cases per 100,000, increasing to 12 by 2015-2017. Similarly, Chester, Montgomery, and York Counties all saw an increase in their incidence rates over this time period, while Lancaster County saw a slight decrease. In contrast, Berks County's *Campylobacter* infection incidence rate saw a dramatic increase, from 12.9 to 61.1 cases per 100,000 in 2015-2017. PA's *Campylobacter* incidence rate also saw an increase over this time period, from 12.5 to 19 cases per 100,000.

FIGURE 34. TRENDS IN INCIDENCE RATE OF *CAMPYLOBACTER* INFECTIONS (PER 100,000 POPULATION), 2011-2013 TO 2015-2017

A DECREASE IS BETTER FOR THIS INDICATOR



DATA TO ACTION

The Pennsylvania Department of Agriculture oversees a large number of retail food facilities within the state, inclusive of restaurants, grocery stores, school cafeterias, farmers markets and other vendors. It also coordinates the inspection of multiple food storage and distribution businesses and establishments²². In Delaware County, municipalities are responsible for conducting restaurant and retail food facility inspections and overseeing the permitting process for certain facilities to operate.

²²Food Safety. *Pennsylvania Department of Agriculture*. (n.d.) Retrieved March 2020 from https://www.agriculture.pa.gov/consumer_protection/FoodSafety/Pages/default.aspx

INJURY AND VIOLENCE

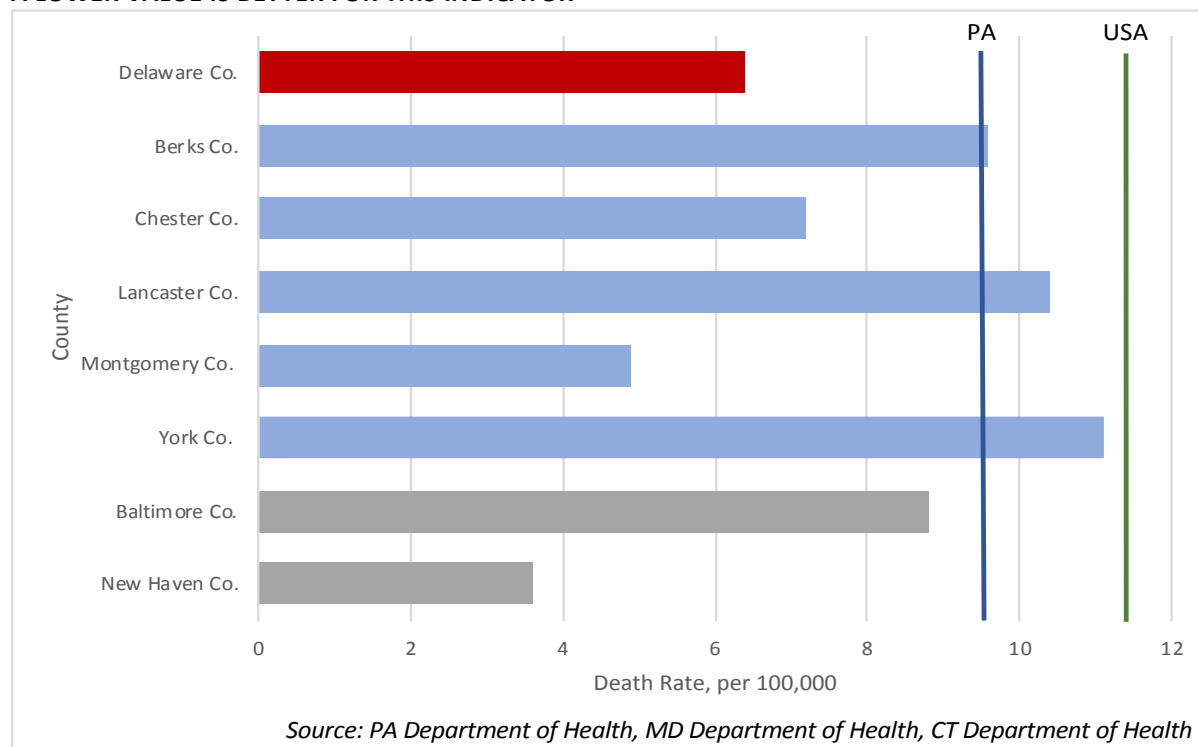
Injuries, both those categorized as unintentional as well as intentional, are important public health priorities in the United States. Injury is the leading killer of Americans under the age of 45 years, irrespective of sex, race, and socioeconomic status²³. It is detrimental to the well-being of a society, in both resources needed for care and rehabilitation, as well as pain and suffering incurred by the affected and their loved ones. Encompassing unintentional areas such as motor vehicle accidents and death due to drug overdose, as well as intentional areas such as child neglect and abuse, firearm injury, and violent crime, injury and violence are pervasive and largely preventable killers that require close investigation.

MOTOR VEHICLE CRASHES

In 2017, Delaware County had a motor vehicle crash mortality rate of 6.4 per 100,000 population (**Figure 35**). Variations in rates among neighboring counties were fairly wide, ranging from Montgomery County at 4.9 to York County at 11.1. Within PA, Delaware County had the second lowest rate among the counties examined. It was significantly lower than the statewide rate of 9.5 per 100,000, as well as the national rate of 11.4 per 100,000.

FIGURE 35. AGE-ADJUSTED MOTOR VEHICLE CRASH DEATH RATE (PER 100,000 POPULATION) (2017).

A LOWER VALUE IS BETTER FOR THIS INDICATOR

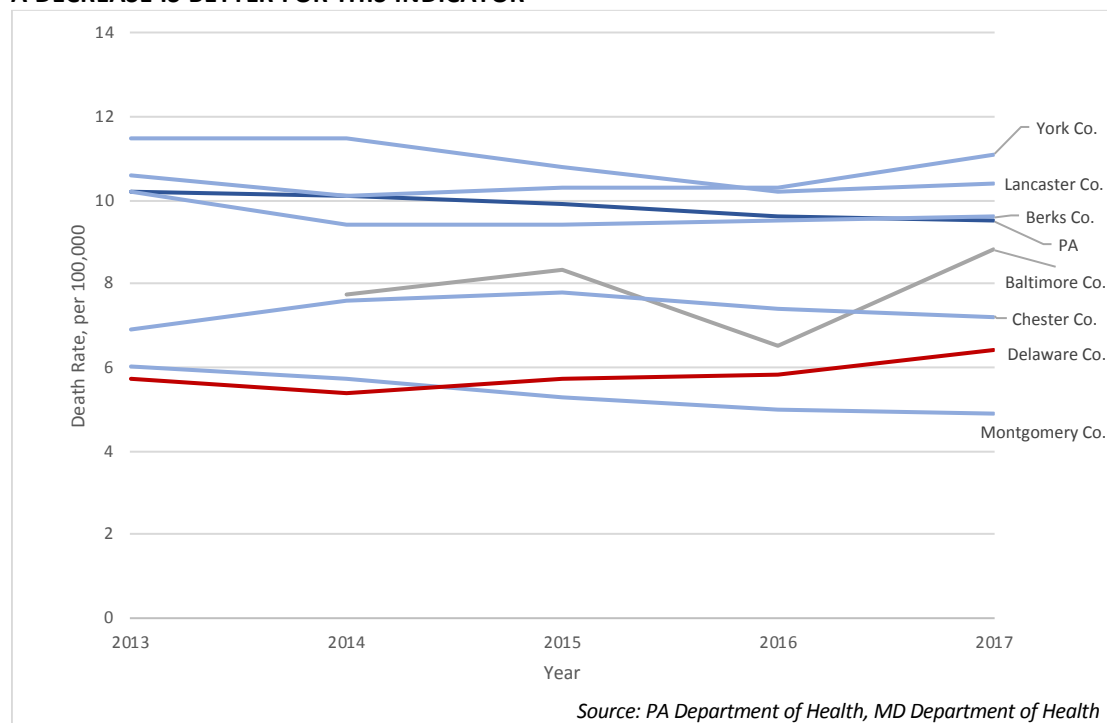


²³Ten Leading Causes of Death and Injury | Injury Prevention & Control. CDC. (30 Mar 2020) Retrieved March 2020 from <https://www.cdc.gov/injury/wisqars/LeadingCauses.html>

The rate of motor vehicle crash-related deaths remained approximately constant in Delaware County between 2013-2017, from 5.7 to 6.4 per 100,000, respectively (**Figure 36**). It remained significantly lower than the state average across this entire time period. Rates of neighboring counties also remained relatively stable, with Delaware County falling below most with the exception of Montgomery County, which it surpassed in 2015.

FIGURE 36. TRENDS IN AGE-ADJUSTED MOTOR VEHICLE CRASH DEATH RATE (PER 100,000 POPULATION), 2013-2017.

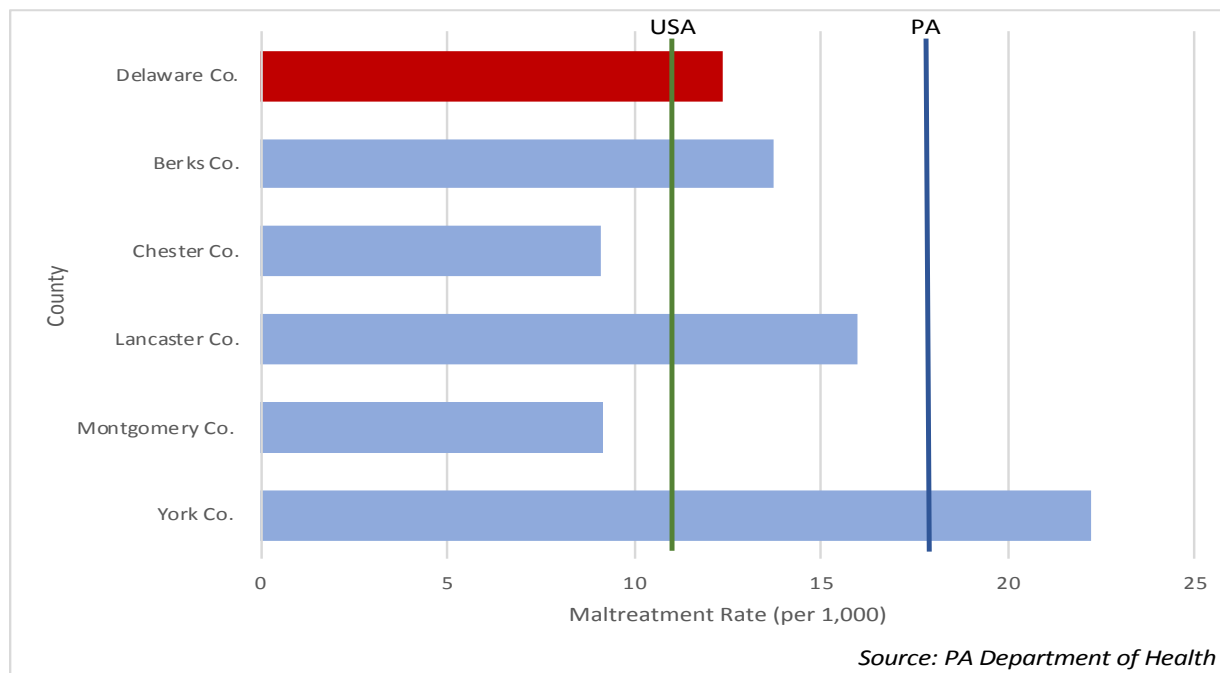
A DECREASE IS BETTER FOR THIS INDICATOR



CHILD MALTREATMENT

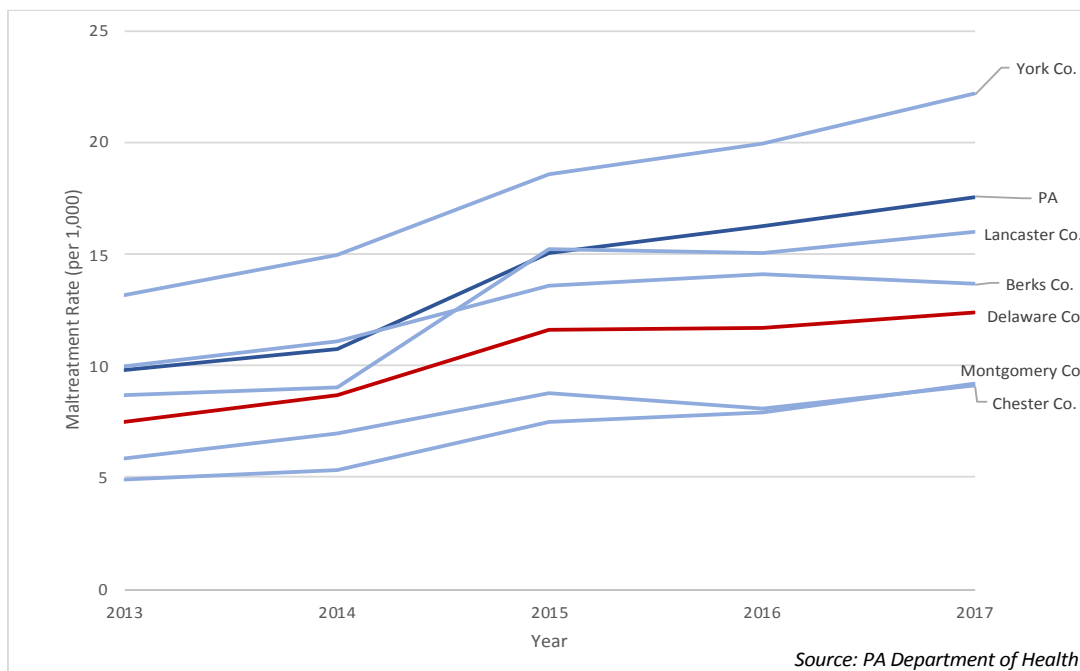
The rate of child maltreatment cases per 1,000 individuals under the age of 18 in Delaware County was 12.4 in 2017 (**Figure 37**). This places it in the middle of its neighboring counties, with Chester County the lowest at 9.1 and York County highest at 22.2. The rate for Delaware County is marginally higher than the national average of 10.75, and significantly lower than the statewide average of 17.6.

FIGURE 37. CHILD MALTREATMENT RATE (PER 1,000 UNDER AGE 18), 2017.
A LOWER VALUE IS BETTER FOR THIS INDICATOR



Between 2013-2017, there has been a consistent and steady increase in the rate of child mistreatment across the entire state of PA, from 9.8 to 17.6 (**Figure 38**). This trend in rate is seen in all examined PA counties. Most fall below the PA state average, with the exception of York County. Delaware County’s rate gradually increases from 7.5 to 12.4 across this time period, placing it appropriately in the middle among neighboring counties.

FIGURE 38. TRENDS IN CHILD MALTREATMENT RATE (PER 1,000 UNDER AGE 18), 2013-2017.
A DECREASE IS BETTER FOR THIS INDICATOR

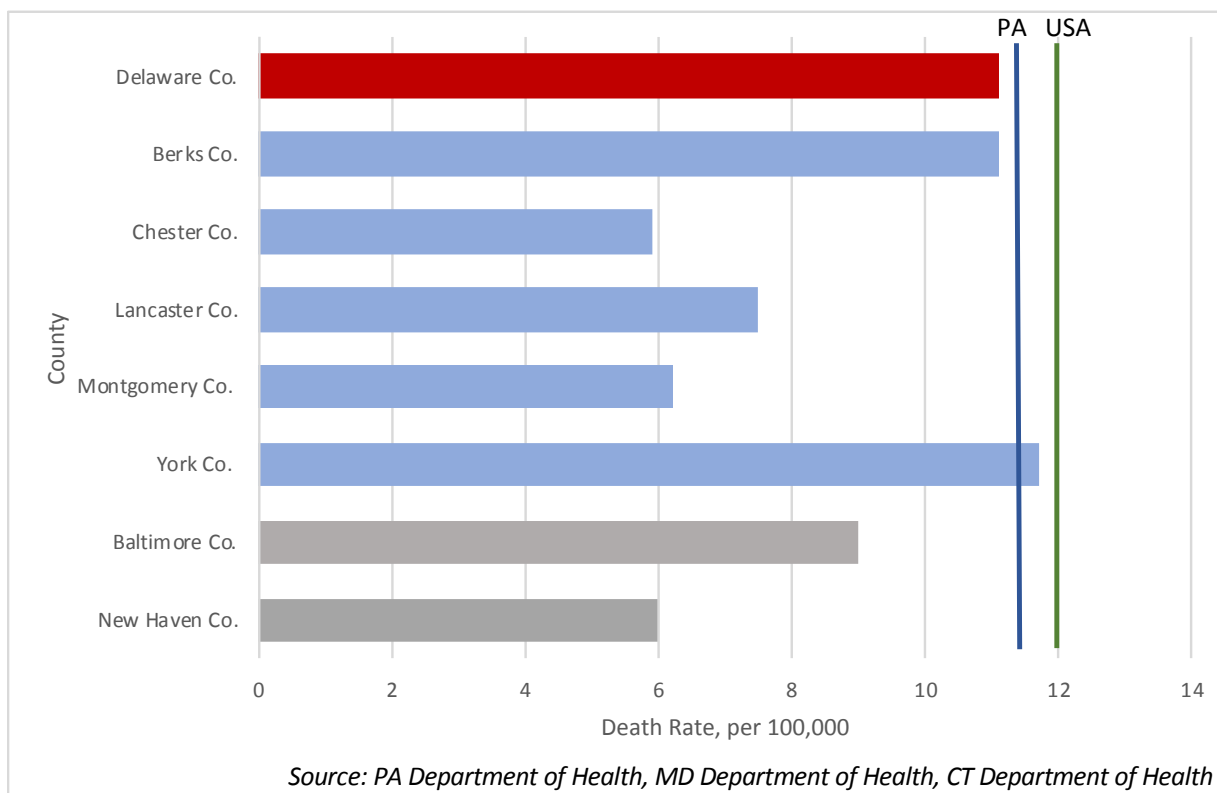


FIREARM-RELATED DEATH

In 2017, the rate of firearm-related deaths in Delaware County was 11.1 per 100,000 population (**Figure 39**). This places it among neighboring counties Berks and York, with rates of 11.1 and 11.7, respectively. It is also approximately the same as the state (11.5) and national averages (12). Chester, Lancaster, and Montgomery Counties have significantly lower rates in comparison, ranging from 5.9 to 7.5.

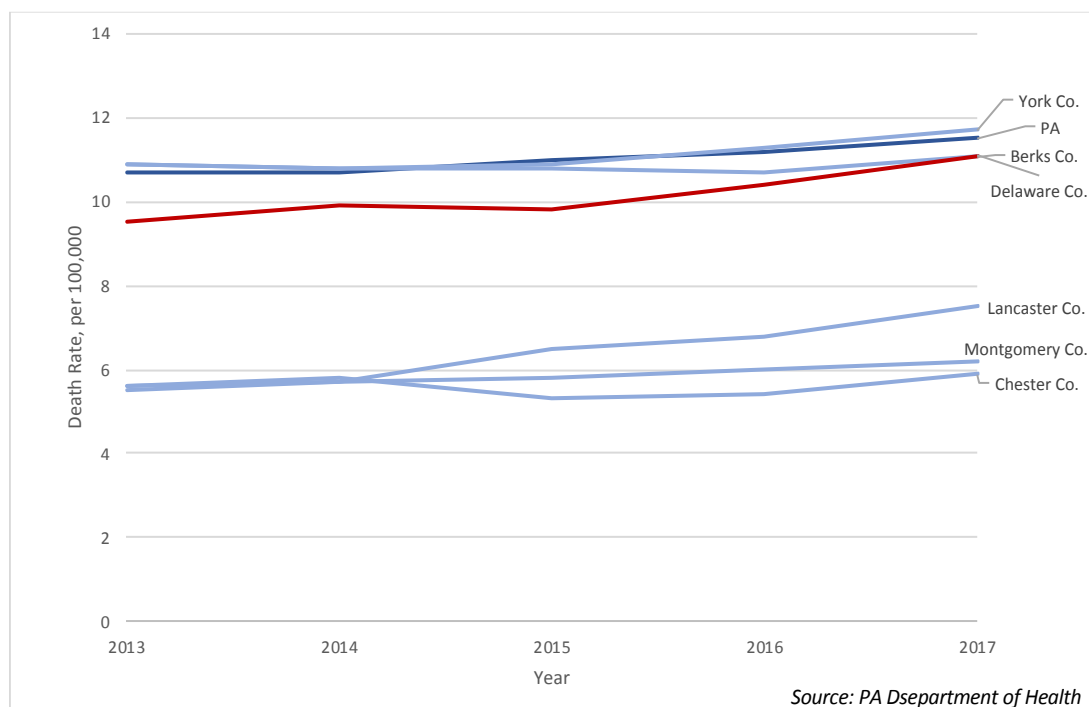
FIGURE 39. FIREARM-RELATED AGE-ADJUSTED DEATH RATE (PER 100,000 POPULATION), 2017.

A LOWER VALUE IS BETTER FOR THIS INDICATOR



Since 2013, Delaware County has experienced a gradual rise in the rate of firearm-related deaths from 9.5 in 2013 to 11.1 in 2017 (**Figure 40**). This trend is consistent with that of its neighboring counties, with comparable rates in York and Berks Counties throughout this time period. Over the same time, Delaware County's rate has remained marginally lower than the state average, which rose from 10.7 in 2013 to 11.5 in 2017.

FIGURE 40. TRENDS IN FIREARM-RELATED AGE-ADJUSTED DEATH RATE (PER 100,000 POPULATION), 2013-2017.
A DECREASE IS BETTER FOR THIS INDICATOR



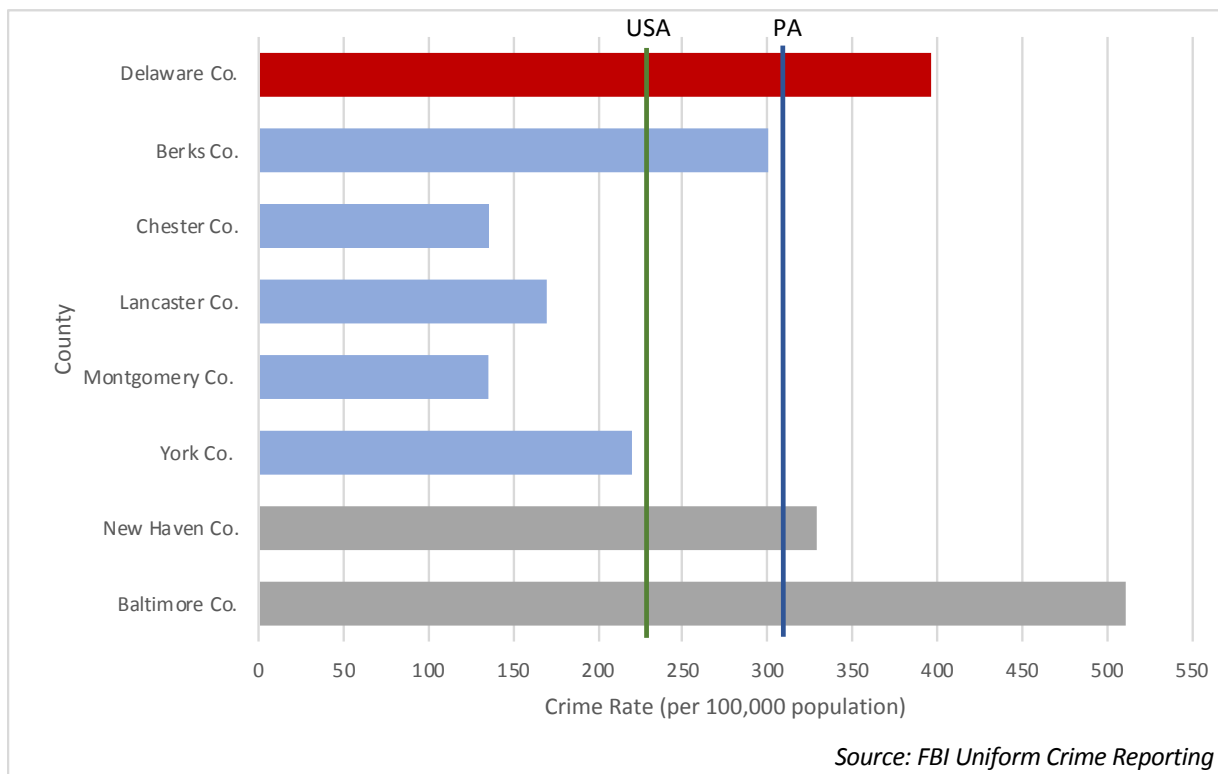
VIOLENT CRIME

Violent Crime is defined by the Federal Bureau of Investigation (FBI) as a crime in which an offender “uses or threatens to use force upon a victim” and includes crimes such as manslaughter, rape, robbery, and aggravated assault²⁴. Delaware County has a high rate of reported violent crimes, with 396 per 100,000 population in 2019 (**Figure 41**). With the exception of Baltimore County at 511 per 100,000, Delaware has the highest rate among its neighboring and comparator counties, which range from 135-329 per 100,000, and also exceeds the state and national averages, at 315 and 233 per 100,000, respectively.

FIGURE 41. NUMBER OF REPORTED VIOLENT CRIME OFFENSES (PER 100,000 POPULATION), 2019.

A LOWER VALUE IS BETTER FOR THIS INDICATOR

²⁴Violent Crime | Bureau of Justice Statistics. *Office of Justice Programs*. (n.d.) Retrieved 5 Feb 2020 from <https://www.bjs.gov/index.cfm?ty=tp&tid=31>



Since 2010, Delaware County has experienced a cumulative decline in rates of reported violent crime, from 504 per 100,000 in 2010 to 396 in 2019. This decreasing trend is consistent with what is seen in neighboring PA counties, though Delaware County has the highest rates among them throughout the duration of this time period.

DATA TO ACTION

Given the broad range of health needs that injury and violence encompass, Delaware County's government has multiple established departments and offices that serve to address each of them. The Department of Intercommunity Health Coordination (ICH) provides resources on its website regarding resources for identifying domestic abuse and violence, as well as guided next steps²⁵. In addressing the rising trend in gun violence and firearm fatalities, Delaware County officials in 2019 called on Pennsylvania lawmakers for the passage of an Extreme Risk Protective Order Legislation (ERPO), which would empower law enforcement and family members to temporarily remove an individual's access to firearms if they are believed to be an eminent danger to themselves or others²⁶. Finally, the county is working hard to address the critical issue of child neglect and abuse: The Office of Children and Youth Services conducts investigations on all allegations of child abuse and neglect, and also provides a variety of services for disenfranchised children, including emergency shelter, adoption services, day care, and access to medical care²⁷.

The Delaware County District Attorney's Office also references many agencies throughout the county that provide assistance towards victims of injury and violence, including Children and Youth Services, Domestic Abuse Project of Delaware County, and the Bureau of Victims Services, among others²⁸.

²⁵ Domestic Abuse. *Delaware County Pennsylvania*. (2019) Retrieved June 2020 from <https://www.delcopa.gov/ich/domesticabuse/domesticviolence.html>

²⁶ Delaware County Lawmakers Call To Remove Guns from 'Dangerous' Individuals. *ABC 6*. (5 Apr 2019) Retrieved June 2020 from <https://6abc.com/5235537/>

²⁷ Office of Children and Youth Services. *Delaware County Department of Human Services*. (2019) Retrieved June 2020 from <http://www.delcohsa.org/childreneyouthservices.html>

²⁸ Agency Assistance. *Delaware County District Attorney*. Retrieved June 2020 from <http://www.delcoda.com/victim-services/agency-assistance>

MATERNAL, INFANT, AND CHILD HEALTH

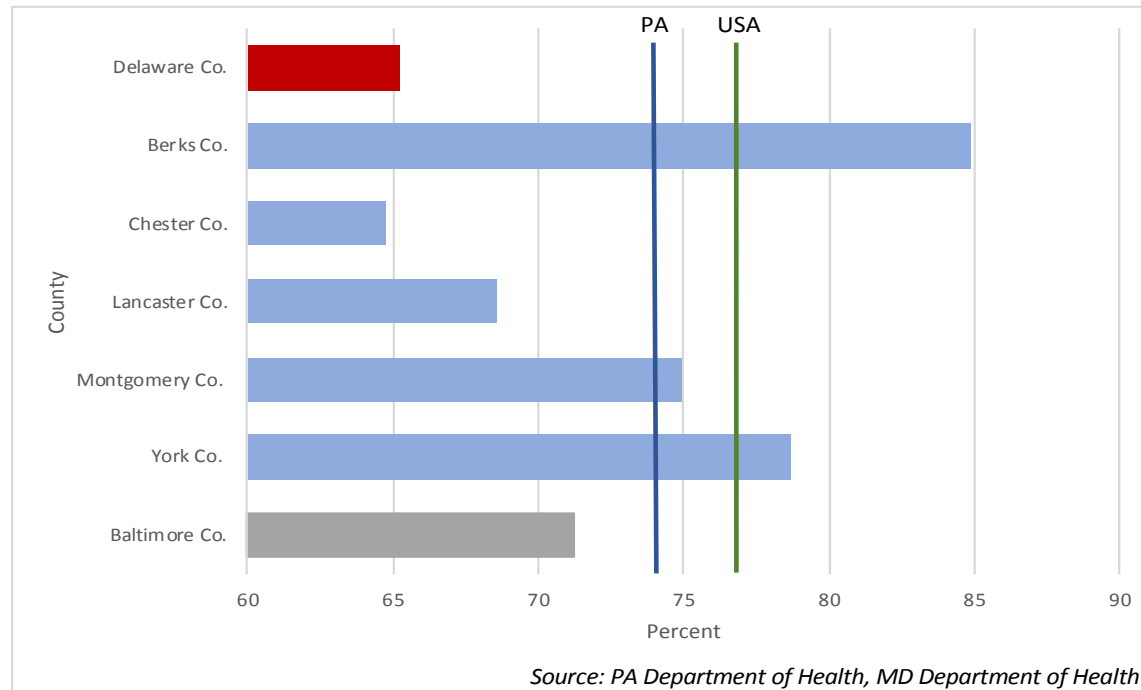
The well-being of mothers, infants, and children (MIC) represent a critical aspect of healthcare and predict the future health outcomes of these individuals and their communities. Several factors can affect health during pregnancy and early life, such as preconception health status of the mother, age, socioeconomic status, and access to prenatal, conception, and pediatric care²⁹. Additionally, there is still significant disparity in MIC care throughout the US. For example, maternal and infant mortality are significantly higher in African American populations compared to other races³⁰. It is critical that we closely consider the health of this critical and vulnerable population.

PRENATAL CARE

In 2017, 65.2% of childbearing women in Delaware County received prenatal care within the first trimester of their pregnancy (**Figure 42**). Rates among neighboring counties vary widely, from 64.7% (Chester County) to 84.9% (Berks County), and Delaware County ranks among the lowest in this group. It is also lower than the state and national averages of 74.2% and 77.1%, respectively.

FIGURE 42. PERCENT OF PREGNANT WOMEN RECEIVING PRENATAL CARE IN THE FIRST TRIMESTER, 2017.

A HIGHER VALUE IS BETTER FOR THIS INDICATOR



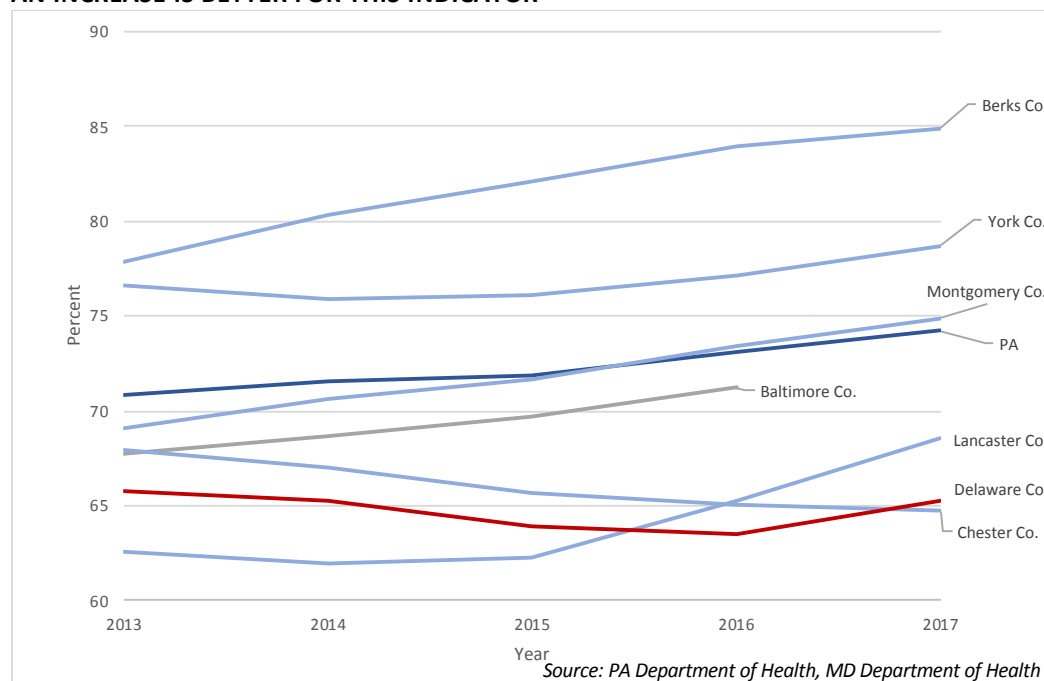
²⁹ Maternal, Infant, and Child Health. *Healthy People 2020*, (n.d.) Retrieved February 2020 from <https://www.healthypeople.gov/2020/topics-objectives/topic/maternal-infant-and-child-health>

³⁰ Tucker, M., Berg, C., & Callaghan, W. (2007). The black-white disparity in pregnancy-related mortality from 5 conditions: Differences in prevalence and case-fatality rates. *Am J Public Health, 1(97)*, 247–251.

The proportion of women who receive prenatal care within the first trimester of their pregnancy remained relatively steady in Delaware County between the years 2013-2017, reaching a low of 63.5% in 2016 (**Figure 43**). In contrast, there was a generally increasing trend across years in most of its neighboring counties and the state as a whole. At the state level, PA's percentage increased consistently from 70.8% to 74.2% across this 4-year span.

FIGURE 43. TRENDS IN PERCENT OF PREGNANT WOMEN RECEIVING PRENATAL CARE IN THE FIRST TRIMESTER, 2013-2017.

AN INCREASE IS BETTER FOR THIS INDICATOR

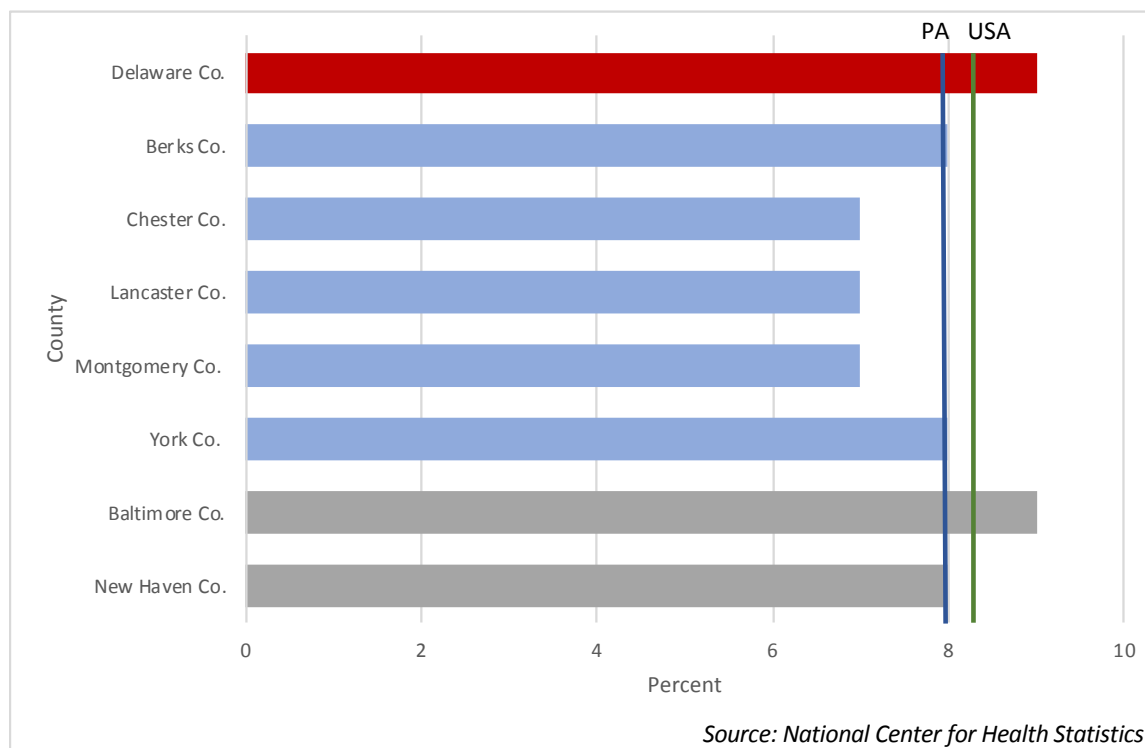


PREVALENCE OF LOW BIRTH WEIGHT

Newborns classified as low birth weight (LBW, defined as less than 2,500 grams or 5 pounds 8 ounces) are at increased risk of many serious health complications³¹. In 2019, 9% of live births in Delaware County were classified as LBW (**Figure 44**). This prevalence is marginally higher than its neighboring counties, which all range between 7 and 8%. The prevalence of LBW in Delaware County is marginally higher than the state average of 8.0% and the national average of 8.3%.

³¹ Low Birthweight. *March of Dimes*. (n.d.) Retrieved March 2020 from <https://www.marchofdimes.org/complications/low-birthweight.aspx>

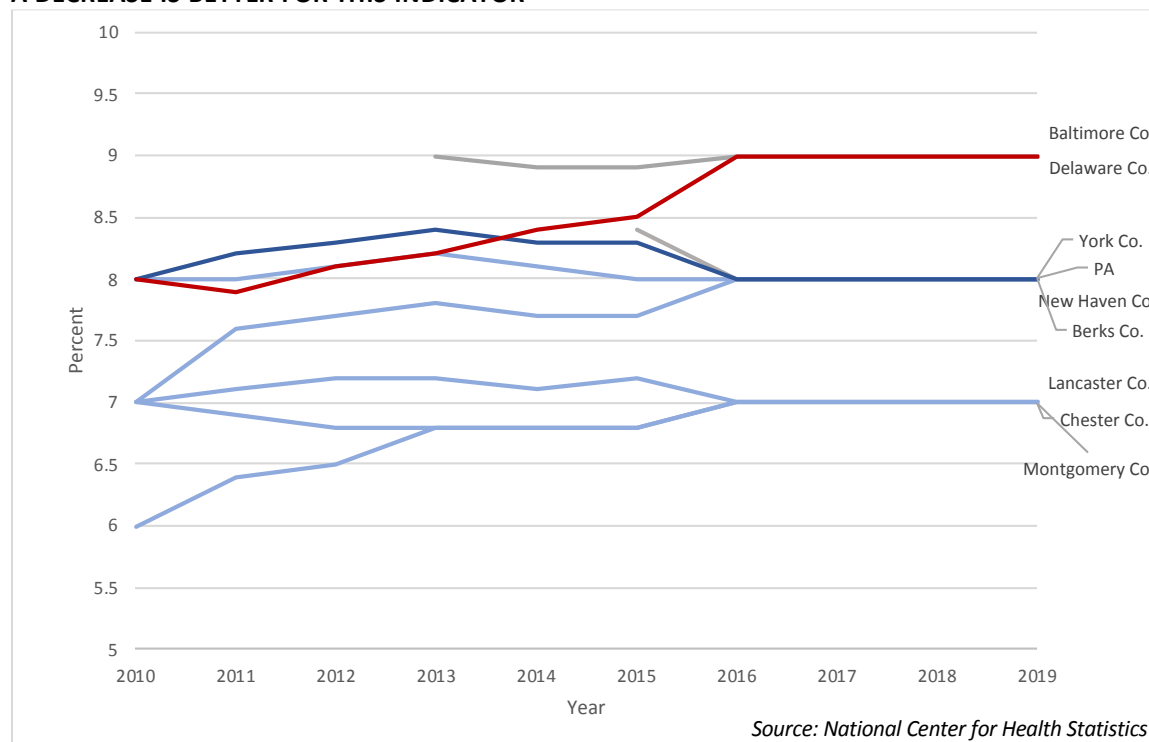
FIGURE 44. PERCENT OF LIVE BIRTHS WITH LOW BIRTH WEIGHT (<2.5KG), 2019.
A LOWER VALUE IS BETTER FOR THIS INDICATOR



The proportion of live births classified as LBW from 2010-2019 has remained largely constant in the state of PA, at approximately 8% (**Figure 45**). In comparison, there has been a gradual increase in prevalence in Delaware County, from 8% in 2010 to 9% in 2019. Neighboring counties have remained constant with minor fluctuations throughout the years.

FIGURE 45. TRENDS IN PERCENT OF LIVE BIRTHS WITH LOW BIRTH WEIGHT (<2.5KG), 2010-2019.

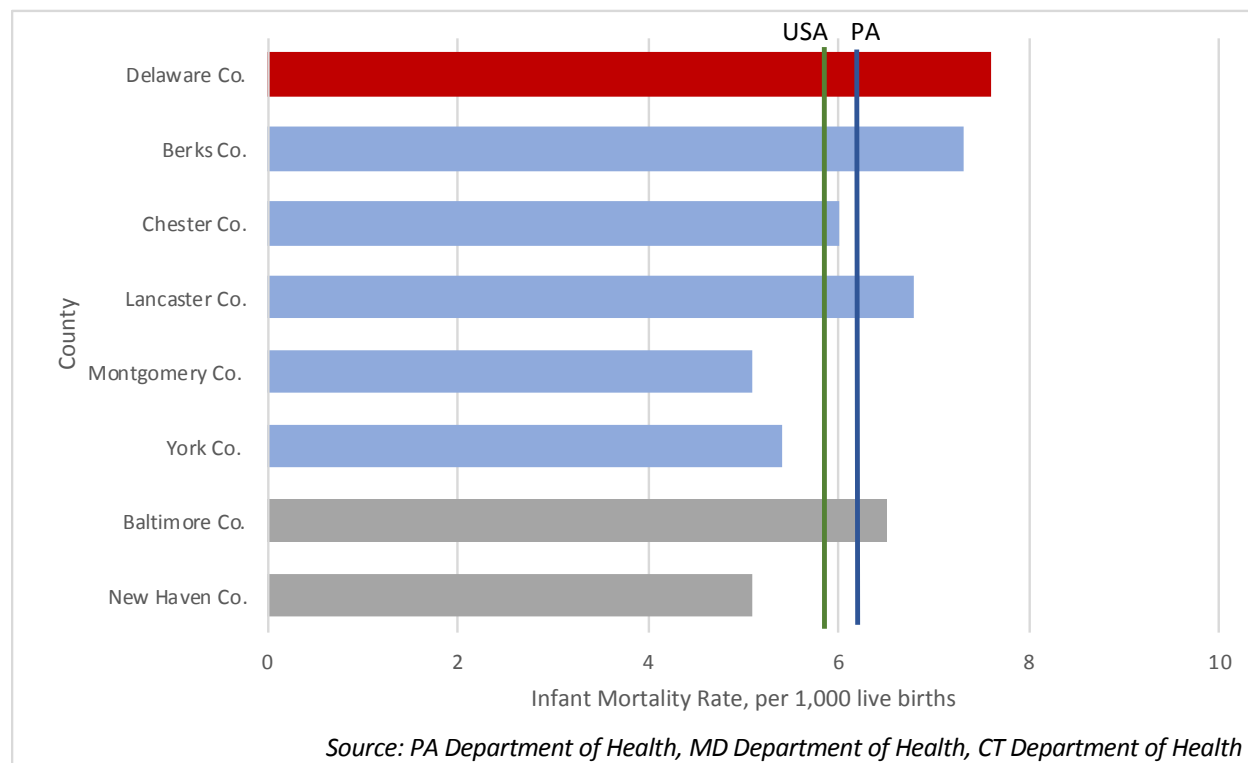
A DECREASE IS BETTER FOR THIS INDICATOR



INFANT MORTALITY RATE

Infant mortality rate (IMR) refers to the number of deaths in children under one year of age per 1,000 live births and is a key measure of infant health in a population. In 2017, Delaware County had an IMR of 7.6 per 1,000 births (**Figure 46**). This was higher compared to its neighboring counties, which had IMRs that ranged from 4.9 to 6.8 per 1,000. Delaware County’s IMR also exceeds that of the state and national averages of 6.2 and 5.9 per 1,000 births, respectively.

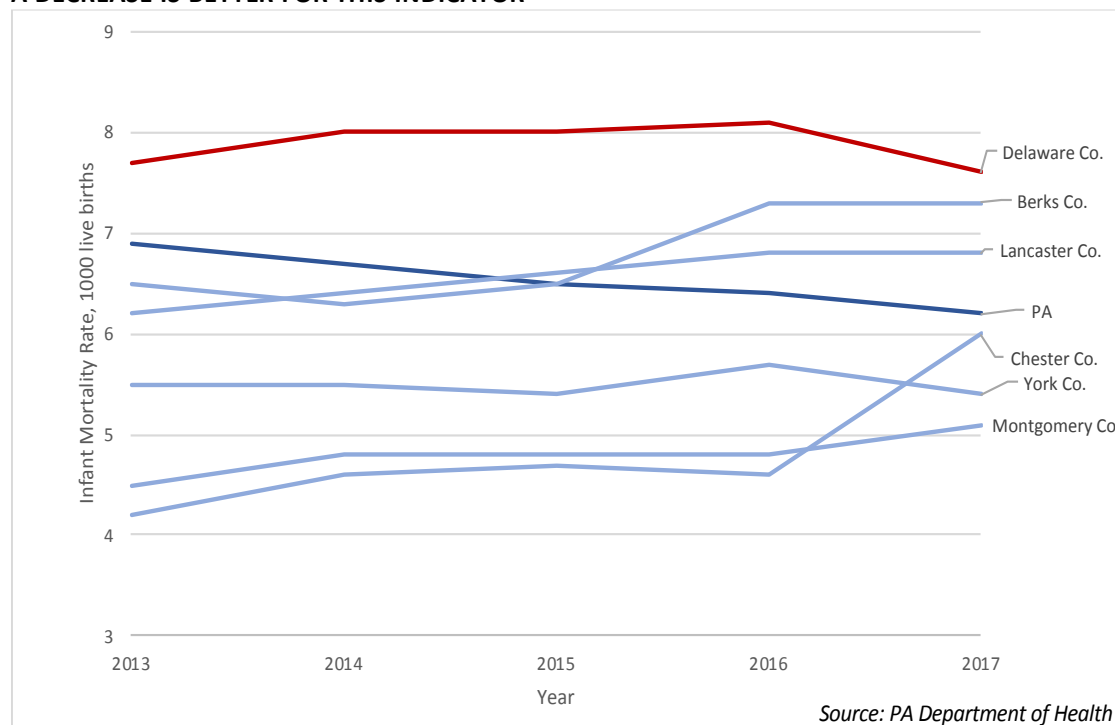
FIGURE 46. INFANT MORTALITY RATE (DEATHS PER 1,000 LIVE BIRTHS), 2017.
A LOWER VALUE IS BETTER FOR THIS INDICATOR



Since 2013, IMR in Delaware County remained relatively constant at approximately 8 per 1,000 until 2016, after which a decline to 7.6 was observed in 2017 (**Figure 47**). Across the observation period of 2013-2017, Delaware County's IMR has been higher than the state average, which gradually declined from 6.9-6.2 during this time. Delaware County has consistently had the highest IMR among its neighboring counties, which range between 4.2-7.3 per 1000. Notably, Berks and Chester Counties both had significant increases in their IMRs during this period.

FIGURE 47. TRENDS IN INFANT MORTALITY RATE (DEATHS PER 1,000 LIVE BIRTHS), 2013-2017.

A DECREASE IS BETTER FOR THIS INDICATOR



DATA TO ACTION

Delaware County has made significant efforts in the past decade in order to promote the health and well-being of its mothers, infants, and children. The Department of Intercommunity Health Coordination offers free and low-cost local health services at many sites throughout the county that cover a variety of needs, among them prenatal and obstetrical services, well-baby and -child care, as well as comprehensive family and pediatric care³². The Philadelphia-based Public Citizens for Children and Youth (PCCY) offers health services and assistance to enroll youth in medical assistance and insurance to families across Pennsylvania³³. Of note, the PCCY released a report in 2016 identifying Delaware County as a priority area in PA³⁴.

³² Health Clinics. *Delaware County Pennsylvania*. (2019) Retrieved June 2020 from <https://www.delcopa.gov/ich/resources/healthclinics.html>

³³ PCCY. *Public Citizens for Children + Youth*. Retrieved June 2020 from <https://www.pccy.org/>

³⁴ Left Out: The Status of Children in Delaware County. *Public Citizens for Children + Youth*. (Oct 2016) Retrieved June 2020 from https://www.pccy.org/wp-content/uploads/2016/10/Left-Out_Delaware-County-1.pdf

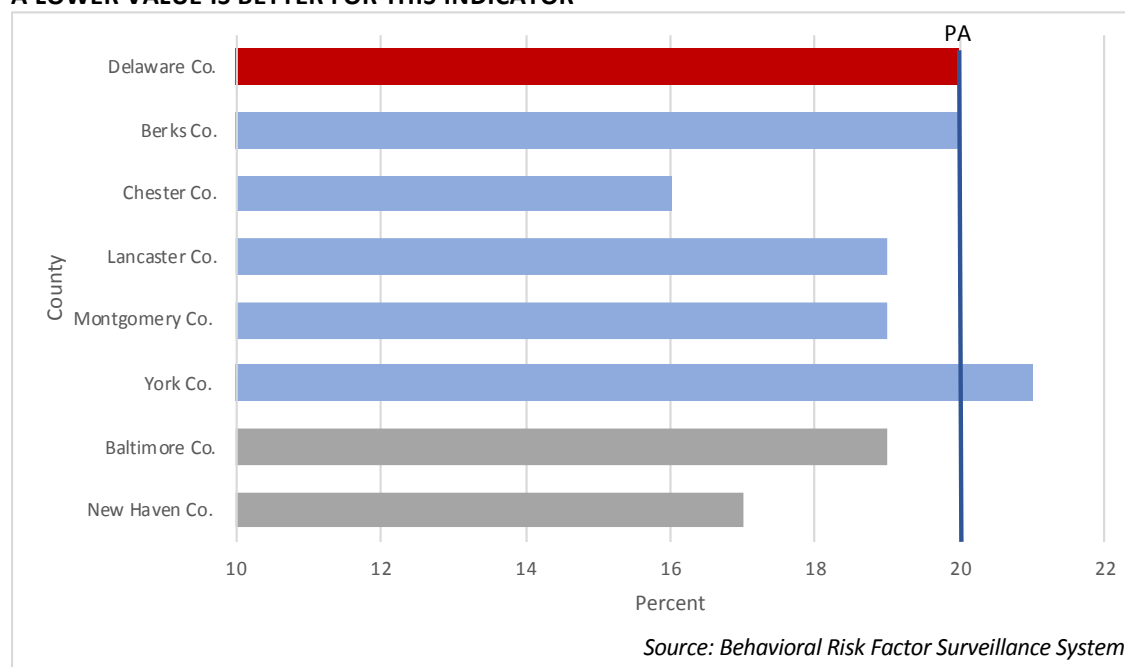
MENTAL HEALTH STATUS

Good mental health involves one's social, psychological, and emotional well-being in addition to good physical health free from mental illness³⁵. Mental health disorders affect people of all ages, races, and socioeconomic status, and can increase the risk for many physical health issues, including stroke, heart disease, and type 2 diabetes³⁶. Many serious mental disorders, such as schizophrenia, major depression, and bipolar illness, can be significantly disabling, resulting in decreased productivity and impaired social relationships³⁷.

DEPRESSIVE DISORDERS

In 2016-2018, 20% of adults in Delaware County reported having been diagnosed with a form of depression (**Figure 48**). This is equivalent to the prevalence in Berks County as well as in the state of PA overall. Delaware County's prevalence was slightly higher than estimated percentages in neighboring Chester (16%), Lancaster (19%), and Montgomery (19%) Counties, and lower than York County (21%).

FIGURE 48. PERCENT EVER TOLD THEY HAVE A DEPRESSIVE DISORDER INCLUDING DEPRESSION, MAJOR DEPRESSION, MINOR DEPRESSION OR DYSTHYMIA, 2016-2018
A LOWER VALUE IS BETTER FOR THIS INDICATOR



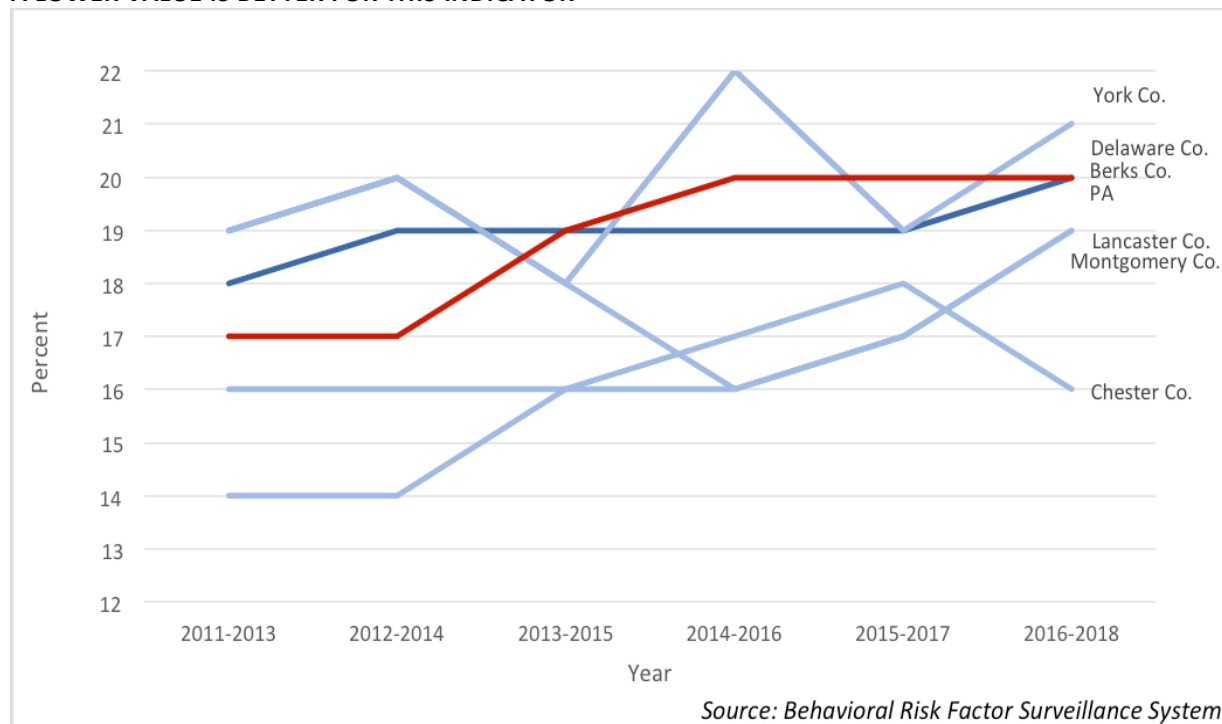
³⁵ Learn About Mental Health | Mental Health. CDC. (12 Dec 2018) Retrieved November 2019 from <https://www.cdc.gov/mentalhealth/learn/index.htm>

³⁶ Chronic Illness & Mental Health. *National Institute of Mental Health*. (2 Feb 2020) Retrieved February 2020 from <https://www.nimh.nih.gov/health/publications/chronic-illness-mental-health/index.shtml#pub1>

³⁷ Fast Facts | Learn About Mental Health | Mental Health. CDC. (26 Jan 2018) Retrieved February 2020 from <https://www.cdc.gov/mentalhealth/learn/index.htm>

The prevalence of depressive disorders has increased slightly in Delaware County in recent years, from 17% in 2011-2013 to 20% in 2016-2018 (**Figure 49**). This upward trend is evident in neighboring Montgomery County, with slight increases also observed in Berks and York Counties. Comparatively, the prevalence has remained mostly stable in Chester and Lancaster Counties during this time period, with slight fluctuations. PA’s prevalence, while remaining relatively stable in recent years, saw a slight increase to 20% in 2016-2018.

FIGURE 49. TRENDS IN PREVALENCE OF DEPRESSIVE DISORDER, 2011-2013 TO 2016-2018
A LOWER VALUE IS BETTER FOR THIS INDICATOR

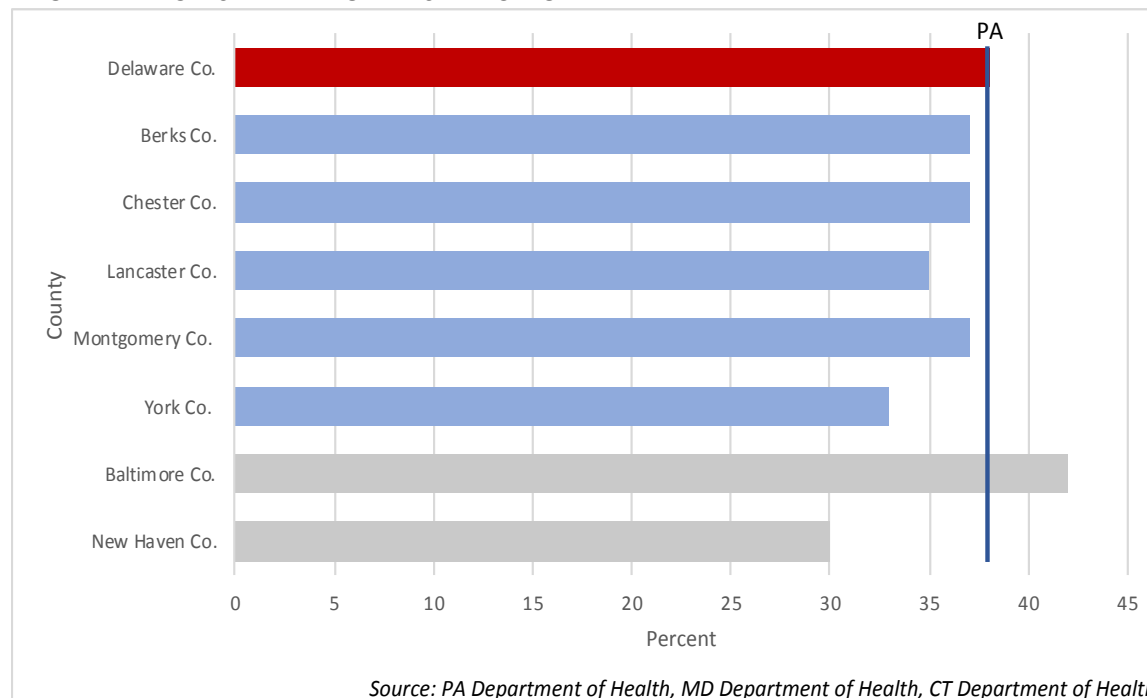


SELF-REPORTED MENTAL HEALTH

From 2015-2017, 38% of Delaware County adults reported mental health as “not good” for one or more days in the past month (**Figure 50**). The percent reporting their mental health as “not good” for one or more days in Delaware County is the same as that of the state of PA (38%) and falls at the top of the range (33% to 38%) compared to neighboring counties, with York County having the lowest prevalence at 33%.

FIGURE 50. PERCENT THAT MENTAL HEALTH WAS FAIR OR POOR 1 OR MORE DAYS IN THE PAST MONTH, 2015-2017

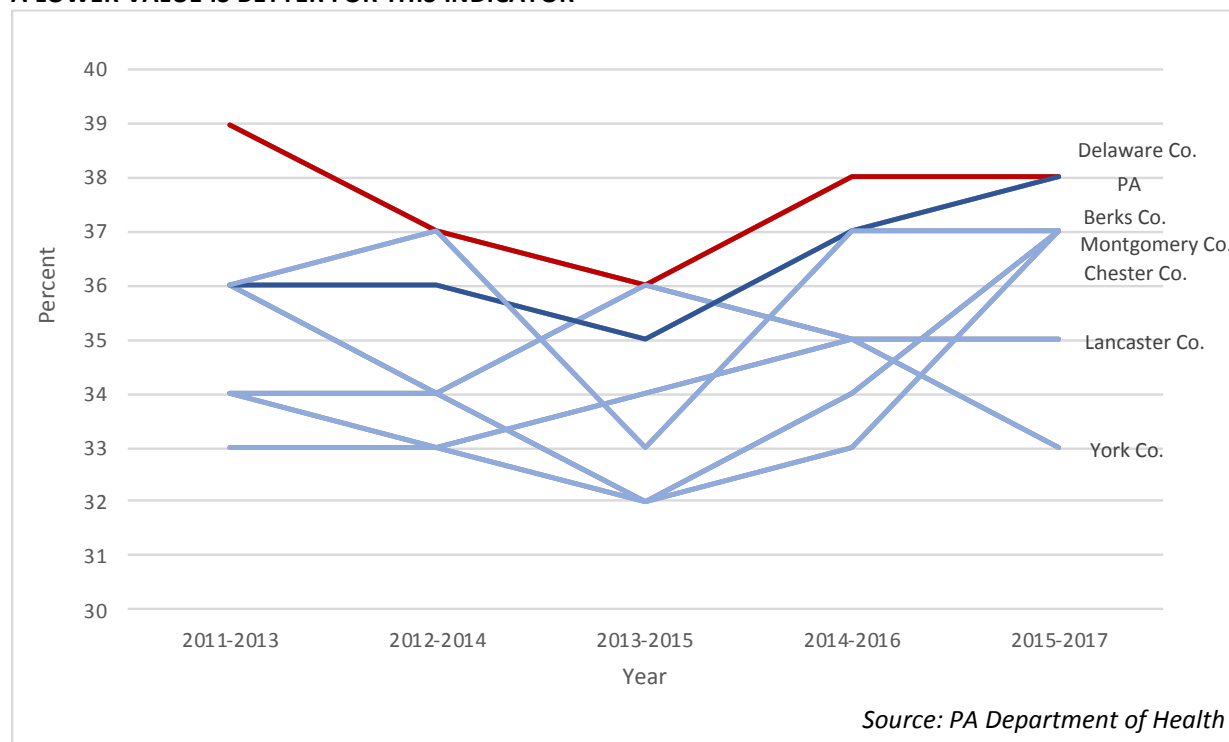
A LOWER VALUE IS BETTER FOR THIS INDICATOR



In Delaware County, the percent of people who reported mental health as “not good” in recent years decreased from 39% in 2011-2013 to 36% in 2013-2015, increasing back to 38% by 2015-2017 (**Figure 51**). Comparatively, the state of PA as well as the majority of neighboring counties showed an overall increase in prevalence during this time period. The exception was York County, whose prevalence fluctuated over the years but ultimately remained unchanged.

FIGURE 51. TRENDS IN PERCENT REPORTING MENTAL HEALTH WAS FAIR OR POOR 1 OR MORE DAYS IN THE PAST MONTH, 2011-2013 TO 2015-2017.

A LOWER VALUE IS BETTER FOR THIS INDICATOR

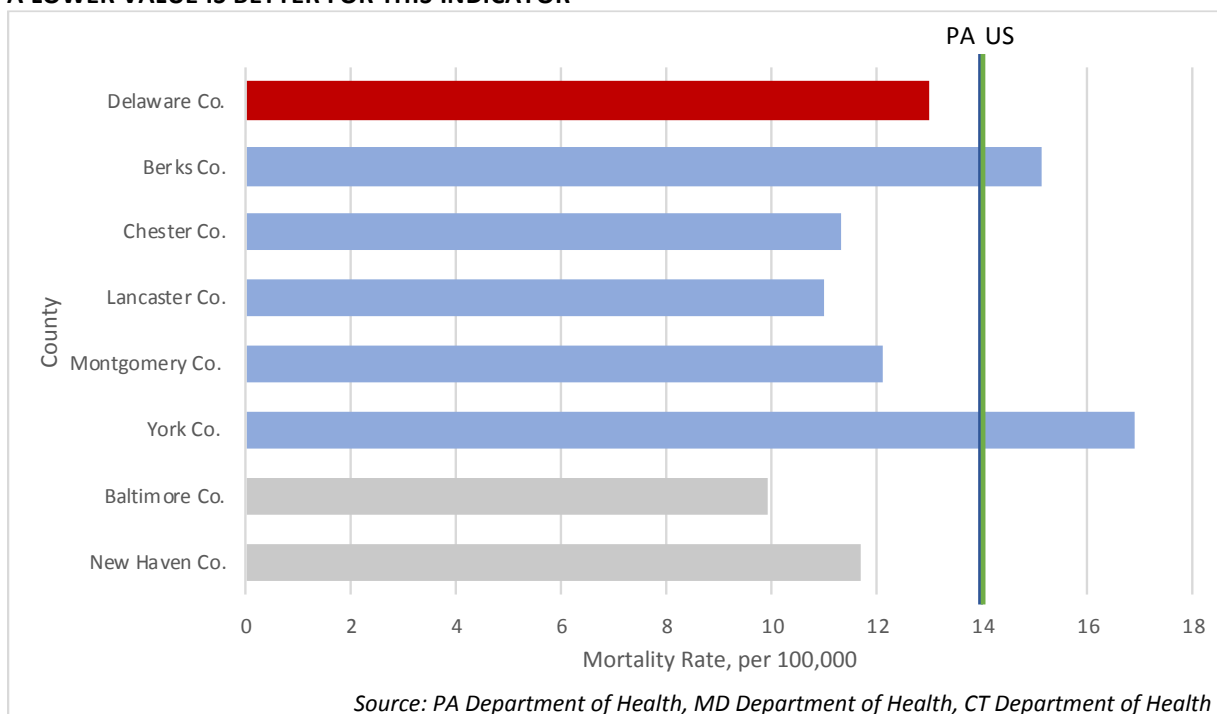


SUICIDE RATE

Suicide is one of the leading causes of death in the US, and there has been a steady rise in the national suicide rate over the last decade³⁸. In Delaware County, the age-adjusted suicide rate in 2013-2017 was 13 deaths per 100,000 population (**Figure 52**). This is below the state and national average of 14 deaths per 100,000. Compared to neighboring counties, Delaware County had a higher suicide rate than Montgomery (12.1), Chester (11.3), and Lancaster (11.0) Counties, but was surpassed by Berks and York Counties with 15.1 and 16.9 deaths per 100,000, respectively.

³⁸Suicide. *National Institute of Mental Health*. (April 2019). Retrieved February 2020 from <https://www.nimh.nih.gov/health/statistics/suicide.shtml>

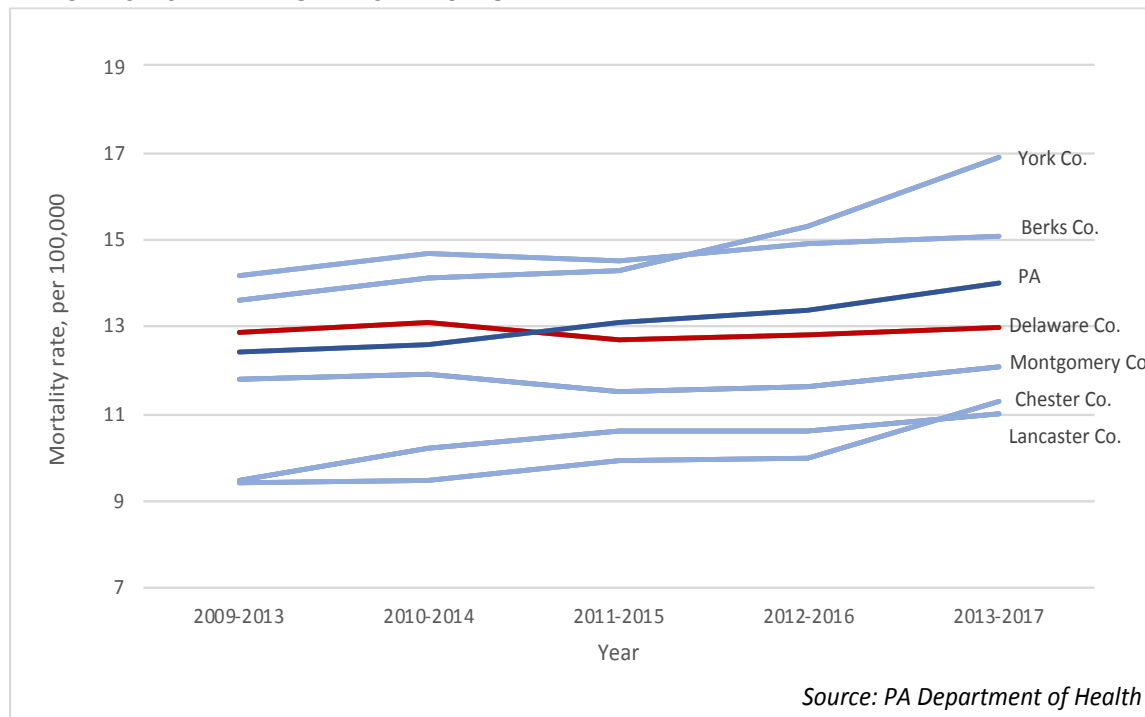
FIGURE 52. AGE-ADJUSTED SUICIDE RATE (PER 100,000 POPULATION), 2013-2017
A LOWER VALUE IS BETTER FOR THIS INDICATOR



Delaware County's suicide rate has mostly remained constant between 2009 and 2017, with minor fluctuations across the years (**Figure 53**). Comparatively, all neighboring PA counties examined saw overall increases in their suicide rates over the same time period, with York County's suicide rate showing the greatest increase from 13.6 to 16.9 per 100,000. The state of PA also saw an increase in suicide rate during this time.

FIGURE 53. TRENDS IN AGE-ADJUSTED SUICIDE RATE (PER 100,000 POPULATION), 2009-2013 TO 2013-2017.

A DECREASE IS BETTER FOR THIS INDICATOR



DATA TO ACTION

As part of efforts to address growing concerns around mental health and suicide, Delaware County established the Delaware County Suicide Prevention and Awareness Task Force (DCSPATF) in 2002. DCSPATIF functions to reduce the loss and suffering caused by suicide and suicidal behavior. This task force offers information and education about, and assistance and support to, efforts to lessen the incidence of suicide and the stigma associated with suicide and suicide. In addition, Delaware County offers a variety of behavioral health and crisis resources, including the Delaware County Crisis Connection Team, a mobile unit that provides 24/7 assessment, intervention, and referral, as well as a Psychiatric Crisis Center that provides crisis intervention and mental health treatment and services³⁹. The Adult Mental Health Division within the Delaware County Office of Behavioral Health also provides services for those who experience mental health challenges. These services include psychiatric rehabilitation, outpatient treatment, case management, housing, acute inpatient treatment, crisis, and peer support services⁴⁰.

³⁹ Delaware County Suicide Prevention and Awareness Task Force. (19 Nov 2019) Retrieved January 2020 from <http://delcosuicideprevention.org>

⁴⁰Office of Behavioral Health | Division of Mental Health, Adult. *Delaware County Department of Human Services*. (n.d.). Retrieved February 2020 from http://www.delcohsa.org/mh_adult.html

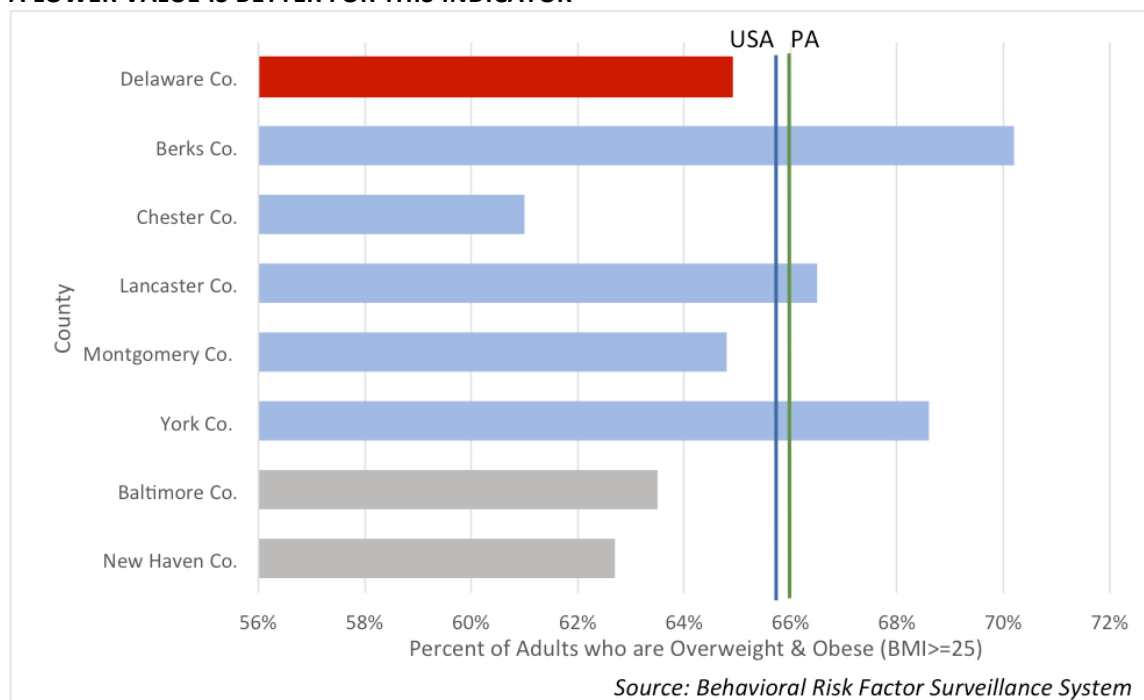
OBESITY AND PHYSICAL ACTIVITY

Obesity is a serious health issue and the prevalence of obesity continues to rise among adults in the United States. Obesity costs the US healthcare system nearly \$150 billion a year, and affects about 93.3 million US adults – nearly 40% of the adult population in 2016.⁴¹ Obesity related conditions such as cancer, heart disease, stroke, and type 2 diabetes are some of the leading causes of preventable, premature deaths. Adequate nutrition and regular physical activity are central factors in reducing the prevalence of obesity⁴².

OVERWEIGHT AND OBESITY PREVALENCE

In 2018, 64.9% of adults in Delaware County were overweight or obese (BMI \geq 25) (**Figure 54**). This is below the statewide and national overweight/obesity prevalence of 66% and 65.8%, respectively. Among neighboring PA counties, Delaware County had a similar prevalence to Montgomery County (64.8%), and a lower prevalence compared to Lancaster (66.5%), York (68.6%), and Berks (70.2%) Counties. Comparatively, Delaware County's prevalence was higher than that of both New Haven County (62.7%) and Baltimore County (63.5%). Chester County had the lowest overweight/obesity prevalence of the counties examined, at 61%.

**FIGURE 54. PREVALENCE OF OVERWEIGHT STATUS AND OBESITY (BMI \geq 25), 2018
A LOWER VALUE IS BETTER FOR THIS INDICATOR**



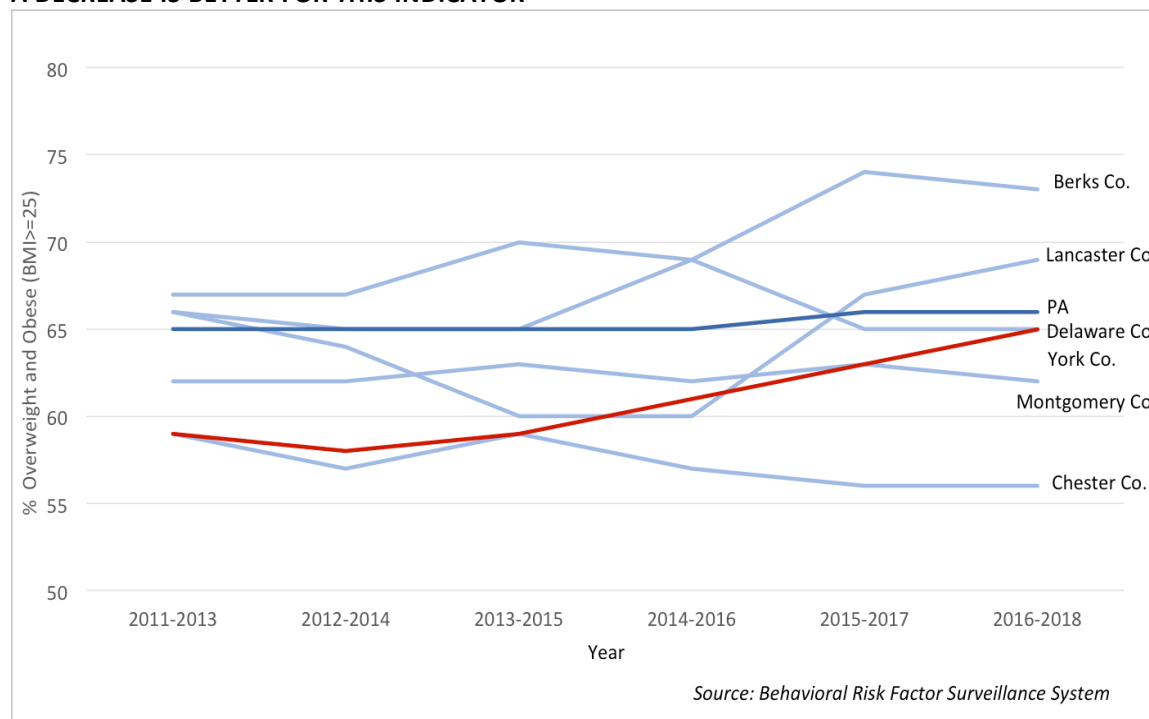
⁴¹ About Obesity | Overweight & Obesity. CDC. (2020) Retrieved 25 February 2020 from <https://www.cdc.gov/obesity/about-obesity/index.html>

⁴² Adult Obesity Facts | Overweight & Obesity. CDC. (2020). Retrieved 27 February 2020 from <https://www.cdc.gov/obesity/data/adult.html>

The percent of people classified as overweight/obese increased in Delaware County from 59% in 2011-2013 to 65% in 2016-2018 (**Figure 55**). Lancaster and Berks Counties also saw increases in prevalence during this time period, whereas Chester and York Counties saw a decrease. Comparatively, Montgomery County and the state of PA overall remained relatively stable throughout.

FIGURE 55. TRENDS IN PREVALENCE OF OVERWEIGHT STATUS AND OBESITY (BMI \geq 25), 2011-2013 TO 2016-2018

A DECREASE IS BETTER FOR THIS INDICATOR

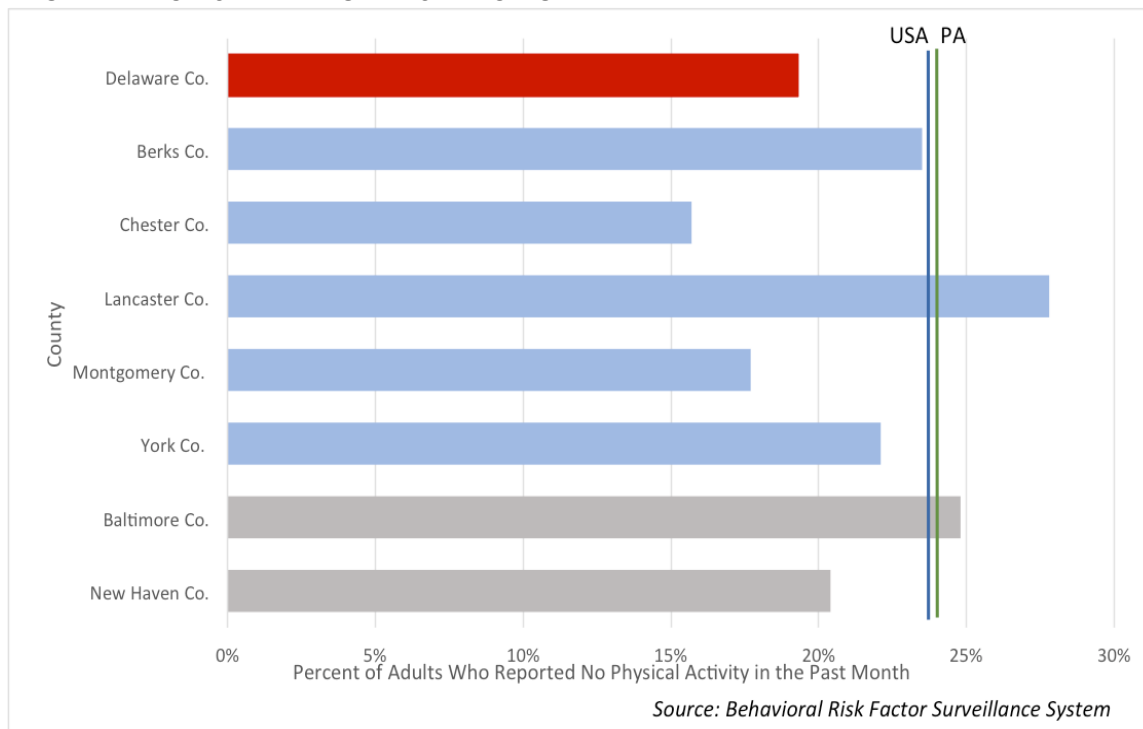


PHYSICAL ACTIVITY

19.3% of adults residing in Delaware County reported no physical activity in the past month in 2018 (**Figure 56**). This is higher than neighboring counties Chester (15.7%) and Montgomery (17.7%), but lower than the other three PA counties examined (Berks, Lancaster, and York Counties). Lancaster County had the highest prevalence at 27.8%. Delaware County's prevalence is likewise lower than that of both Baltimore County (24.8%) and New Haven County (20.4%), as well as the state of PA (24%) and the US overall (23.8%).

FIGURE 56. PERCENT ADULTS REPORTING NO PHYSICAL ACTIVITY IN THE PAST MONTH, 2018

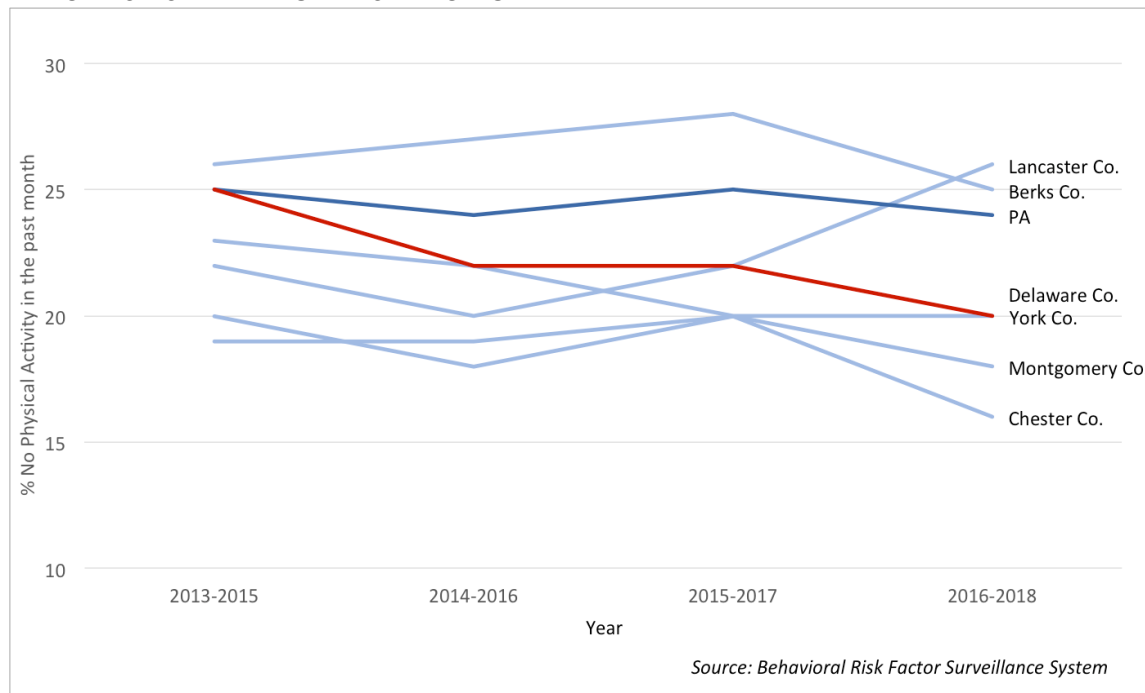
A LOWER VALUE IS BETTER FOR THIS INDICATOR



The percentage of adults in Delaware County who reported no physical activity in the past month has decreased over time from 25% in 2013-2015 to 20% in 2016-2018 (**Figure 57**). A similar trend was observed in Chester and York Counties. Comparatively, Berks and Montgomery Counties as well as the state of PA saw a very slight decrease in prevalence over the same period. In contrast, Lancaster County saw an increase in prevalence, from 22% in 2013-2015 to 26% in 2016-2018.

FIGURE 57. TRENDS IN PREVALENCE OF ADULTS WITH NO PHYSICAL ACTIVITY IN THE PAST MONTH, 2013-2015 TO 2016-2018

A DECREASE IS BETTER FOR THIS INDICATOR



DATA TO ACTION

As part of efforts to address obesity, Delaware County Council has worked to increase physical activity through several initiatives. One such initiative is a partnership with the University of Pittsburgh School of Public Health, Pennsylvania Department of Health, and the Delaware County Department of Intercommunity Health Coordination to increase opportunities for physical activity in Delaware County through the WalkWorks program⁴³, which establishes community-based walking routes and forms sustainable walking groups.

⁴³ WalkWorks. Pennsylvania Department of Health. Retrieved June 2020 from <https://www.health.pa.gov/topics/programs/WalkWorks/Pages/WalkWorks.aspx>

ORAL HEALTH

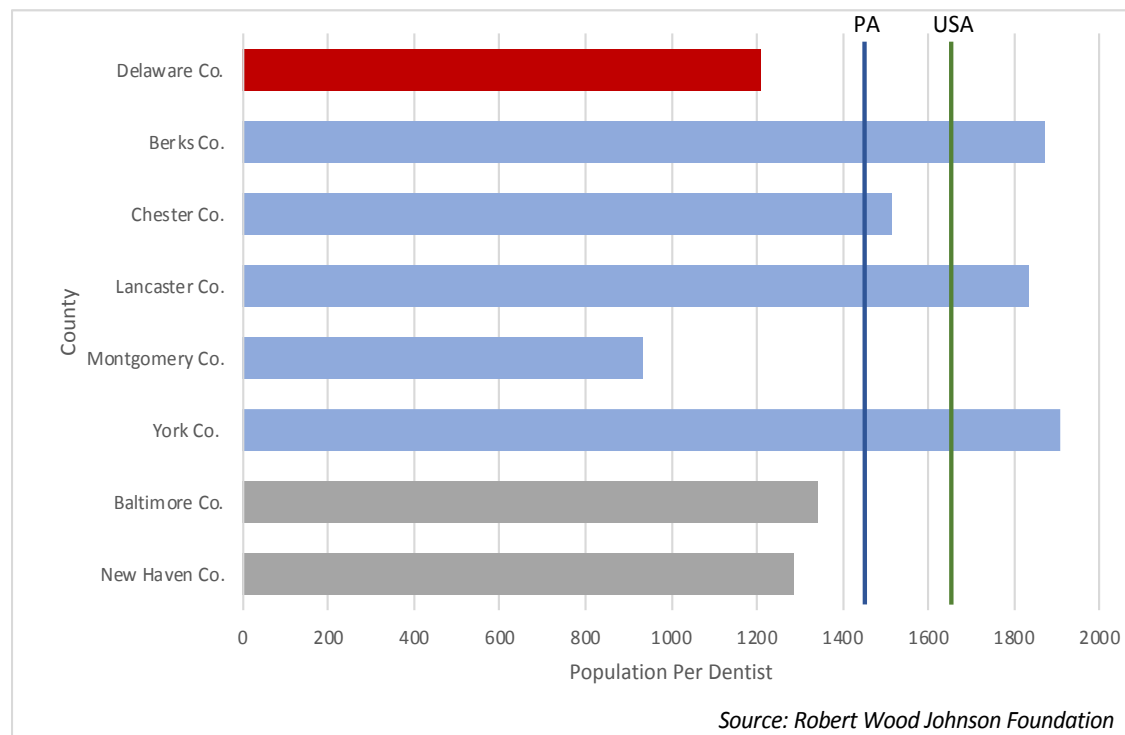
Oral diseases, from benign conditions such as dental caries (cavities) to serious ones such as oral cancer, are among the most common non-communicable disorders and can cause significant disability for individuals across all age groups. According to the CDC, more than 1 in 4 US adults currently experience untreated tooth decay, and nearly half of all US adults age 30 years or older show signs of gum disease⁴⁴. Routine surveillance and cleaning by a dental provider is the most effective method of mitigating morbidity associated with oral disease, and proper access and utilization of such services represents a foundational aspect of healthcare access within a population.

POPULATION TO DENTIST RATIO

In 2019, there were 1,209 Delaware County residents per every dentist within the County (**Figure 58**). This places it amongst the lowest of its neighboring counties, with only Montgomery County at a lower ratio of 934 people per dentist. Counties with the largest ratio included York County at 1,906 per dentist, Berks County at 1,874 per dentist, and Lancaster County at 1,834 per dentist. State and nationwide ratios are also significantly higher than that of Delaware County, at 1,458 per dentist and 1,642 per dentist, respectively.

FIGURE 58. RATIO OF POPULATION PER DENTIST, 2019.

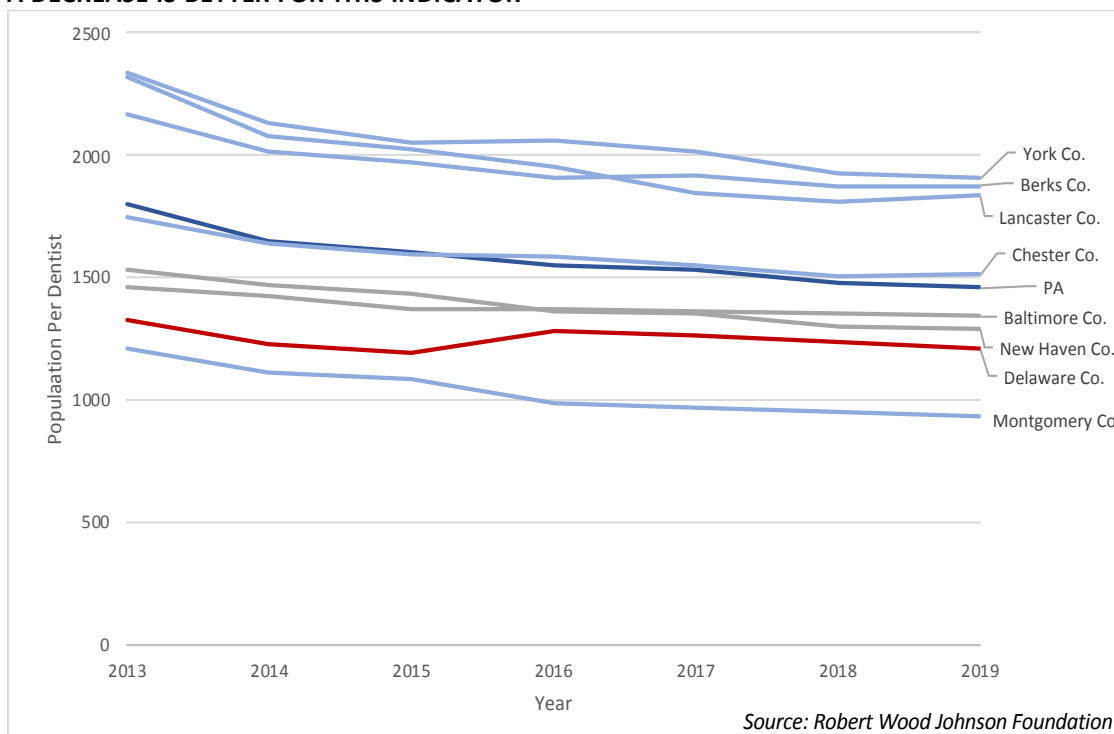
A LOWER VALUE IS BETTER FOR THIS INDICATOR



⁴⁴ Adult Oral Health | Basics | Division of Oral Health. CDC. (19 Dec 2019) Retrieved March 2020 from <https://www.cdc.gov/oralhealth/basics/adult-oral-health/index.html>

From 2013-2019, there has been a universal downtrend in ratio of population per dentist, indicating a general increase in the number of dentists across all geographic areas (**Figure 59**). Delaware County is no exception, with a gradual decrease from 1,323 individuals per dentist in 2013 to 1,209 per dentist in 2019. Throughout this data period, it has remained consistently lower than comparator counties Baltimore and New Haven, as well as the PA statewide ratio, the latter having decreased from 1,801 per dentist in 2013 to 1,458 per dentist in 2019.

FIGURE 59. TRENDS IN RATIO OF POPULATION PER DENTIST, 2013-2019.
A DECREASE IS BETTER FOR THIS INDICATOR



DATA TO ACTION

Pennsylvania's Department of Health released its Oral Health Plan in 2017, thus establishing the surveillance and prevention of oral disease as a health priority within the state⁴⁵. This can be seen within Delaware County, where several bodies are actively engaged in promoting this mission. The Dental Society of Chester County and Delaware County is a non-profit that represents the interests of both the dental profession and the public in Chester and Delaware Counties. Among other activities, they sponsor initiatives such as Give Kids a Smile and Give Vets a Smile Day, which aim to expand dental services in the community⁴⁶. Delaware County also offers several free and sliding scale payment dental clinics that provide services to those who would otherwise be unable to afford them⁴⁷.

REPRODUCTIVE AND SEXUAL HEALTH

Sexual health encompasses physical, mental, emotional, and social well-being relative to sexuality, inclusive of a respectful approach to sexual relationships and experiences⁴⁸. Indicators such as teen birth rate and prevalence of sexually transmitted infections (STIs) can reflect a community's sexual and reproductive health.

Children of teenage mothers have an increased risk for health issues such as higher perinatal mortality risk and longer-term effects on academic performance and IQ⁴⁹. In addition, teen mothers are at greater risk for negative health outcomes such as higher rates of postpartum depression⁵⁰. In 2017, the teen birth rate in the US was at a record low of 18.8 births per 1,000 women ages 15-19 years⁵¹. However, current US rates are still significantly higher than other western developed countries, and persistent racial, ethnic, and geographic disparities remain⁵².

⁴⁵ Pennsylvania Oral Health Plan 2017-2020. *Pennsylvania Department of Health*. Retrieved June 2020 from <https://www.health.pa.gov/topics/Documents/Programs/2017-2020PennsylvaniaOralHealthPlan.pdf>

⁴⁶ *The Dental Society of Chester County and Delaware County*. Retrieved June 2020 from <http://www.chesdeldentalsoc.org/>

⁴⁷ Delaware County PA Free Dental Care. *Free Dental Care*. Retrieved June 2020 from <https://www.freedentalcare.us/co/pa-delaware>

⁴⁸ Gender and Human Rights | WHO | Sexual and reproductive health. *WHO*. (2020) Retrieved March 2020 from https://www.who.int/reproductivehealth/topics/gender_rights/sexual_health/en/

⁴⁹ National Research Council (US) Panel on Adolescent Pregnancy and Childbearing; Hofferth SL, Hayes CD, editors. *Risking the Future: Adolescent Sexuality, Pregnancy, and Childbearing, Volume II: Working Papers and Statistical Appendices*. Washington (DC): National Academies Press (US); 1987. CHAPTER 8, THE CHILDREN OF TEEN CHILDBEARERS. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK219236/>

⁵⁰ Comparison of Adolescent, Young Adult, and Adult Women's Maternity Experiences and Practices. *American Academy of Pediatrics*, 1 May 2012, <https://pediatrics.aappublications.org/content/129/5/e1228>.

⁵¹ About Teen Pregnancy . *CDC*. (1 Mar 2019) Retrieved April 2020 from <https://www.cdc.gov/teenpregnancy/about/index.htm>.

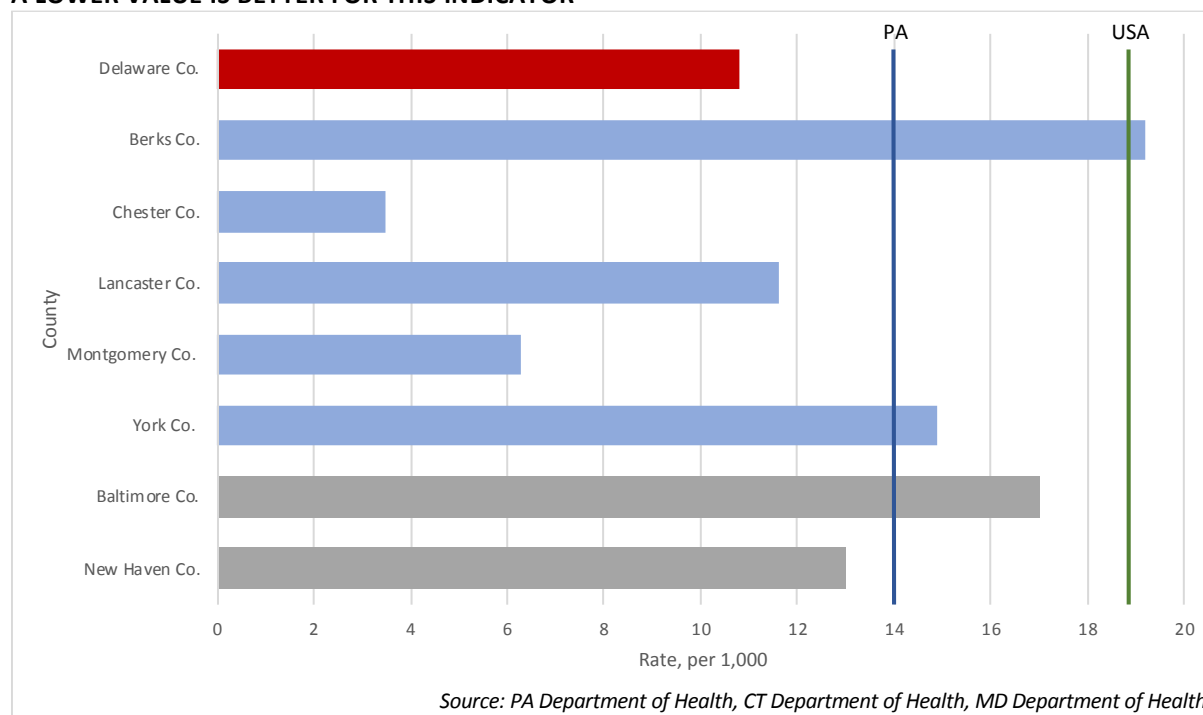
⁵² Romero L, Pazol K, Warner L, et al. Reduced Disparities in Birth Rates Among Teens Aged 15-19 Years – United States, 2006-2007 and 2013-2014. *MMWR Morbidity and mortality weekly report*. 2016;65(16):409-414.

Chlamydia and Gonorrhea are common STIs that can be caused by unprotected vaginal, anal or oral sex. Left untreated, these infections can cause long-term abdominal pain, complications with pregnancy, and an increased risk of HIV.

TEEN BIRTH RATE

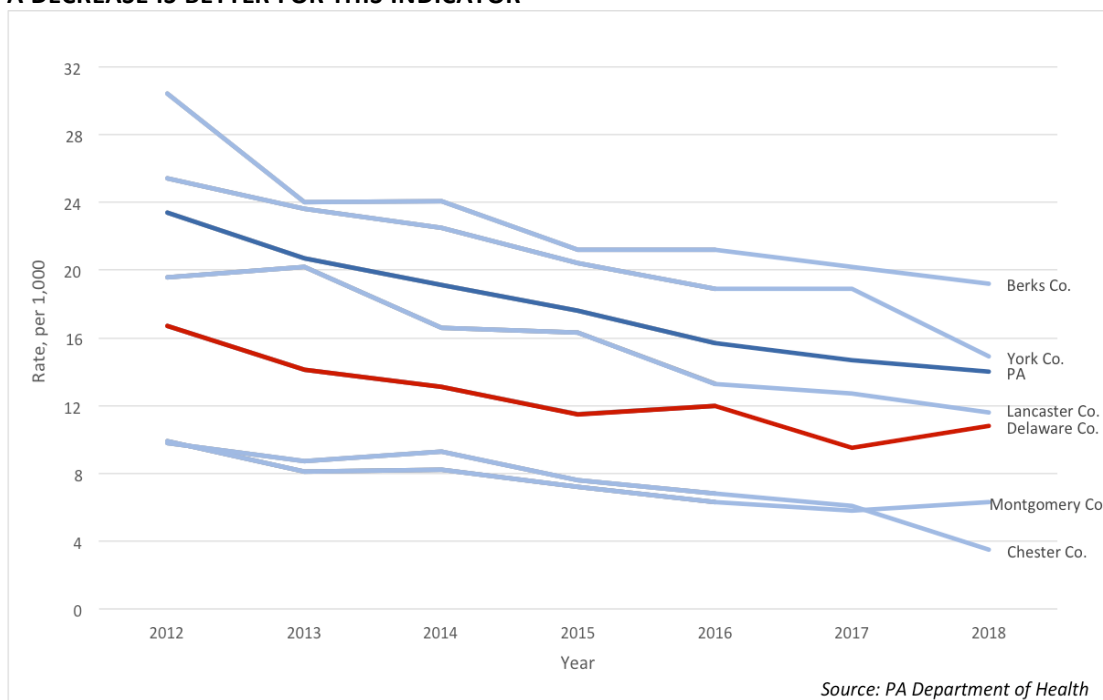
Delaware County reported 10.8 births per 1,000 females aged 15-19 years in 2018 (**Figure 60**). This is higher than Chester and Montgomery Counties, which had birth rates of 3.5 and 6.3 per 1,000 respectively. Comparatively, Delaware County had a lower teen birth rate compared to all other neighboring PA counties examined plus Baltimore and New Haven Counties (Lancaster 11.6, New Haven 13, York 14.9, Baltimore 17, Berks 19.2). Delaware County's rate was also lower than that of the state and the US overall, at 14 and 18.8 per 1,000 respectively.

FIGURE 60. BIRTH RATE PER 1,000 FEMALES AGE 15 TO 19 YEARS, 2018
A LOWER VALUE IS BETTER FOR THIS INDICATOR



In Delaware County, the teen birth rate has decreased from 16.7 births per 1,000 females aged 15-19 in 2012 to 10.8 in 2018 (**Figure 61**). Similarly, all neighboring PA counties also saw declines over this time period, with the largest decline observed in Berks County (30.4 to 19.2 births per 1,000). This aligns with a statewide decrease in teen birth rate within PA during this time.

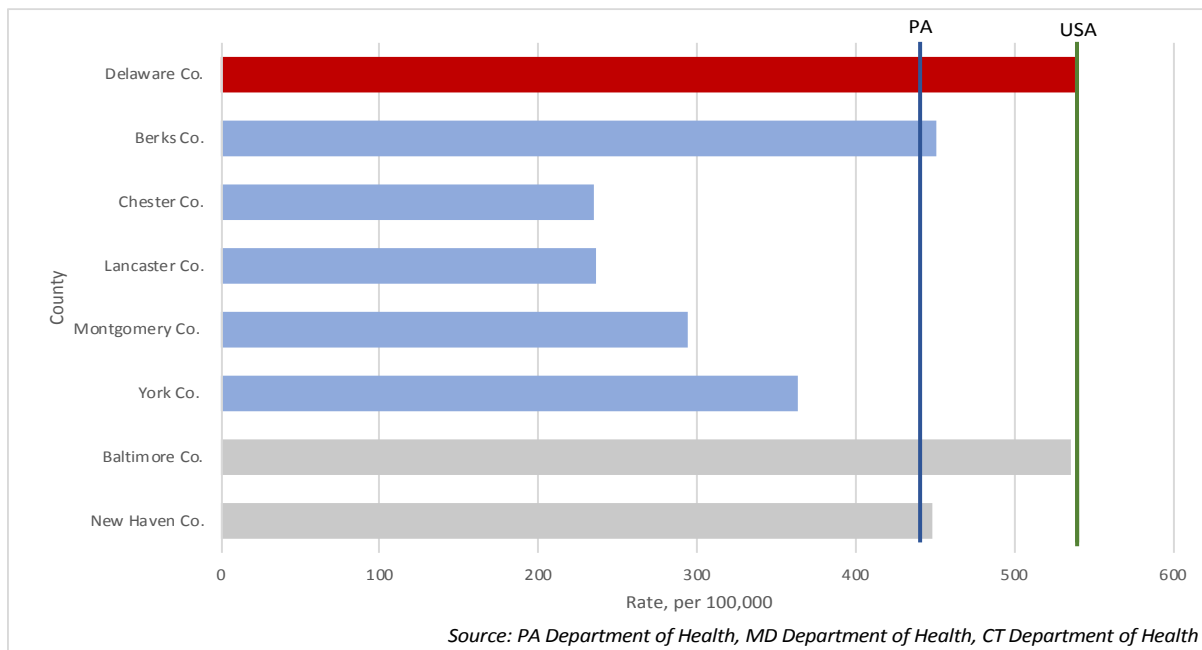
FIGURE 61. TRENDS IN BIRTH RATE PER 1,000 FEMALES AGED 15-19 YEARS, 2012 TO 2018
A DECREASE IS BETTER FOR THIS INDICATOR



CHLAMYDIA INFECTIONS

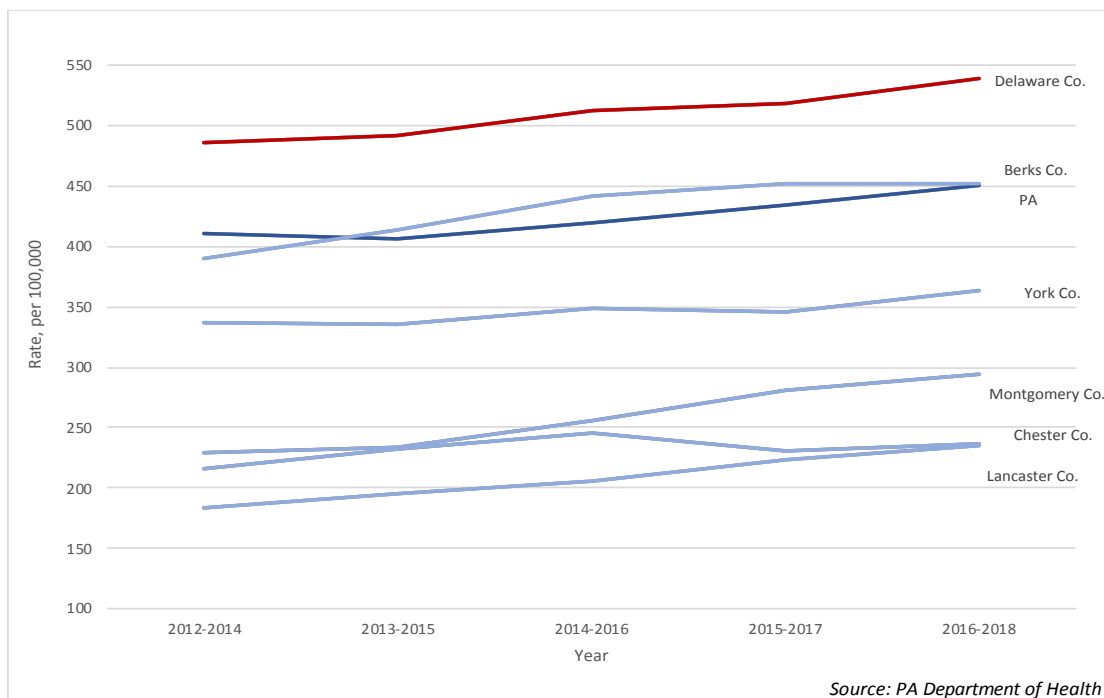
In 2016-2018, Delaware County had the highest chlamydia infection rate compared to neighboring PA counties, at 538.7 cases per 100,000 population (**Figure 62**). This is on par with the nationwide rate (539.9 per 100,000) as well as that of Baltimore County (536.1 per 100,000). Comparatively, Chester and Lancaster Counties had the lowest chlamydia infection rates with 234.4 and 236.1 cases per 100,000, respectively. Of the counties examined, Berks County had the second highest infection rate at 451.1 cases per 100,000, which closely aligns to that of the state of PA (449.8 cases per 100,000).

FIGURE 62. CHLAMYDIA INFECTION RATE (PER 100,000 POPULATION), 2016-2018
A LOWER VALUE IS BETTER FOR THIS INDICATOR



Delaware County saw a slight increase in chlamydia infection rates from 485.6 cases per 100,000 in 2012-2014 to 538.8 per 100,000 in 2016-2018 (**Figure 63**). All comparator counties in Pennsylvania also saw a similar increase in infection rates over this time period, as did the state as a whole.

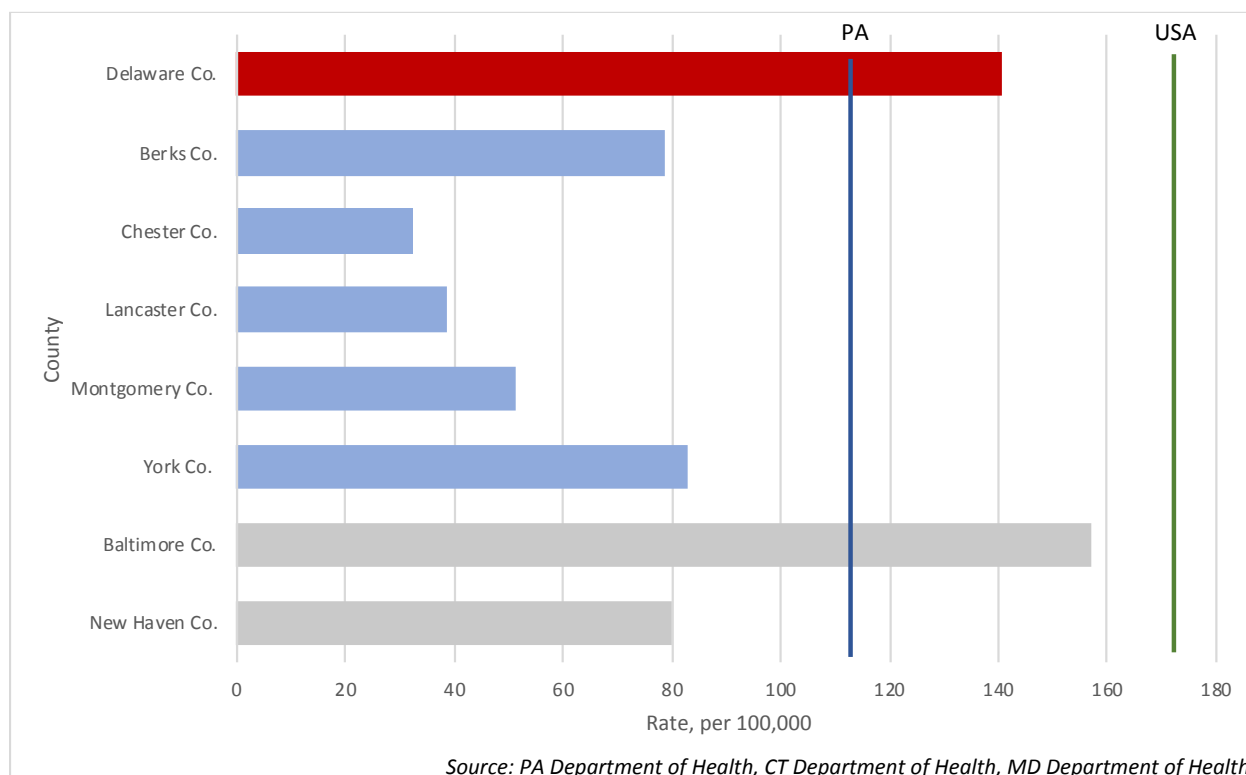
FIGURE 63. TRENDS IN CHLAMYDIA INFECTION RATE (PER 100,000 POPULATION), 2012-2014 TO 2016-2018
A DECREASE IS BETTER FOR THIS INDICATOR



GONORRHEA INFECTIONS

Delaware County had the highest gonorrhea infection rate of its neighboring PA counties in 2016-2018, with 140.6 cases per 100,000 population (**Figure 64**). This was also above the PA statewide rate of 119.1 cases per 100,000. Chester and Lancaster Counties had the lowest infection rates, with 32.5 and 38.5 cases per 100,000, respectively. Notably, Baltimore County had the highest gonorrhea infection rate of all the counties examined, at 157.2 per 100,000, but this was still eclipsed by the nationwide rate of 171.9 cases per 100,000.

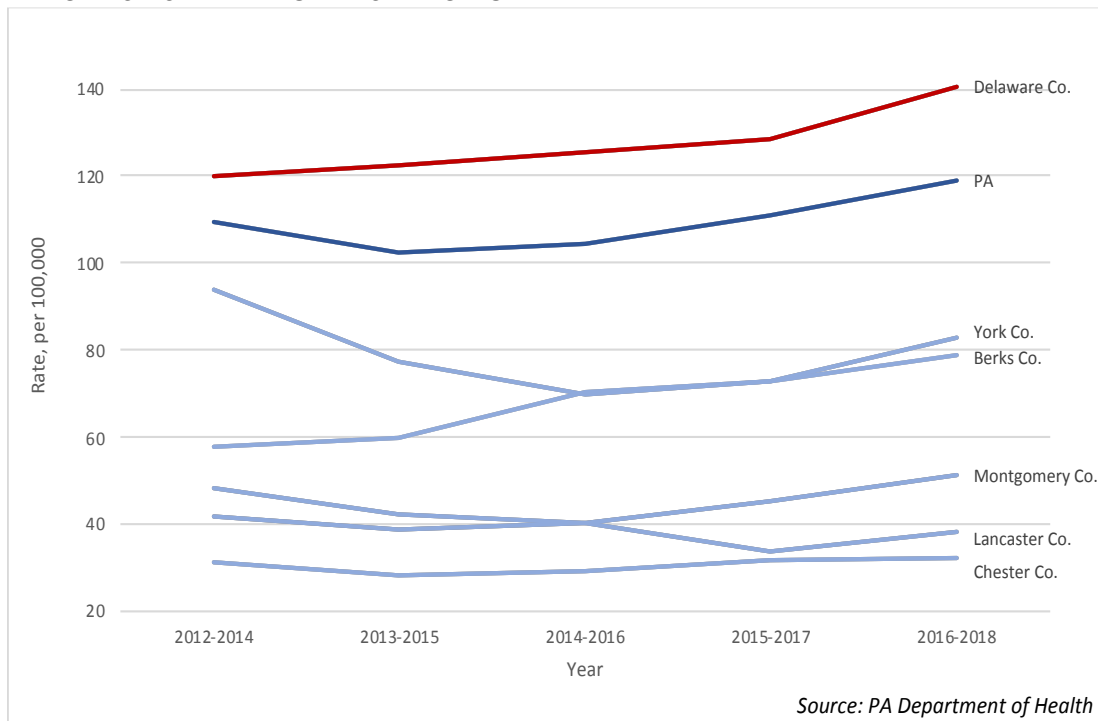
**FIGURE 64. GONORRHEA INFECTION RATE (PER 100,000 POPULATION), 2016-2018
A LOWER VALUE IS BETTER FOR THIS INDICATOR**



Delaware County's gonorrhea infection rate increased from 120 cases per 100,000 in 2012-2014 to 140.6 cases per 100,000 people in 2016-2018 (**Figure 65**). Berks, Chester, and Montgomery Counties also saw an increase in infection rate during this time period, while Lancaster and York Counties saw a decrease. At the state level, PA saw an increase in infection rates during this time, from 109.5 to 119.1 cases per 100,000.

FIGURE 65. TRENDS IN GONORRHEA INFECTION RATE (PER 100,000 POPULATION), 2012-2014 TO 2016-2018

A DECREASE IS BETTER FOR THIS INDICATOR



DATA TO ACTION

Delaware County has numerous agencies and non-profit groups aiming to improve sexual wellness for its residents. The Foundation for Delaware County's Health Resource Center is a confidential drop-in center based out of Chester High School that provides students with information on reproductive and sexual health topics, with referrals to in-school social services as needed. The center also partners with Crozer-Keystone's Smedley Wellness Center, which provides adolescents with comprehensive family planning, among other services.⁵³ While PA does not mandate school sexual health education, many school districts employ their own programs. The Chester Upland and William Penn School Districts utilize a nationally standardized sexual health curriculum to educate their students, with the latter further supplementing with additional materials drawn from other existing curricula and resources.⁵⁴

The Foundation for Delaware County provides various programs for expecting families, including Healthy Start and the Nurse-Family Partnership, a home-visiting program that promotes healthy pregnancies, birth outcomes and development, and economic autonomy⁵⁵. The Maternity Care Coalition provides pregnancy and parenting support and education through their MOMobile program⁵⁶. More reproductive and sexual health services are available through the Pennsylvania Department of Health Services.⁵⁷ In addition, there are numerous clinics throughout Delaware County that provide STI testing and counseling, including the Delaware County State Health Center, Planned Parenthood, and the ChesPenn Health Services Center.

SUBSTANCE USE AND ABUSE

Substance abuse is associated with serious health and social problems as well as significant societal costs. The National Survey on Drug Use and Health reports that in 2017, 19.7 million Americans aged 12 years and older were battling a substance use disorder. That same year, the National Institute on Drug Abuse reported more than \$740 billion in associated costs relating to

⁵³ Health Resource Center. *The Foundation for Delaware County*, (n.d.) Retrieved March 2020 from <https://delcofoundation.org/our-programs/teen-programs/health-resource-center/>

⁵⁴ Delaware County - Safe Teens. (n.d) Retrieved March 2020 from <https://safeteens.org/news-resources/the-state-of-sex-ed/delaware-county/>

⁵⁵Nurse-Family Partnership. *The Foundation for Delaware County*. (n.d.) Retrieved May 2020 from <https://delcofoundation.org/our-programs/womens-and-childrens-health/nurse-family-partnership/>

⁵⁶ MOMobile. *Maternal Care Coalition*. Retrieved 2020 from <https://maternitycarecoalition.org/momobile/>

⁵⁷ Reproductive Health. *Department of Human Services*. (n.d.) Retrieved March 2020 from <https://www.dhs.pa.gov/Services/Other-Services/Pages/Reproductive-Health.aspx>

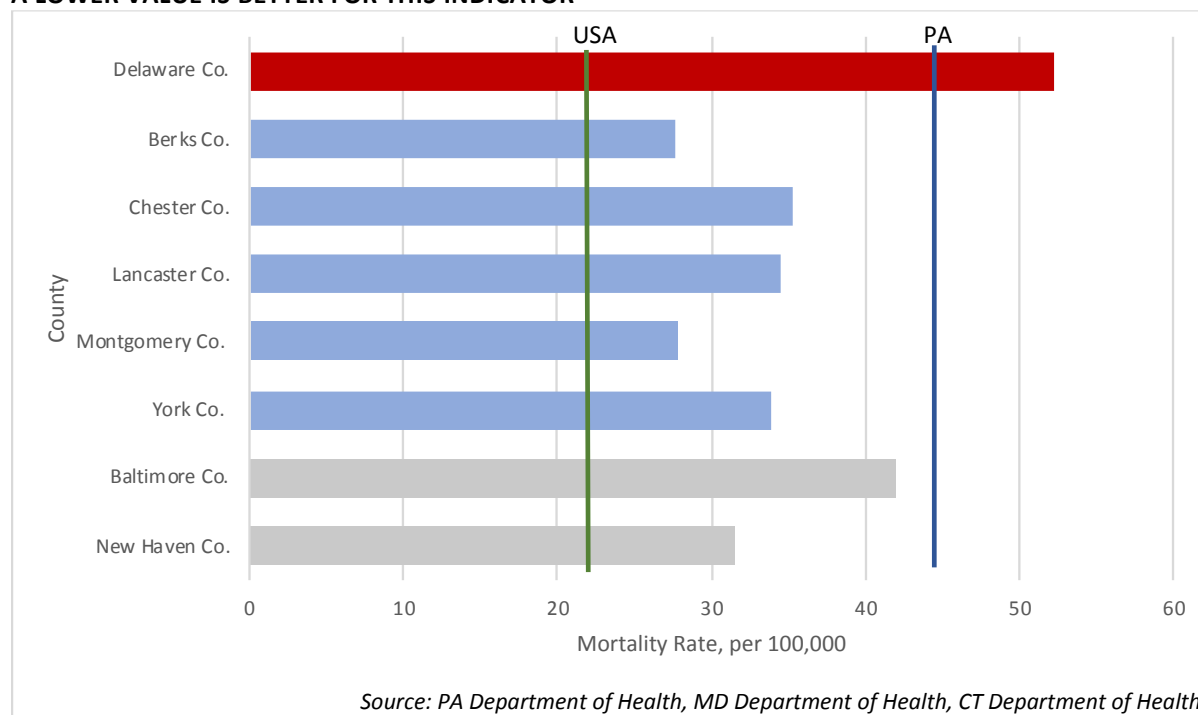
healthcare, crime, and lost productivity. Alcohol and drug use disorders frequently co-occur, with 1 out of 8 US adults in 2017 reporting struggling simultaneously with both disorders.⁵⁸

DRUG-RELATED DEATHS

Delaware County has experienced a significant mortality burden from drug use and abuse, with an age-adjusted drug-related mortality rate of 52.3 per 100,000 in 2017, more than double its rate from 2013 (**Figure 66**). This is the highest of all the counties examined, in addition to both the state of PA (44.8) and nationwide (21.7). Among neighboring PA counties, the drug-related mortality rate ranged from 27.6 in Berks County to 35.3 in Chester County. Baltimore County had the second highest mortality rate of the counties examined, at 42 deaths per 100,000.

FIGURE 66. AGE-ADJUSTED DRUG-RELATED MORTALITY RATE (PER 100,000 POPULATION), 2017

A LOWER VALUE IS BETTER FOR THIS INDICATOR

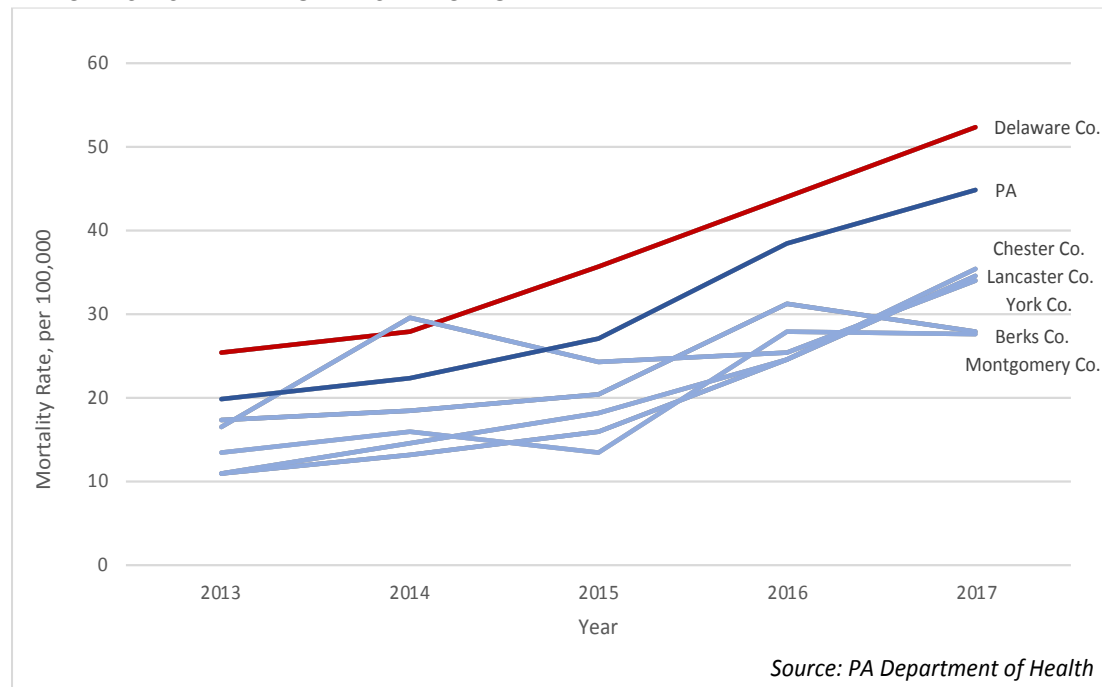


Drug use associated mortality rates have significantly increased in Delaware County in recent years, from 25.2 deaths per 100,000 in 2013 to 52.3 per 100,000 in 2017 (**Figure 67**). A similar trend was observed across all neighboring PA counties examined as well as in the state overall.

⁵⁸ Thomas, R. "Addiction Statistics | Drug & Substance Abuse Statistics." *American Addiction Centers*. (n.d.) Retrieved November 2019 from <https://americanaddictioncenters.org/rehab-guide/addiction-statistics>

FIGURE 67. TRENDS IN AGE-ADJUSTED DRUG-RELATED MORTALITY RATE (PER 100,000 POPULATION), 2013 TO 2017

A DECREASE IS BETTER FOR THIS INDICATOR

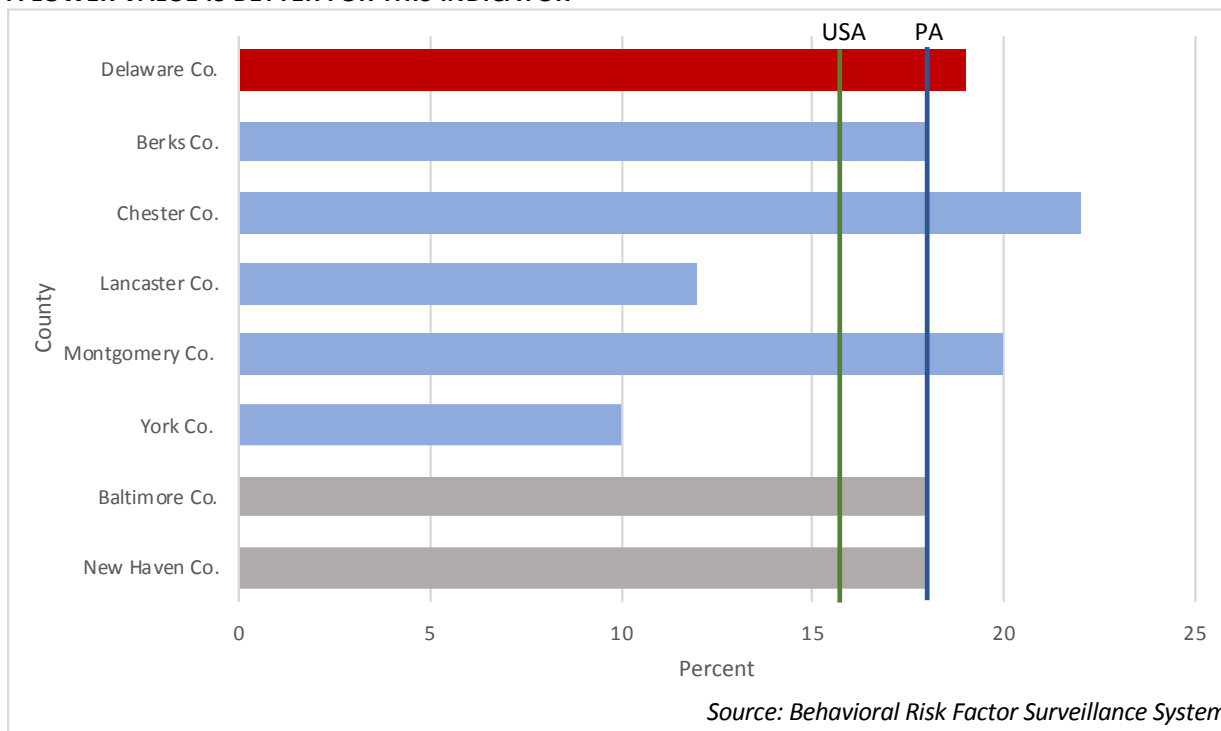


ALCOHOL USE AND ABUSE

Binge drinking is the most commonly reported indicator for alcohol use and abuse. From 2015-2017, 19% of Delaware County adults aged 18 and over reported binge drinking (defined as consuming 5 (males) or 4 (females) or more drinks on one occasion) (**Figure 68**). This prevalence is higher than both the state of PA (18%) and the nation as a whole (16%). Compared to its neighboring PA counties, Delaware County's prevalence is higher than that of Berks (18%), Lancaster (12%), and York (10%) Counties, but lower than Chester and Montgomery Counties, which had rates of 22% and 20%, respectively.

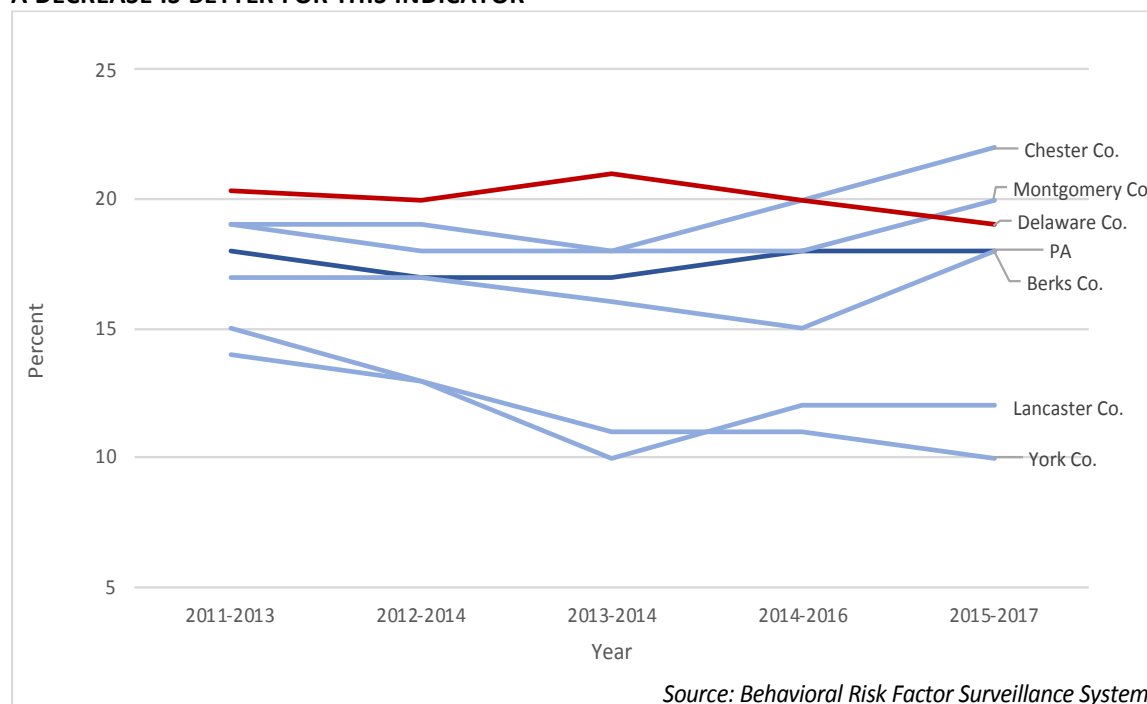
FIGURE 68. PREVALENCE OF BINGE DRINKING, 2015-2017.

A LOWER VALUE IS BETTER FOR THIS INDICATOR



Delaware County's binge drinking prevalence has stayed mostly constant with a slight overall decrease from 2011 to 2017 (**Figure 69**). During this time, Lancaster and York Counties also saw an overall decrease. In contrast, Berks, Chester, and Montgomery Counties experienced an overall increase in prevalence over this time period. At the state level, PA's prevalence of binge drinking has mostly remained constant over the years.

**FIGURE 69. TRENDS IN PREVALENCE OF BINGE DRINKING, 2011-2013 TO 2015-2017
A DECREASE IS BETTER FOR THIS INDICATOR**



DATA TO ACTION

As part of efforts to address effects of the growing opioid epidemic within the community, the Delaware County Council partnered with the District Attorney's office and other Delaware County agencies in 2012 to form the Delaware County Heroin Task Force⁵⁹. The aim of the task force is to educate community members about available addiction prevention and treatment resources, utilize law enforcement and public education to decrease drug-related crime, and reduce drug demand, particularly for heroin and illegally used prescription drugs. Further, the County has collaborated with various community agencies, organizations, and educational institutions to make naloxone more readily accessible to the public, including incorporating it into automated external defibrillator (AED) kits.⁶⁰

The County also facilitates the Delco STOP (Substance Treatment and Overdose Prevention) Coalition, which aims to promote community awareness around treatment and recovery, reduce and end stigma, and increase treatment access. Delaware County offers a Certified

⁵⁹ Heroin task force. *Delaware County Pennsylvania*. (2019) Retrieved June 2020 from

<https://www.delcopa.gov/heroin/index.html>

⁶⁰ Life-saving Narcan accessible in Delaware County Community College AED cabinets. *Delaware County, Pennsylvania*. (n.d.) Retrieved 20 May 2020 from

<https://www.delcopa.gov/publicrelations/releases/2019/narcanatdcc.html>

Recovery Specialist (CRS) program in partnership with the Crozer-Keystone Health System⁶¹. The CRS program connects County residents, particularly overdose survivors and their friends and family, with free treatment referrals and support. Over 1,600 individuals have benefited from the program since its start in 2016.

The Division of Drug and Alcohol Programs within the Delaware County Office of Behavioral Health funds and oversees the delivery of prevention, intervention, and treatment services to eligible residents through the efforts of various organizations and agencies across the County⁶². Services include assessment, detox programs, recovery housing, inpatient rehabilitation, and free education-based prevention services, among others. These are but some of the many alcohol and substance use services and resources available to Delaware County residents.

TOBACCO USE

Tobacco use is the leading cause of preventable disease and mortality in the United States, and can lead to cancer, heart disease, lung disease, stroke, and other chronic health conditions. Smoking-related diseases cause over 480,000 deaths a year in the US and cost the nation over \$300 billion annually⁶³. Tobacco use during pregnancy increases the risk of harmful effects on a baby's health both before and after birth. Age of tobacco use initiation is another important factor to consider. Nationally, 5.10% of US youth aged 12-17 years reported using tobacco in the past month from 2016-2017,⁶⁴ whereas in Pennsylvania, this statistic was slightly lower at 4.59%. Youth tobacco initiation can lead to both immediate and long-term adverse health consequences, and may impact continued tobacco use into adulthood.

ADULT SMOKING

In 2018, 12.5% of adults in Delaware County reported being a current smoker, defined as anyone who has ever smoked 100 cigarettes or more and currently smokes every day or some days (**Figure 70**). This is higher than the prevalence in Chester and Montgomery Counties (11.4% and 9.0% respectively), but lower than that of Berks (15.5%), Lancaster (13.4%), and York Counties, with York having the highest prevalence among all counties examined, at 20.2%. Delaware County had fewer current smokers than both the state of PA and the nation as a whole (17.0% and 16.1%, respectively).

⁶¹ Surviving an Overdose: Next Steps on the Road to Recovery. *Delaware County District Attorney*. Retrieved June 2020 from http://www.delcohsa.org/drugalcohol/CRS_brochure.pdf

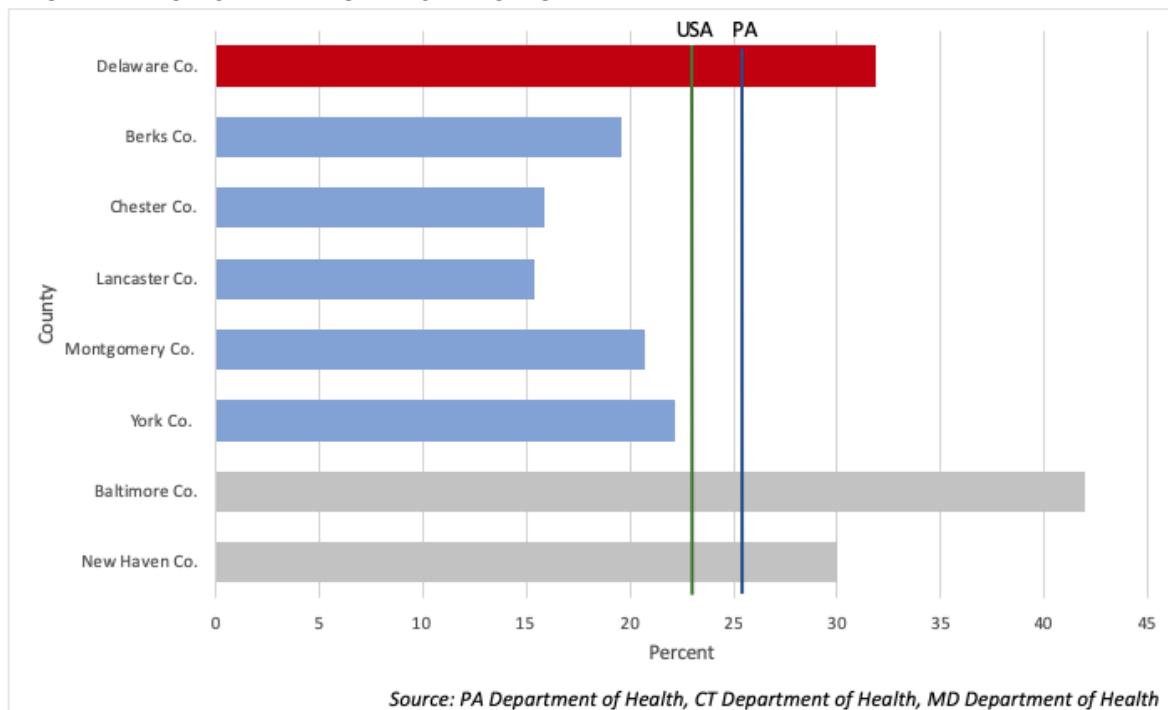
⁶² Office of Behavioral Health, Division of Drug & Alcohol. *Delaware County Department of Human Services*. (2019) Retrieved June 2020 from <http://www.delcohsa.org/drugalcohol.html>

⁶³ Tobacco Use. *CDC*. (18 March 2019) Retrieved 20 May 2020 from <https://www.cdc.gov/chronicdisease/resources/publications/factsheets/tobacco.htm>

⁶⁴ National Survey on Drug Use and Health. *SAMHSA*. (2017) Retrieved November 2019 from <https://www.samhsa.gov/data/data-we-collect/nsduh-national-survey-drug-use-and-health>

FIGURE 70. PERCENT OF ADULTS (18+) WHO ARE CURRENT SMOKERS (SMOKES EVERY DAY OR SOME DAYS), 2018.

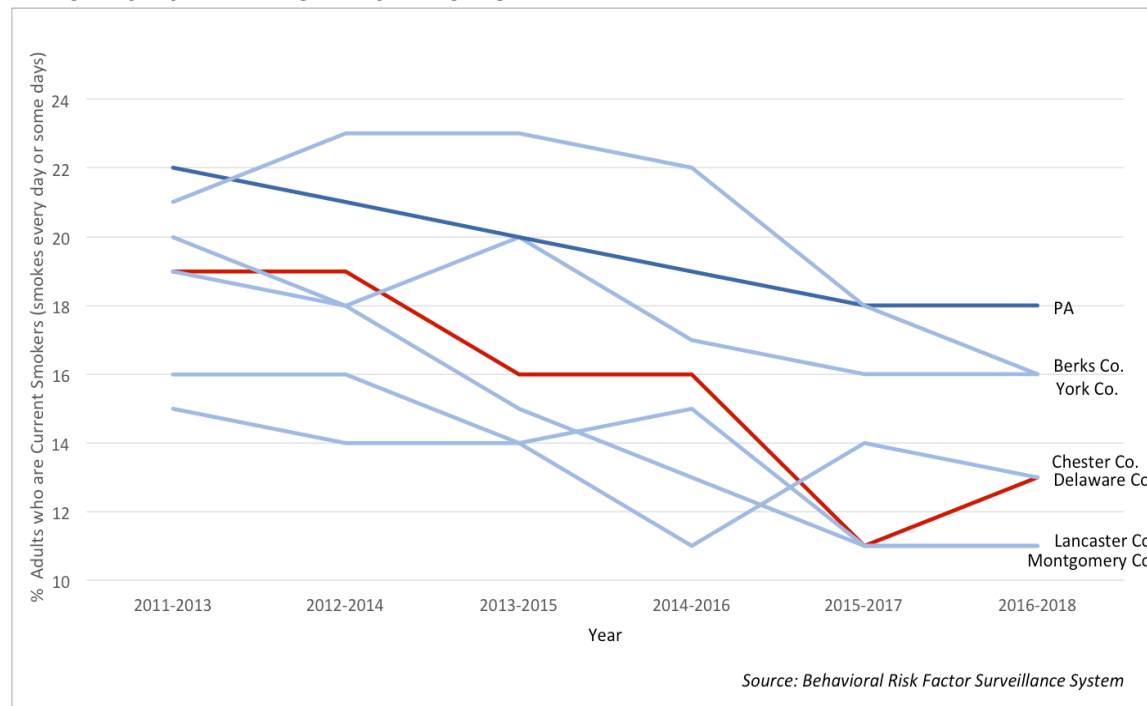
A LOWER VALUE IS BETTER FOR THIS INDICATOR



In Delaware County, the percent of adults who are current smokers has decreased from 19% in 2011-2013 to 13% in 2016-2018 (Figure 71). A similar trend was observed across all neighboring PA counties examined, with the greatest decrease noted in Lancaster County (20% to 11%). Statewide, PA also saw a decrease in prevalence of current smokers over this time period.

FIGURE 71. TRENDS IN PERCENT OF ADULTS (18+) WHO ARE CURRENT SMOKERS (SMOKES EVERY DAY OR SOME DAYS), 2011-2013 TO 2016-2018

A DECREASE IS BETTER FOR THIS INDICATOR



DATA TO ACTION

There are several initiatives within Delaware County to decrease the prevalence of tobacco use. The Delaware County Tobacco-Free Coalition (DCTFC) is a local group that works to reduce and eliminate exposure to tobacco smoke through awareness campaigns as well as community events⁶⁵. As an example, DCTFC partners with the Delaware County Council to organize an annual “Kick Butts Day Bookmark Contest” to raise student awareness around the dangers of tobacco use⁶⁶. Since 2009, the Pennsylvania Department of Health has funded the Southeastern Pennsylvania (SEPA) Tobacco Control Project, which works to reduce and prevent county level tobacco related burdens via advocacy, education, and various tobacco control and treatment approaches. In addition the SEPA Tobacco Control Project collaborates with providers including ChesPenn Health Services, Holcomb Behavioral Health Services, and Main Line Health to provide affordable or free smoking cessation programs and counseling⁶⁷.

⁶⁵ "Delaware County Tobacco Free Coalition." *Facebook*. Retrieved January 2020 from <https://www.facebook.com/pages/category/Medical---Health/Delaware-County-Tobacco-Free-Coalition-1601257463440724/about/>.

⁶⁶ Delco Kicks Butt on March 20! *Delaware County, Pennsylvania*. (n.d.) Retrieved November 2019 from <https://www.delcopa.gov/publicrelations/releases/2019/kickbuttday.html>

⁶⁷ Southeastern Pennsylvania Tobacco Control Project. *Health Promotion Council*. (2019) Retrieved June 2020 from *Surviving an Overdose: Next Steps on the Road to Recovery*. *Delaware County District Attorney*. Retrieved June 2020 from http://www.delcohsa.org/drugalcohol/CRS_brochure.pdf

