

Revised Integrated HIV Prevention and Care Plan

For the Commonwealth of
Pennsylvania
Department of Health,
Division of HIV Disease
2017- 2021
Revised 2020

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pennsylvania
DEPARTMENT OF HEALTH

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Contributors (2016)

Pennsylvania Department of Health

Division of HIV Disease

Lana Adams, director

Section Managers (in alphabetical order): Jill Garland, Cheryl Henne, Julia Montgomery

The staff of the Prevention and Care sections and the Special Pharmaceutical Benefits Program

Kenneth McGarvey, director 2012-2016

Bureau of Epidemiology

Key Contributing Staff: Godwin Obiri, DrPH, MS; Michael Allen, MPH; Monisola Malomo, DVM, MPH; Russel Sharif, MPH

University of Pittsburgh, Graduate School of Public Health (GSPH)

HIV Prevention and Care Project

David Givens, PhD(c), director

Key Contributing Staff (in alphabetical order): Mackey Friedman, PhD, MPH; Daniel Hinkson; Sarah Krier, PhD; Anthony Silvestre, PhD; Debra Stemmler, BA

The Mid Atlantic AIDS Education and Training Center

Linda Rose Frank, PhD, MSN, ACRN, FAAN, principal investigator, executive director, and associate professor

The staff of the MidAtlantic AETC Central Office at the University of Pittsburgh (GSPH, Dept. of Infectious Disease and Microbiology), and Regional Coordinators from MAAETC

Consortium: University of Maryland, Johns Hopkins University, Christiana Care, Howard University, Health Federation/Drexel, Virginia Commonwealth University, INOVA Health Care, Inc., West Virginia University

Contributors (cont.) (2016)

This Plan has also been made possible by the efforts, recommendations, and expertise of the HIV Planning Group members who served during the 2013-2016 planning years (in alphabetical order):

Deja Alvarez, 2016	*Sharita Flaherty, 2013-16	Susan Rubinstein, 2013-15
Wesley Anderson, 2014-16	Dr. Linda Rose Frank, 2014-16	Dr. Shubhra Shetty, 2013-15
Greg Seaney-Ariano, 2016	Mary Gallagher, 2013	Dr. Grace Shu, 2013-16
Aaron Arnold, 2016	Christopher Garnett, 2015-16	Pamela Smith, 2014-16
Alicia Beatty, 2013-15	Daniel Harris, 2015-16	**Richard Smith, 2014-16
Adam Bocek, 2014-16	Jeffery Haskins, 2015-16	Robert Smith, 2014-16
Jazmine Brockington, 2016	Michael Hellman, 2013-14, 2016	Tony Strobel, 2013-16
Michael Brookins, 2013	Ron Johnson, 2013	Ann Stuart Thacker, 2014-16
Jeanne Caldwell, 2015-16	Terry Kurtz, 2013	Nathan Townsend, 2014-16
Dan Champion, 2013-15	Lou Ann Masden, 2015-16	Ja’Nae Tyler, 2016
Principe Castro, 2014-16	Shannon McElroy, 2013-16	Wayne Williams, 2014-16
Melissa Davis, 2013-16	Terrance McGeorge, 2013	Derick Wilson, 2013-15
Dr. Oladoyin Desalu, 2013-15	Briana Morgan, 2013-16	Donna Woodman, 2013
Kathleen Dougherty, 2016	Michael Myers, 2014-15	Tamara Wurst, 2013
Wayne Fenton, 2013-15	Daiquiri Robinson, 2014-16	Paul Yabor, 2015-16
Angel Ferris, 2016	Tamara Robinson, 2013-14	

*HPG Community Co-Chair 2013 –July 2016

**HPG Community Co-Chair July 2016-publication

Contributors (2017-2019)

Epidemiological Contributors: The following staff members and organizations contributed to the development and publication of updates to the HIV epidemiology overview in the Revised Integrated HIV Prevention and Care Plan (IHPCP) 2017-2021:

Bureau of Epidemiology

Bureau of Epidemiology: Sharon Watkins, PhD, Director

Division of Infectious Disease Epidemiology: Atmaram Nambiar, MD, MPH, director

HIV Investigation Section: Monisola Malomo, DVM, MPH, epidemiologist

HIV Surveillance and Epidemiology Section: Godwin Obiri, DrPH, MS, Director/Principal Investigator and Michael Allen, MPH

Bureau of Communicable Diseases

Bureau of Communicable Diseases: Cindy Findley, director

Division of HIV Disease: Jill Garland, director
 HIV Prevention Section: Mari Jane Salem-Noll, program manager
 HIV Care Support Services Section: Cheryl Henne, program manager

Key partners

HIV Surveillance and Epidemiology Section, Pennsylvania Department of Health: HIV Surveillance Data
 Health Resources and Services Administration (HRSA)
 Centers for Disease Control and Prevention (CDC)

IHPCP Content Update Contributors: The following staff members and organizations contributed to the development and publication of the updates to the public health and community-driven content and language in the Revised Integrated HIV Prevention and Care Plan 2017-2021:

Division of HIV Disease

Division of HIV Disease: Jill Garland, director
 HIV Prevention Section: Mari Jane Salem-Noll, program manager
 HIV Care Support Services Section: Cheryl Henne, program manager

University of Pittsburgh HIV Prevention and Care Project (HPCP)

Principal Investigator: Mackey Friedman, PhD, MPH;
 Co-Investigator: Sarah Krier, PhD, MPH
 HPCP Project Director: David Givens, PhD, MA
 HPG Planning Program Leads: Brian Adams, PhD(c); David Givens, PhD, MA

HIV Planning Group (2017-2019)

This Plan has been made possible by the efforts, recommendations, and expertise of the HIV Planning Group members who served during the 2017-2019 planning years (in alphabetical order):

Aaron Arnold (2017-2018)	Leah Magagnotti (2017-2019)
Dominique Carollo (2019)	Lou Ann Masden (2017)
Dr. Liza Conyers (2019)	Shannon McElroy (2018-2019)
Dr. Daphne Curges (2019)	Steven Nazzario (2017-2019)
Miriam Pastor DeGroat (2017-2019)	Jessica Netto (2017)
Sonny Concepcion (2018-2019)	**Robert Pompa (2017-2019)
James Davis (2018-2019)	Atticus Ranch (2019)
John Easter (2017)	Roy Spearman (2019)
Sharita Flaherty (2017-2019)	Clint Steib (2017-2018)
Courtney Franklin (2019)	Dane Stratford (2019)

Christopher Garnett (2017)	Ja’Nae Tyler (2017)
*Michael Hellman (2017-2019)	Greg Validisera (2019)
Jamal Jackson (2017)	Herman Wilson (2018)
Ella Kaplan (2019)	Michael Witmer (2017-2019)
Christopher Kupchik (2017)	
Dr. Teresa Lowery (2017-2019)	

*HPG Community Co-Chair 2017–2019

**HPG Co-Chair Elect 2019

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Findley C, Garland J, Salem-Noll M, Henne, C, Watkins S, Nambiar A, Malomo M, Obiri G, Allen M, Friedman M, Krier S, Givens D, Adams B. *Revised Integrated HIV Prevention and Care Plan for the Commonwealth of Pennsylvania, 2017-2021*. Harrisburg: Pennsylvania Department of Health; 2020.

Introduction

The Pennsylvania Department of Health Division of HIV Disease, the University of Pittsburgh HIV Prevention and Care Project (HPCP), and the statewide HIV Planning Group (HPG) have been developing a planning infrastructure for Integrated Prevention and Care Planning since January 2013. The following document is the sum of those efforts, which provides the direction, goals, and processes that form the jurisdiction's Plan for 2017-2021. This Integrated Plan uses the state's epidemiological data (Section 1) and consumer and stakeholder input to effectively plan for both preventing new cases of HIV and helping people who already have HIV stay healthy. Section 2 uses this information to describe all the actions the state's Division of HIV Disease and its partners will take such as specific activities for better prevention, testing, getting people into care, conducting HIV treatment, and helping people stay in care. Finally, it enumerates how the HPG, and Pennsylvania stakeholders have been assisting and will continue to assist with the planning process, including monitoring and evaluating the progress being made on this plan.

Federal guidance recommends that Integrated Planning should involve collaborative efforts with metropolitan jurisdictions as much as possible. In Pennsylvania, Philadelphia is categorized by the Center for Disease Control and Prevention (CDC) as an Eligible Metropolitan Area (EMA). In accordance with this guidance, a representative from the Department actively participates in the Philadelphia EMA planning process, while several representatives from the Philadelphia EMA participate in the HPG. This Integrated HIV Prevention and Care Plan (IHPCP) is a state jurisdictional plan, which covers the Commonwealth of Pennsylvania and the Philadelphia EMA. However, this plan is not an Integrated Plan with the Philadelphia EMA. The Philadelphia EMA has written an integrated prevention and care plan for that region. While the five southeastern Pennsylvania counties are included in this document, activities specific to those five counties can be found in the EMA's plan. Furthermore, this plan provides for ongoing coordination and future collaboration with the Philadelphia EMA.

The IHPCP and its contents represent a unique effort by several dedicated parties from across the state. The planning process and content that forms the basis of the IHPCP – that is, the assessments, reports, and recommendations – were developed over the course of four years by members of the HPG, the official planning advisory body for the Pennsylvania Department of Health (DOH), Division of HIV Disease. This body meets all federal guidelines for representativeness, inclusion, and parity among members, including representatives from community stakeholders (high-risk groups, health professionals

and providers, relevant state agency representatives, etc.), Ryan White grantees Parts A-F, People Living with HIV (PLWH), and others. Their efforts, analyses, reports, and recommendations, which over those years have involved the time and expertise of more than four dozen stakeholders, consumers, and professionals, are integrated into every section of this document. At the HPG's suggestion, document accessibility has also been addressed herein; the General Summary included below achieves a Flesch-Kincaid system score equivalent to a sixth grade reading level.

The Division of HIV Disease, under the direction of Mari Jane Salem-Noll (with past directors Jill Garland, Lana Adams and Ken McGarvey), has developed the policy guidelines, goals, and measurements in this Plan with feedback from the HPG and other stakeholders throughout the state. These goals include reducing new HIV infections; increasing access to care; improving health outcomes for people living with HIV; reducing HIV-related disparities and health inequalities. These items create the roadmap for how the jurisdiction will address the prevention, care and treatment needs in their service areas, accomplish the goals of the National HIV/AIDS Strategy, and the principles and gaps identified by the HIV Care Continuum.

Finally, this document, particularly those sections detailing the extensive work of the HPG, has been drafted, compiled, edited, and reviewed by the staff of the HIV Prevention and Care Project at the University of Pittsburgh. This project provides a variety of specialized public health expertise to the Division of HIV Disease, including statewide planning assistance for both the IHPCP and the HPG. As noted below and elsewhere in the document, it also includes significant contributions and work from the Bureau of Epidemiology in the Pennsylvania Department of Health and a workforce capacity summary from the Mid-Atlantic AIDS Education and Training Center (MAAETC) at the University of Pittsburgh.

Epidemiological Executive Summary

Since the inception of the HIV epidemic through the end of 2018, a total of 62,199 people were diagnosed with HIV infection in the Commonwealth of Pennsylvania, while an estimated 36,791 (59.2 percent) of them were presumed to be alive in Pennsylvania. This number of people living with HIV (PLWH) includes those diagnosed in state and are currently residing in Pennsylvania. In addition, the number also includes those that immigrated to the commonwealth after their initial diagnosis and are now residing in Pennsylvania. The number of PLWH infection continues to increase as more people are living longer because of advances in diagnosis, medical treatment, and care.

On the other hand, the number of newly diagnosed HIV cases is on the decline. In the year 2014, a total of 1,210 new HIV infection were diagnosed compared to 966 cases in 2018. This represents a 20.2 percent decline in new HIV diagnoses. It is also estimated that in the year 2025, the annual number of new diagnoses of HIV infection will be in the lower 600's.

HIV affects people of different age, sex, race, and ethnicity. However, disparities exist in who becomes infected and gets a diagnosis of HIV infection. In 2018, the rate of newly diagnosed HIV cases in Pennsylvania was 7.5 per 100,000 population overall, but the rate for males (12.0 per 100,000 male population) was more than three times the rate for females (3.2 per 100,000 female population). Considering race and ethnicity, HIV diagnosis rates were highest among black/African American males (51.6 per 100,000 black/African American population) and females (15.9 per 100,000 black/African American population) [Table 1]. Overall, the rate of newly diagnosed HIV cases in black/African Americans was 33 per 100,000 population compared to the rate of 18.6 per 100,000 population for Hispanics or 3.0 per 100,000 population for whites.

In terms of comparison of numbers of newly diagnosed HIV infection with the sociodemographic of the state, the HIV epidemic disproportionately impacts Black/African Americans and Hispanics. black/African Americans made up 11.2 percent of the general population of Pennsylvania but accounted for 47.3 percent (457/966) of all newly diagnosed HIV infection in 2018. Likewise, Hispanics made up 7.3 percent of the general population but accounted for 18.1 percent of all newly diagnosed HIV infection in 2018 (Table 1). Black/African Americans also accounted for 49 percent (18,043/36,791) of PLWH at year-end 2018 (Table 12).

In addition, there is impact of poverty and lack of health insurance on the health and well-being of the population which cannot be overemphasized. According to the 2017 American Community Survey 1-year estimate, about one in eight (12.5 percent) of Pennsylvanians live in poverty. However, disparities were observed by sex, race, ethnicity, and educational attainment. More females were in poverty than males (13.7 percent versus 11.2 percent). Whites also had the lowest poverty level at 10.1 percent compared to Black/African Americans at 24.8 percent or Hispanics at 28.7 percent or American Indians/Alaska Natives at 24.6 percent. The poverty level among Asians was 13.3 percent, while those persons who identified as having two or more races made up 22.3 percent. It has been determined that race and ethnicity is not the predisposing or causal factor in disease occurrence but rather social determinants of health like poverty and lack of insurance predisposes certain groups of people to getting infected or being affected by diseases. By geographical location, most rural counties had poverty rates

higher than 12.5 percent. Among the 19 urban counties, 15 of these had poverty rates below the state average of 12.5 percent while Erie, Luzerne, Lackawanna, and Philadelphia counties had rates higher than the 12.5 percent state average. Forest and Philadelphia counties had poverty rates that were greater than 20 percent. Philadelphia County alone accounted for 404 (41.8 percent) newly diagnosed HIV infection in 2018. Other state statistics estimate that 6.6 percent of Pennsylvanians under 65 years of age do not have health insurance. However, Blacks/African Americans and Hispanics had an uninsured rate of 7 percent and 12.6 percent, respectively.

The annual number of diagnoses of HIV infection has continued to decrease from year to year since the mid-1990s. However, individuals age 25 to 34 and men who have sex with men (MSM) are at a higher risk of getting infected with HIV. MSM accounted for 461 (47.7 percent) of all newly diagnosed cases in 2018 (Table 3) while individuals age 25 to 34 accounted for 335 (34.7 percent) of all diagnosed HIV infections in 2018 (Table 2).

Among the 62,199 persons ever diagnosed with HIV infection while residing in Pennsylvania, the cumulative total deaths by year-end 2018 for PLWH was 26,113 (42 percent) [Table 15]. In 2018, there were 369 HIV-associated deaths with a rate of 2.9 per 100,000 population. The overall death rate in persons diagnosed with HIV infection was higher among males at 4.3 per 100,000 compared to females at 1.5 per 100,000 (Table 5). By race, Black/African Americans had a higher death rate of 14.4 per 100,000 population compared to 1.1 per 100,000 for whites or 4.5 per 100,000 population for Hispanics. Overall, the death rates among Black/African Americans diagnosed with HIV infection was approximately 14 times the death rate for whites (Table 5). By race and sex, Black/African American males diagnosed with HIV infection had the highest death rate of 21.8 per 100,000 male population compared to 1.7 per 100,000 for white males or 6.5 per 100,000 for Hispanic males. Also, Black/African American females had the highest death rate of 7.5 per 100,000 female population compared to 0.5 per 100,000 for white females or 2.4 per 100,000 for Hispanic females (Table 5). While the reason for disparities in race and ethnicity are not fully known, lack of access to care, stigma, self-denial, impact of systemic racism, racial discrimination and other social factors might contribute to poorer health outcomes among Black/African Americans living with HIV compared to other races and ethnicities.

Between the years 2014 and 2018, an estimated 2,669 HIV-associated deaths were reported, of which persons who inject drugs (PWID's) -associated deaths was 851 (31.9 percent) compared to 715 (26.8 percent) among MSM and 768 (28.8 percent) among heterosexuals (Table 18). The HIV-associated mortality among IDUs is a source of concern with the increasing mortality associated with opioid use in

the Commonwealth of Pennsylvania. Pennsylvania ranks among the top 10 states with the highest opioid use and overdose rates. In 2018, 4,491 drug related overdose deaths were reported. However, the Pennsylvania Department of Health continues to strengthen its HIV surveillance, prevention, and care activities in the wake of the opioid crisis in the state and around the country.

At the county level, Philadelphia County had the highest number and rate of PLWH in the Commonwealth of Pennsylvania at 1,164 per 100,000 population compared to 287 per 100,000 population in the entire commonwealth. Philadelphia County accounted for about 18,440 (50.1 percent) of all PLWH and alive at year-end 2018. Other counties with a diagnosed prevalence rate higher than the overall Pennsylvania rates include Allegheny, Berks, Dauphin, Delaware, Lehigh, Montgomery, and York Counties (Table 27).

In conclusion, the HIV surveillance data show that individuals ages 25 to 34, men who have sex with men (MSM), Blacks/African Americans are disproportionately impacted by the HIV epidemic. Therefore, concerted joint efforts by all stakeholders are necessary to end the epidemic in Pennsylvania. This assessment of the epidemiology of HIV infection in Pennsylvania as outlined in this overview is therefore an integral part of the HIV prevention and care program in the commonwealth as it provides information to effectively guide prevention and care activities. It is our hope that it will assist numerous organizations in the planning of HIV-related programs, resource allocation for prevention and care activities and education for PLWH, their caregivers, lawmakers, and the public.

This overview provides information on newly diagnosed HIV infection, PLWH, HIV diagnosed prevalence rate and mortality. This information is based on available data resources and we will continue to update the IHPCP accordingly.

Plan General Summary

This summary explains the parts of this Plan for people interested in learning more about how Pennsylvania plans to address HIV disease. This document focuses on what will be done across the state for prevention, testing, getting people into care, giving quality treatment, and helping people stay in care. This plan has three parts.

Section 1

The first part is about knowing and tracking how the disease is spread, who gets HIV, and ways to prevent HIV or treat people who are living with HIV. This section shows that the state knows where people with HIV live in Pennsylvania, what makes people at risk of getting it, and who is getting HIV. This part lists activities that help people living with HIV and what else is needed to help them. Answering these questions is an important first step in creating a good plan.

Section 2

Knowing where and how HIV is spreading allows the state to plan what to do to prevent new cases of HIV and help people who already have HIV stay healthy. This section will address what the state has planned for the years 2017-2021. This incorporates plans for better prevention, testing, getting people into care, better HIV treatment, and helping people stay in care. This is the heart of the planning document. It talks about the ways the state HPG and other people from all over Pennsylvania have been and will continue to help the planning process. Planning for all people affected by HIV in Pennsylvania is very important, and this is why the plan was developed and why it will succeed.

Section 3

This part talks about how the state will monitor the progress being made. This means that this section says how the state will track how well it's doing as it carries out the Plan. Keep in mind: This is the first time the state has written a plan that has both prevention and care together for Pennsylvania. This is a big step forward for even better HIV planning and services, and it will continue to improve even more in the future.

The authors would like to thank you for your interest in the work being done to fight HIV infection and to support the health of people living with HIV in Pennsylvania. If you have any questions or would like to become more involved with state planning or the HIV Planning Group, please visit www.stophiv.org or email stakeholders@stophiv.org.

Preface to the Revised Edition: Revisions to the Integrated HIV Prevention and Care Plan

This section outlines the changes that have been made to this document in the 2021 revision.

Epidemiologic Overview Updates (Section 1)

This epidemiologic overview is based on the “Integrated Guidance for Developing Epidemiologic Profiles: HIV Prevention and Ryan White HIV/AIDS Planning (RWHAP)” issued by Centers for Disease Control and Prevention (CDC) and Health Resources and Services Administration (HRSA) (August 2014). This profile provides a thorough description of HIV among the various populations in Pennsylvania along sociodemographic, geographic, behavioral, and clinical terms; describes the current status of persons with HIV infection in Pennsylvania and seeks to anticipate future HIV distribution; identifies characteristics of the general population and of populations who are living with, or at high risk for, HIV and need primary and secondary prevention or care services; provides information required to conduct needs assessments and gap analyses.

The following additions and updates were made:

1. Addition of data sources, strengths, and limitations
2. Addition of methods section
3. Updates to Figure 1 (Previously map 1) using year 2017 data
4. Addition of Figure 4: Persons without health insurance under age 65 years by county, Pennsylvania, 2018
5. Addition of Figure 5: The rate (per 100,000 population) of newly diagnosed HIV infection by county, Pennsylvania, 2018*
6. Addition of Figure 6: The number of newly diagnosed HIV infection by county, Pennsylvania, 2018*
7. Updates to all tables using the most recent 1-year data (year 2018) and five-year data (year 2014 to 2018)
8. Updates to indicators of risk for HIV infection in Pennsylvania using BRFSS and YRBSS data

The following exclusions were made: (page references are to their locations in the original Plan, not this current document)

1. Map 2 on page 11
2. Map 4 on page 12
3. Map 5 on page 13
4. Map 6 on page 14
5. Map 8 on page 15
6. Map 10 on page 17
7. Map 11 on page 18
8. Maps 13 and 14 on page 37
9. HIV and associated coinfection with STDs
10. Map 14 on page 41
11. Figures 13 and 14 on page 45

IHPCP Content Updates

The additions, deletions, and updates in the *Revised IHPCP 2017-2021* follow joint planning feedback regarding this IHPCP by the CDC and HRSA. The Division of HIV Disease, Pennsylvania HPG, and HPCP received and collaboratively interpreted the joint federal feedback in 2017, and the HPG combined the feedback with their own significant expertise, diverse perspectives and lived experiences of the epidemic to create recommendations for revisions (both for this current document and for the 2022-2027 IHPCP that is under development at the time of this publication). The HPG formally approved their recommendations in 2019. The Division of HIV Disease then reviewed and approved all feasible recommendations (90 percent of total HPG recommendations) for the 2017-2021 IHPCP, and HPCP integrated both these approved recommendations and the updated Epidemiological Profile—as well as this new preface—to create the current revised document. The approved recommendations/updates that are applicable to the 2017-2021 IHPCP include (by IHPCP subsection and starting page number):

Introduction (p. 8)

- Clarified mission statement to better explain the purpose of the plan and what it is used for

Epi Overview (provided by the Bureau of Epidemiology) (p. 21)

- Added the most recent annual Epidemiological update
- Included mortality and morbidity assessment of PLWH
- See the Epidemiological update above for a full description of additional revisions

HIV Care Continuum (p. 60)

- Added an update regarding the advancement of undetectable equals untransmittable (U=U) and viral suppression

Engagement Disparities (p. 63)

- Added language recognizing systemic impact of racial discrimination
- Created paragraph explaining how criminalization is a possible deterrent to getting tested and staying in care
- Added section explaining that Pennsylvania Expanded HIV Testing Initiative (PEHTI) is working with Drug and Alcohol providers to build their capacity to do routine testing and leverage private insurance to cover the cost.

Service Needs (p. 75)

- The HPG recommended that members have a presence at opioid taskforce meetings, which are conducted all over the state

Service Gaps (p. 83)

- Added section expressing importance of educating all levels of care—individuals, care providers, and insurance companies
- Revised all references to “intervention specialists” in the plan to “field staff” for simplification
- Added the division of HIV disease’s definition of the “field staff” position

Barriers—Client Barriers (p. 85)

- Incorporated “fear of HIV status getting out” and “fear of criminalization” in the list of known client barriers

IHPCP Activities Structural Changes (91)

- Restructured and simplified numbering system of strategies and activities to make them more specific and more easily understood

NHAS Goal: Reducing New HIV Infections; State Objective 2, Strategy B: Expand access to effective HIV prevention services, including pre-exposure prophylaxis (PrEP) and post-exposure prophylaxis (PEP) (p. 94)

- Added a goal to make PrEP education and PrEP referral and linkage a requirement (recommended as the Department of Health’s incorporation in Participating Provider Agreements (PPAs).

NHAS Goal: Increasing Access to Care and Improving Health Outcomes for PLWH; State Objective 3, Strategy H: Establish seamless systems to link people to care immediately after diagnosis, and support retention in care (p. 96)

- Clarified the definition of “immediately” in the original Plan; reworded to “Work with Part C providers to establish rapid linkage”

NHAS Goal: Increasing Access to Care and Improving Health Outcomes for PLWH; State Objective 3, Strategy I: Increase the capacity of systems as well as the number and diversity of available providers of clinical care and related services for PLWH (p. 97)

- Added a goal to collaborate with capacity building providers and the MAAETC to develop a statewide trauma informed care training
- Added a goal to pursue the provision of more mental health trainings and educational trainings about Undetectable Equals Untransmittable (U=U) and PrEP

NHAS Goal: Reducing HIV-related Disparities and Health Inequalities; State Objective 5, Strategy O: Reduce stigma and eliminate discrimination associated with HIV status (p. 100)

- Added a goal to collaborate with capacity building providers and MAAETC in creating/pursuing trainings for all field staff on language around addressing stigma concerns and how that impacts HIV testing.

Stakeholder Involvement in Planning (p. 143)

- Noted that Pennsylvania Department of Education also created revisions to the state academic standards for Health and Physical Education, and the HPG provided feedback to the proposed learning outcomes in spring 2019.
- Added the following from the current Pennsylvania Curriculum Code:
 - § 4.29. HIV/AIDS and other life-threatening and communicable diseases.
 - (a) Instruction regarding prevention of human immunodeficiency virus (HIV) infection/acquired immunodeficiency syndrome (AIDS and other life-threatening and communicable diseases shall be given for primary, intermediate, middle school and high school education and shall follow the requirements of subsections (b) and (c).
 - (b) Educational materials and instruction shall be determined by the local school district and be appropriate to the age group being taught. The program of instruction must include information about the nature of the diseases, treatments and cures, methods of transmission and how infection can be prevented. The school district may omit instruction in the elementary grades on transmission of disease through sexual activity. Programs discussing transmission through sexual activity must stress that abstinence from sexual activity is the only completely reliable means of preventing sexual transmission. Programs must stress that avoidance of illegal drug use is the only completely reliable means of preventing transmission of disease through shared drug paraphernalia.
 - (c) A school entity shall excuse a pupil from HIV/AIDS instruction when the instruction conflicts with the religious beliefs or principles of the pupil or parent or guardian of the pupil and when excusal is requested in writing. Prior to the commencement of instruction, a school district shall publicize that detailed curriculum outlines and curricular materials used in conjunction with the instruction are available to parents and guardians during normal school hours or at teacher-parent conferences. Curricular materials, if practical, shall be made available by the school entity for home

instructional use by a parent or guardian if the student has been excused from the school entity's HIV/AIDS instruction.

Appendices

- Added Appendix for 2017-2019 Epidemiological Section Citations (Appendix A1)

Section I: Statewide Coordinated Statement of Need/Needs Assessment

Introduction

The tables, graphs and analysis presented in this section depict the ongoing public health emergency HIV poses to Pennsylvanians. This comprehensive evaluation of data, collected through a variety of different sources, provides epidemiologic/scientific resources in support of integrated, comprehensive, and evidence-based planning for HIV prevention and care. The HIV Surveillance and HIV Investigation Sections of the Division of Infectious Disease Epidemiology, Bureau of Epidemiology are the primary entities in the commonwealth with the capacity and responsibility for: a) HIV/AIDS surveillance and epidemiologic investigations; b) providing data and ongoing epidemiology support to prevention and care service development, evaluation and community planning processes (including participating in planning and implementation meetings, prioritization of population-transmission groups and interventions, conducting analyses to monitor trends, assess need for health-care resources, and project the future impact of the disease); and c) disseminating surveillance data through publications and presentations throughout the commonwealth. Important uses of the collected data involve supporting the Prevention and Care Planning (PCP) programs during their planning process.¹

Data Sources, Strengths and Limitations

Pennsylvania HIV surveillance: HIV surveillance is the core data source for this epidemiologic profile. Pennsylvania HIV surveillance program uses the Pennsylvania National Electronic Disease Surveillance System (PA-NEDSS) and the Enhanced HIV/AIDS Reporting System (eHARS) to collect, manage, analyze, and report HIV-related surveillance data to the CDC. These data include all persons with

¹ DISCLAIMER: The Pennsylvania Department of Health Bureau of Epidemiology and the Bureau of Health Statistics and Research specifically disclaim responsibility for any analyses, interpretations, or conclusions made by the user of this report.

diagnosed HIV infection who resided in the Commonwealth of Pennsylvania at the time of diagnosis, with their accompanying sociodemographic data, transmission category and vital status (dead/alive).

Strengths: Reporting of all HIV cases is over 99 percent complete.¹ The data provide information that could be used in conjunction with other data sources to identify PLWH who are linked to care and retained in care. It also helps to identify PLWH who are virally suppressed and have very low levels of HIV in their blood.

Limitations: Not all viral load (VL) and CD4 tests are reported to the HIV surveillance system. This is because current Pennsylvania HIV reporting regulations require the reporting of only detectable VL tests and CD4 results that are below 200 cells/ μ L or below 14 percent of the total lymphocytes. This makes it less likely that the surveillance system will receive CD4 and VL test results outside these limits. The excluded test results are necessary to calculate accurately the indicators of the HIV care continuum (linkage to care, retention in care and viral suppression).

U.S. Census Bureau: Data on socio-demographic and economic status can be obtained both at the county and state levels.

Strengths: The data is easily accessible and provides reliable and validated data.

Limitation: The data cannot be modified to provide data within specified age-groups. Rather, the data have fixed age groupings and the desired age-groupings can only be obtained through costly data requests.

Vital statistics data: Data on death which include the cause of death, contributory factors associated with the cause of death and date of death are obtained from the Bureau of Health Statistics and Registries, Pennsylvania Department of Health.

Strengths: The data are relatively up to date and complete.

Limitations: HIV may be underreported as the cause of death-on-death certificates. Also, deaths of Pennsylvania residents that occurred outside of Pennsylvania are not reported in the data file. Therefore, the death file might be missing some data on HIV-related deaths.

Social Security death master file: This database contains information on all deaths of persons who had a Social Security account and whose death was reported to the Social Security Administration. However, deaths reported to the Social Security Administration by state vital statistics offices are excluded from the file available to CDC, and CDC makes the remaining file available to state HIV surveillance programs annually.

Strengths: The data are updated regularly.

Limitations: No cause of death is indicated, and the file does not contain all deaths that occurred in the United States. In addition, the state where death occurred is not recorded in the file. Sometimes, albeit rarely, this file misclassifies living persons as dead.

Youth Risk Behavioral Surveillance (YRBS): The YRBS is a national school-based survey conducted by CDC, states, territorial, tribal, and local governments. It obtains data from high school students from the ninth grade to the 12th grade. It monitors six types of health-risk behaviors including: behaviors that contribute to unintentional injuries and violence; sexual behaviors related to unintended pregnancy and sexually transmitted infections, including HIV infection; alcohol and other drug use; tobacco use; unhealthy dietary behaviors and inadequate physical activity.

Strengths: It collects data in all 50 U.S. states, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, and Palau. It is an important tool that can be used to implement prevention activities and build health promotion activities.

Limitations: Self-reported data are being collected, and sensitive behavioral information may be over- or under-reported. The survey is administered in school, therefore data collected might not be representative of adolescents who are not enrolled in school or are homeschooled.

Behavioral Risk Factor Surveillance System (BRFSS): The BRFSS is a telephone survey that collects information on U.S adult residents regarding their health-related risk behaviors, chronic health conditions and use of preventive services.

Strengths: BRFSS collects data in all 50 states, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, and Palau. It is an important tool that can be used to implement prevention activities and build health promotion activities both statewide and nationally.

Limitations: Self-reported data are being collected, and sensitive behavioral information may be over- or under-reported. Data at the local county level are also not available for use or analysis.

A. Epidemiologic Overview

Methods

Data for this HIV Epidemiology overview update were obtained from the HIV surveillance data system known as eHARS in conjunction with PA-NEDSS, U.S. Census Bureau, vital statistics data, and social security death master file.

This overview covers the geography and sociodemographic characteristics of the general population and HIV burden in the Commonwealth of Pennsylvania. The HIV surveillance data analyzed for use in this overview include cases diagnosed through Dec. 31, 2018 and reported by March 31, 2019.

Case selection criteria for inclusion in the HIV burden section, subsections I and II are as follows:

- Confirmed annual diagnosis of HIV infection during the year 2014 to 2018, with HIV infection including HIV infection without AIDS and AIDS;
- Pennsylvania residence at the time of diagnosis;
- Case meeting the CDC criteria for reporting (i.e., sex, race, residence, age, and vital status); and
- Sex classified as female or male referring to sex assigned at birth.

Case selection criteria for inclusion in the HIV burden section, subsection III (PLWH) and HIV Diagnosed Prevalence rate in Pennsylvania) are as follows:

- Confirmed diagnosis of HIV infection in individuals who were alive at each year-end 2014, 2015 and 2016, 2017 and 2018;
- Pennsylvania residence at the current address;
- Case meeting CDC's criteria for reporting; and

- Sex classified as female or male referring to sex assigned at birth.

Case selection criteria for inclusion in the HIV burden section, subsection IV (five-year mortality data among people diagnosed with HIV infection) are as follows:

- Confirmed deaths among PLWH during the year 2014 through year-end 2018;
- Confirmed HIV diagnosis in Pennsylvania.
- Case meeting CDC’s criteria for reporting; and
- Sex classified as female or male referring to sex assigned at birth.

Case selection criteria for inclusion in the HIV burden section, subsection VI (HIV Infection in the Counties and Subrecipients Regions) are as follows:

- Confirmed diagnosis of HIV infection in individuals who were alive at year-end 2018;
- Pennsylvania residence at the current address;
- Case meeting CDC’s criteria for reporting; and
- Sex classified as female or male referring to sex assigned at birth.

Data were analyzed and presented using SAS 9.4 and Microsoft Excel 2016. A descriptive epidemiology by year of diagnosis, sex, race/ethnicity, transmission category, age group and county were assessed and presented in this profile. All reported numbers less than 12, with the corresponding rates, should be interpreted with caution, as these numbers have underlying relative standard errors greater than 30 percent and are considered unreliable. In the description by race/ethnicity, Hispanic includes all races.

Findings

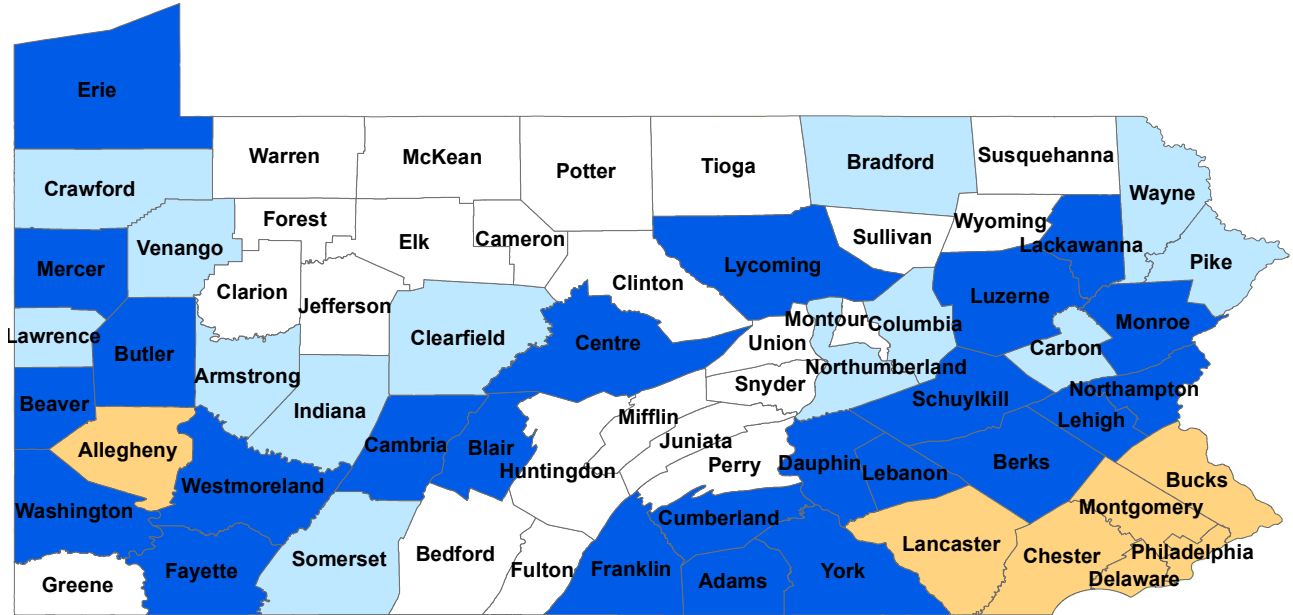
Section 1: Geographic and Sociodemographic Characteristics of the General Population in the Commonwealth of Pennsylvania

The geographical description of the Commonwealth of Pennsylvania

The Commonwealth of Pennsylvania is in the northeastern part of the United States. It is a large state in terms of geography. Its land area covers about 44,743 square miles.⁷ It is the thirty-third largest state by area, the fifth most populous state and the sixth-largest state economy in the United States. It is bordered by six states locally (Ohio, West Virginia, Maryland, Delaware, New Jersey, and New York) and internationally by Canada. As of 2017, the total population of Pennsylvania was 12,805,537.¹¹ Pennsylvania is made up of 2,561 municipalities and 67 counties. Nineteen of its 67 counties are designated urban counties and 48 are designated rural counties, making Pennsylvania a state with a large rural population (3,399,545 people/26.5 percent of the total state population).⁶ The seven most populous counties are Allegheny, Bucks, Chester, Delaware, Lancaster, Montgomery and Philadelphia,

with populations greater than 500,000 each. The combined population of these counties makes up 46 percent (5,885,219 residents) of the total population. Approximately one-fifth (22 percent or 2,803,911) of the entire population reside in Allegheny and Philadelphia Counties.

Figure1: Estimated Population by County, Pennsylvania, 2017



Data source: Pennsylvania Department of Health Enterprise Data Dissemination Informatics Exchange (EDDIE). Population, county, state. Accessed July 19, 2019. <https://www.phaim1.health.pa.gov/EDD/WebForms/PopCntySt.aspx>. Total population was 12,805,537.

Legend

- 0 - 50,000
- 50,001 - 100,000
- 100,001 - 500,000
- 500,001 - 1,580,863

According to the Center for Rural Pennsylvania, “a county or school district is rural when the number of persons per square mile within the county or school district is less than 284. Counties and school districts that have 284 persons or more per square mile are considered urban”.¹⁰ The majority of the urban counties are clustered in the southeastern and southcentral regions of the commonwealth. Figure 2 shows the rural/urban counties in Pennsylvania.

Figure 2: Rural and Urban Counties in Pennsylvania



Data source: The Center for Rural Pa. Accessed June 24, 2019. https://www.rural.palegislature.us/demographics_rural_urban_counties.html

Legend

- Rural county
- Urban county

Socio-demographic characteristics of the commonwealth

Sex: With an estimated population of 12,805,537 in 2017, females were 6,533,016 (51 percent) of the population, while males were 6,272,521 (49 percent). Differences, however, exist within each sex by age group. Male’s age 0 to 19 were one-quarter (24.7 percent) of the male population, and those 65 and above represented 15.8 percent of the male population. Female’s age 0 to 19 were 22.5 percent of the female population, while those age 65 and above represented 19.7 percent of the female population. As a percentage of the total population, females age 65 and older were 10 percent and males age 65 and older were 7.7 percent of the population.¹²

Age: In the 2017 population estimates, persons under 5 years and under 18 years of age represented 5.5 percent and 20.8 percent of the population, respectively. Pennsylvanian’s age 25 to 34 accounted for 1,681,722 (13.1 percent) people. The population in Pennsylvania is aging, very much like the rest of the U.S. The median age in years in the 2017 American Community Survey one-year estimates was 40.8 compared to 40.2 in 2010. The median age for males was 39.2 years and 42.5 years for females. Likewise, adults age 65 and older made-up 17.8 percent of the population in 2017 compared to 15.4 percent in 2010. Pennsylvania ranks fourth in the nation in percentage population of residents age 65 and older.¹²

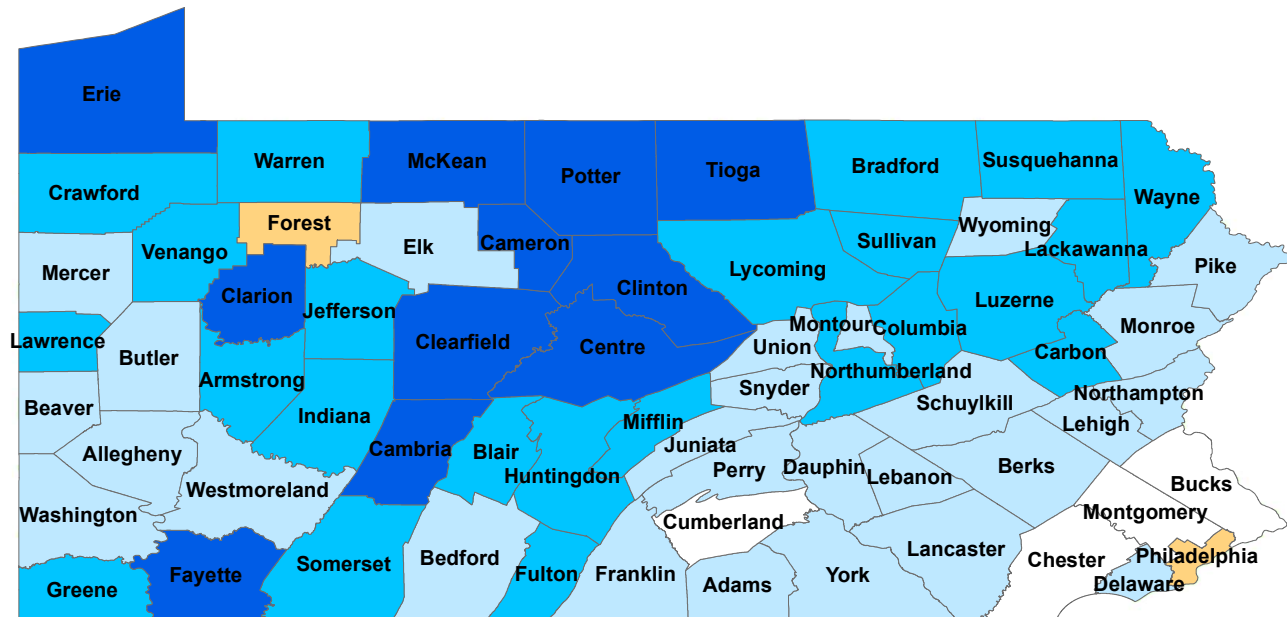
Race/ethnicity: The Office of Management and Budget (OMB) classifies race into six different categories. Ethnicity (Hispanic/Latino) is often shown in tables with these six categories of race: American Indian/Alaska Native, Asian, Black/African American, Native Hawaiian/Other Pacific

Islander, white and multiple races.⁹ Using the 2017 data estimates, white alone made up 80.7 percent; Black/African American alone, 11.2 percent; American Indian/Alaska Native, 0.2 percent; Asian alone, 3.5 percent; Native Hawaiian and other Pacific Islander alone, 0 percent; and two or more races, 2.5 percent of the population in Pennsylvania. Foreign-born persons made up 7 percent of the population. There was an increase in the population of persons who identified as Asians from 2.8 percent in 2010 to 3.5 percent in 2017. Individuals who identified as having two or more races were 2.5 percent of the population in 2017 compared to 1.9 percent in 2010.¹⁷

Socioeconomic characteristics of the commonwealth

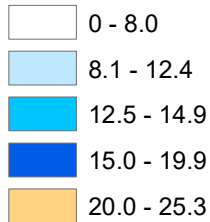
Poverty and income: According to the 2017 American Community Survey 1-Year Estimates, the population of Pennsylvanians living below the poverty level in the past 12 months was 12.5 percent compared to 13.4 percent in the entire United States. However, disparities existed by sex, race, ethnicity, and educational attainment. More females were in poverty than males (13.7 percent versus 11.2 percent). Whites also had the lowest poverty level at 10.1 percent compared to Black/African Americans at 24.8 percent or Hispanics at 28.7 percent or American Indian/Alaska Native at 24.6 percent. The poverty level among Asians was 13.3 percent, while those persons who identified as having two or more races was 22.3 percent.¹⁶ The median household income in 2017 was \$59,195 in Pennsylvania compared to \$60,336 in the United States. The mean household income during the same time was \$81,006 in Pa. and \$84,525 in the United States. An estimated 7.2 percent of households earned less than \$10,000 in 2017 in Pennsylvania. Likewise, 42.9 percent of households earned \$49,999 or less while 26.3 percent of households earned \$100,000 or more.¹³ Educational attainment also had an impact on the poverty level. Resident's age 25 years and older with a bachelor's degree or higher had the lowest poverty level of 3.8 percent compared to 24.1 percent among individuals age 25 and older with less than a high school graduate level education.¹⁶

Figure 3: Percent in Poverty by County, Pennsylvania, 2018



Data source: U.S census Bureau. QuickFacts Pennsylvania. Accessed June 25, 2019. <https://www.census.gov/quickfacts/PA>

Legend



Employment: The United States Department of Labor, Bureau of Labor Statistics, estimates that the unemployment rate in the Commonwealth of Pennsylvania among those 16 years and older as of August 2019 stands at 3.9 percent compared to 3.7 percent in the United States.²⁰ However, there are disparities in the unemployment rate by age, sex, race and ethnicity. In the 2017 American Community Survey 1-year estimates, whites had the lowest unemployment rate at 4.4 percent compared to Asians (5.3 percent), Black/African Americans (10.6 percent), American Indian and Alaska Native (13.4 percent) or individuals with two or more races (10.6 percent). Male’s age 20 to 64 years had a higher unemployment rate of 5.1 percent compared to females at 4.6 percent. Resident’s age 16 to 19 had the highest unemployment rate at 17.3 percent compared to 10 percent in age group 20 to 24, 5.5 percent in age group 25 to 29, 5.7 percent in age group 30 to 34, 4.3 percent in age group 35 to 44, 3.5 percent in age group 45 to 54, 3.3 percent in age group 55 to 59, 3.6 percent in age 60 to 64, 3.6 percent in age group 65 to 74, and 3.1 percent in age groups 75 and older. The unemployment rate among Pennsylvanian’s age 25 to 64 with less than a high school diploma was 9.5 percent compared to those with a bachelor’s degree or higher at 2.3 percent.¹⁴

With the expansion of Medicaid through the Affordable Care Act, the number of civilian non-institutionalized Pennsylvanians with some form of health insurance coverage was 94.5 percent in 2017 compared to 91.3 percent in the United States. Among those insured, 72.5 percent had private health insurance (67.6 percent in the U.S.), while 36.8 percent had public coverage (35.5 percent in the U.S.). It is estimated that 4.4 percent of civilian non-institutionalized children under 19 years of age were without health insurance (5 percent in the U.S.). Among adults age 19 to 64 in the labor force and employed, 93.4 percent had health insurance coverage, while 80.4 percent of those in the labor force but unemployed had health insurance coverage.¹³

Disability: In Pennsylvania, 14.1 percent of the civilian non-institutionalized population had a disability compared to 12.7 percent in the United States. Disability increases with age with 0.9 percent of the population under 5 years of age having some form of disability compared to 7 percent of the population age 5 to 17, 7 percent of the population age 18 to 34, 13.9 percent in age 35 to 64, 24 percent among age 65 to 74 and 47.9 percent in the population age 75 and over. An estimated 13.8 percent (± 0.2) of males and 14.4 percent (± 0.2) of females had a disability in 2017. Among races, American Indians/Alaska Natives had the highest percentage of people living with a disability at 20.8 percent. By disability type, an estimated 3.9 percent of Pennsylvanians had hearing difficulty compared to 2.3 percent with vision difficulty or 5.9 percent with cognitive difficulty.¹⁸ These groups present unique challenges as different organizations working on HIV need to target prevention messages to meet the unique needs of these populations.

Homelessness: In Pennsylvania, an estimated 13,512 individuals were homeless in 2018, of which, 11,768 (87.1 percent) were sheltered and 1,744 (12.9 percent) were unsheltered. A total of 1,408 (10.4 percent) were chronically homeless, 982 (7.3 percent) were veterans and 684 (5.1 percent) were homeless unaccompanied youths age 25 years and younger.¹⁹ The number of homeless individuals decreased since 2010, when there were 14,516 homeless individuals. This represents a 6.9 percent decrease in the number of homeless individuals from 2010 to 2018. The issue of homelessness is particularly challenging for individuals living with chronic infection (such as HIV) and their caregivers because homelessness has been associated with reduced access to care, engagement in harmful behaviors, lower survival rate, and poor adherence to treatment.

Section 2: HIV Burden in Pennsylvania, 2014-2018

Newly Diagnosed HIV Infection in Pennsylvania, 2014-2018

The total number of new HIV cases diagnosed in the five-year period 2014 to 2018 was 5,565. Of the total cases, 1,222 (22 percent) were females and 4,343 (78 percent) were males. By race and ethnicity, 881 (15.8 percent) were Hispanic, 14 (0.3 percent) were American Indian, 105 (1.9 percent) were Asian, 2,816 (50.6 percent) were Black/African American, 1,635 (29.4 percent) were white and 114 (2 percent) were of multiple races. By age, about a third (1,745/5,565 or 31.4 percent) of diagnosed HIV infections during this time period were age 25 to 34. Individual's age 15 to 44 accounted for 72.5 percent (4,036) of newly diagnosed infections during the same time period. By transmission category, 2,881 (51.8 percent) infections were acquired through MSM, 1,411 (25.4 percent) were through

heterosexual contact and 368 (6.6 percent) were IDU. By geographic location, a total of 2,479 (44.5 percent) cases were residents in Philadelphia County at the time of diagnosis. Allegheny County had 566 (10.2 percent) newly diagnosed HIV infections during this time period. Important epicenters were found near urban areas throughout the state where 58.7 percent (3,266) of the newly diagnosed HIV infections were residents in Philadelphia and the surrounding counties of Bucks, Chester, Delaware, and Montgomery.

Subsection I. Newly Diagnosed HIV infection in Pennsylvania, 2018

Table 1: The Number and Rate of Newly Diagnosed HIV Infection by Sex and Race/Ethnicity, Pennsylvania, 2018*

Race/Ethnicity	Male			Female			Total*		
	No.	%	Rate	No.	%	Rate	No.	%	Rate
Hispanic	140	18.5	29.2	35	16.6	7.6	175	18.1	18.6
American Indian	1	0.1	11.0	0	0.0	0.0	1	0.1	5.4
Asian	17	2.3	7.8	4	1.9	1.7	21	2.2	4.6
Black/African American	343	45.4	51.6	114	54.0	15.9	457	47.3	33.0
White	241	31.9	5.0	52	24.6	1.0	293	30.3	3.0
Multiracial	13	1.7	12.7	6	2.8	5.6	19	2.0	9.1
Total	755	100	12.0	211	100	3.2	966	100	7.5

Data source: Pa. HIV surveillance

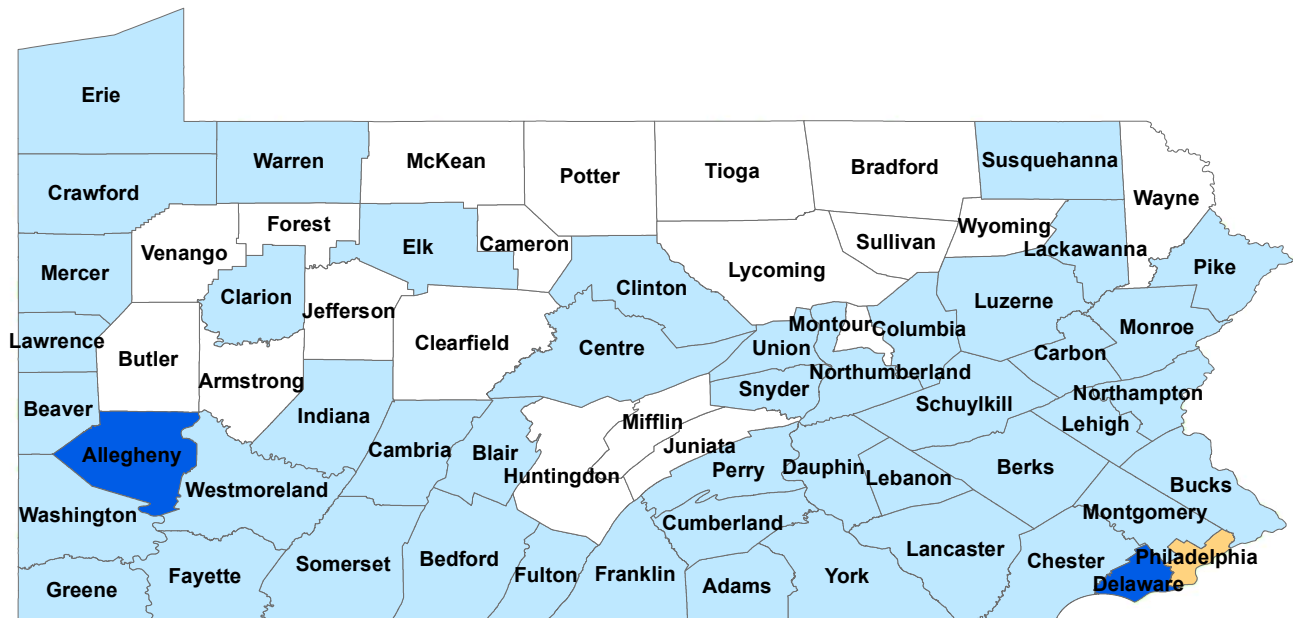
Rates are per 100,000 population

* Count may be incomplete due to lag in reporting.

In 2018, the total number of individuals newly diagnosed with HIV was 966. Of this total, 755 (78.2 percent) were males and 211 (21.8 percent) were females. By race/ethnicity, 457 (47.3 percent) were Black/African American, 293 (30.3 percent) were white, 175 (18.1 percent) were Hispanic, 21 (2.2 percent) were Asian and 19 (2 percent) were of multiple races. The rate of newly diagnosed HIV cases in 2018 in Pennsylvania was 7.5 per 100,000 population. The newly diagnosed HIV rate for males was more than three times the rate for females (12.0 per 100,000 compared to 3.2 per 100,000).

Black/African American males and females had the highest rates of newly diagnosed HIV cases at 51.6 per 100,000 Black/African American male population and 15.9 per 100,000 Black/African American female population compared to other races and ethnicities. Overall, the rate of newly diagnosed HIV cases in Black/African Americans was 33 per 100,000 population compared to 18.6 per 100,000 population for Hispanics and three per 100,000 population for whites (Table 1).

Figure 5: The Number of Newly Diagnosed HIV infection by County, Pennsylvania, 2018*



Data source: Pennsylvania HIV surveillance
 * Count may be incomplete due to lag in reporting.

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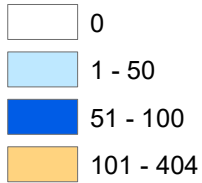
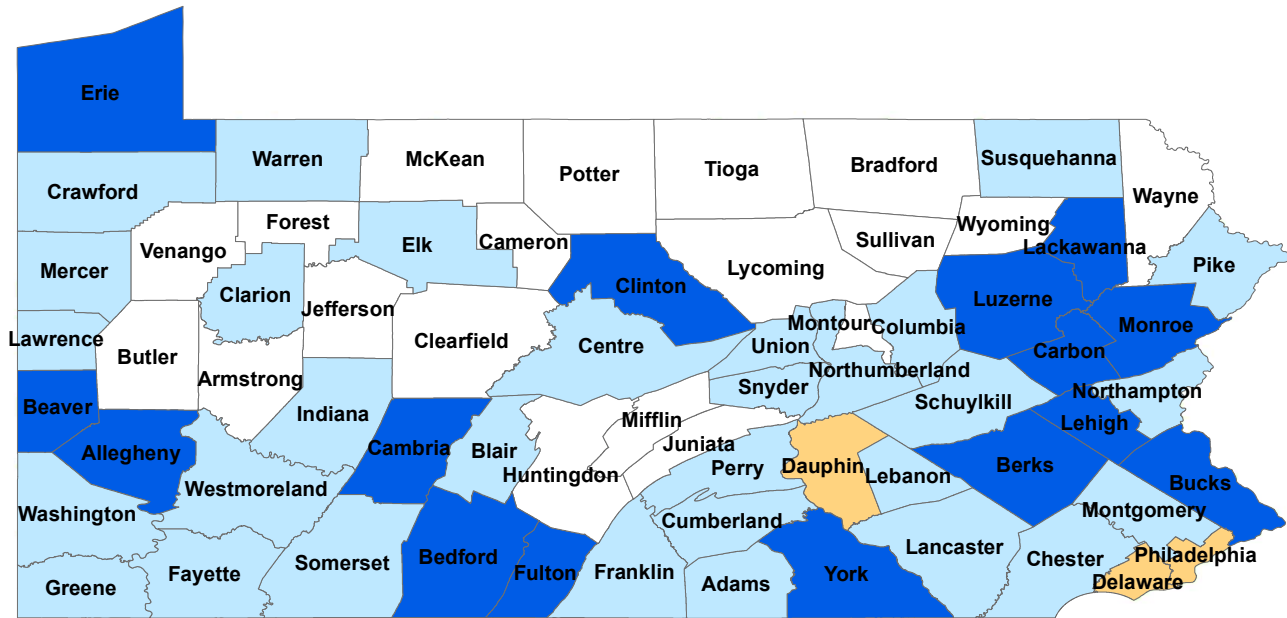


Figure 6: The Rate (per 100,000 population) of Newly Diagnosed HIV Infection by County, Pennsylvania, 2018*



Data source: Pennsylvania HIV surveillance
 * Count may be incomplete due to lag in reporting.

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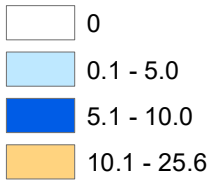


Table 2: The Number of Newly Diagnosed HIV Infection by Sex and Age at Diagnosis, Pennsylvania, 2018*

Age group (years)	Male		Female		Total*	
	No.	%	No.	%	No.	%
0-12	0	0.0	1	0.5	1	0.1
13-14	0	0.0	0	0.0	0	0.0
15-24	192	25.4	30	14.2	222	23.0
25-34	274	36.3	61	28.9	335	34.7
35-44	120	15.9	40	19.0	160	16.6
45-54	91	12.1	46	21.8	137	14.2
55-64	60	7.9	26	12.3	86	8.9
≥65	18	2.4	7	3.3	25	2.6
Total	755	100.0	211	100.0	966	100.0

Data source: Pennsylvania. HIV surveillance
 * Count may be incomplete due to lag in reporting.

In 2018, the highest number and percentage of newly diagnosed HIV infection was in the 25 to 34-year-old age group. This age group accounted for a total of 335 (34.7 percent) of all newly diagnosed HIV infections in Pennsylvania. Among males, 36.3 percent of newly diagnosed HIV infection were among those age 25 to 34 compared to 28.9 percent among females. Among those age 15 to 44, a total of 717 newly diagnosed cases were reported, and males accounted for 586 (81.7 percent) of all newly diagnosed HIV infections compared to 131 (18.3 percent) females in this age group (Table 2).

Table 3: The Number of Newly Diagnosed HIV Infection by Sex and Transmission Category, Pennsylvania, 2018*

Transmission category	Male		Female		Total	
	No.	%	No.	%	No.	%
MSM	461	61.1	0	0.0	461	47.7
IDU	63	8.3	33	15.6	96	9.9
MSM and IDU	25	3.3	0	0.0	25	2.6
Heterosexual contact	63	8.3	65	30.8	128	13.3
All pediatric mode	0	0.0	3	1.4	3	0.3
Unknown	143	18.9	110	52.1	253	26.2
Total	755	100.0	211	100.0	966	100.0

Data source: Pennsylvania HIV surveillance

* Count may be incomplete due to lag in reporting.

By transmission category, 461 (47.7 percent) of people newly diagnosed with HIV infection in 2018 were men who have sex with men (MSM). In addition, 128 (13.3 percent) became infected through heterosexual contact, 96 (9.9 percent) cases were infected through injection drug use (IDU) and 25 (2.6 percent) through MSM and IDU contact. A total of 253 (26.2 percent) newly diagnosed HIV cases did not have any risk factor reported, or the risk factor was not identified. Among males, MSM accounted for the highest number of newly diagnosed HIV infection of 461 (61.1 percent) cases out of 755 cases, while among females, heterosexual contact accounted for the highest mode of transmission of 65 (30.8 percent) cases out of 211 cases (Table 3).

Table 4: The Number of Newly Diagnosed HIV Infection by Transmission Category and Race/Ethnicity, Pennsylvania, 2018*

Race/ethnicity	Transmission category							Number	Percent
	MSM	IDU	MSM and IDU	Heterosexual contact	All pediatric mode	Unknown			
Asian	13	0	0	3	0	5	21	2.2	
Black/African American	205	23	4	63	1	161	457	47.3	
Hispanic	86	20	2	23	1	43	175	18.1	
multiarc	12	2	0	2	0	3	19	2.0	
American Indian	1	0	0	0	0	0	1	0.1	
White	144	51	19	37	1	41	293	30.3	
Total	461	96	25	128	3	253	966	100.0	

Data source: Pennsylvania HIV surveillance * Count may be incomplete due to lag in reporting.

By race, Black/African Americans accounted for 457 (47.3 percent) of all newly diagnosed HIV infections in 2018, while whites accounted for 293 (30.3 percent) and Hispanics, 175 (18.1 percent) cases. By transmission category, black/African Americans had the highest number of diagnosed HIV cases attributable to MSM compared to other races/ethnicities. A total of 205 (44.5 percent) cases of all newly diagnosed HIV infection attributable to MSM were among black/African Americans compared to 144 cases (31.2 percent) in whites. Likewise, diagnosed HIV cases attributable to heterosexual contact was also higher among black/African Americans compared to whites (49.2 percent versus 28.9 percent) [Table 4]. The data presented in this table show that black/African Americans have the greatest number of newly diagnosed HIV infections and in comparison, to the general population, black/African Americans are disproportionately impacted by the HIV epidemic.

Table 5: The Number and Rate of Death Among Persons with a Diagnosis of HIV Infection by Sex and Race/Ethnicity, Pennsylvania, 2018*

Race/ethnicity	Male			Female			Total		
	No.	%	Rate	No.	%	Rate	No.	%	Rate
Hispanic	31	11.4	6.5	11	11.3	2.4	42	11.4	4.5
American Indian	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Asian	2	0.7	0.9	0	0.0	0.0	2	0.5	0.4
Black/African American	145	53.3	21.8	54	55.7	7.5	199	53.9	14.4
White	82	30.1	1.7	27	27.8	0.5	109	29.5	1.1
Multiple race	12	4.4	11.7	5	5.2	4.7	17	4.6	8.1
Total	272	100	4.3	97	100	1.5	369	100	2.9

Data source: Pennsylvania HIV surveillance

Rates are per 100,000 population.

* Count may be incomplete due to lag in reporting.

The overall death rate in 2018 among persons diagnosed with HIV infection was higher among males at 4.3 per 100,000 male population compared to females at 1.5 per 100,000 female population. By race, black/African Americans had a higher death rate of 14.4 per 100,000 population compared to 1.1 per 100,000 for whites and 4.5 per 100,000 population for Hispanics. Overall, the death rates among black/African Americans diagnosed with HIV infection was approximately 14 times the death rate for whites. By race and sex, black/ African American males diagnosed with HIV infection had the highest death rate of 21.8 per 100,000 male population compared to 1.7 per 100,000 for white males and 6.5 per 100,000 for Hispanic males. Also, black/African American females had the highest death rate of 7.5 per 100,000 female population compared to 0.5 per 100,000 for white females and 2.4 per 100,000 for Hispanic females (Table 5). The reasons for these disparities are unknown. However, lack of access to care, stigma, self-denial, and other social factors might be contributing to poorer health outcomes among black/African Americans living with HIV compared to other races/ethnicities.

Subsection II. Five-Year Newly Diagnosed HIV Cases in Pennsylvania, 2014-2018

Table 6: The Number of People Diagnosed with HIV Infection by Sex and Year of Diagnosis, Pennsylvania, 2014-2018

	Cumulative cases through 2013						Five-year total from year 2014 to 2018		Cumulative cases through Dec. 31, 2018	
	No.	2014	2015	2016	2017	2018*	No.	Percent	No.	Percent
Sex	No.	No.	No.	No.	No.	No.	No.	Percent	No.	Percent
Female	14,080	254	263	261	233	211	1,222	22	15,302	24.6
Male	42,554	956	911	876	845	755	4,343	78	46,897	75.4
Total	56,634	1,210	1,174	1,137	1,078	966	5,565	100	62,199	100

Data source: Pennsylvania HIV surveillance

* Count may be incomplete due to lag in reporting.

Prior to 2014, a total of 56,634 cases were diagnosed with HIV. A cumulative total of 62,199 cases have been diagnosed in Pennsylvania by year-end 2018. Females accounted for 15,302 (24.6 percent) diagnosed HIV infections and males accounted for 46,897 (75.4 percent) diagnosed HIV infections. From 2014 through 2018, a total of 5,565 cases were diagnosed. However, the number of newly diagnosed HIV infections per year have been on the decline. There were 1,210 new cases in 2014 compared to 966 new cases in 2018 (Table 6).

Table 7: The Number of People Diagnosed with HIV Infection by Race/Ethnicity and Year of Diagnosis, Pennsylvania, 2014-2018

Race/ethnicity	Cumulative cases through 2013	2014	2015	2018	2017	2018*	Five-year total from year 2014 to 2018		Cumulative cases through Dec. 31, 2018	
	No.	No.	No.	No.	No.	No.	No.	Percent	No.	Percent
Hispanic	7,579	168	160	200	178	175	881	15.8	8,460	13.6
American Indian	49	4	2	5	2	1	14	0.3	63	0.1
Asian	305	23	21	24	16	21	105	1.9	410	0.7
Black/African American	27,949	629	636	548	546	457	2,816	50.6	30,765	49.5
White	19,100	353	334	338	317	293	1,635	29.4	20,735	33.3
Multiple race	1,652	33	21	22	19	19	114	2.0	1,766	2.8
Total	56,634	1,210	1,174	1,137	1,078	966	5,565	100	62,199	100

Data source: Pennsylvania HIV surveillance

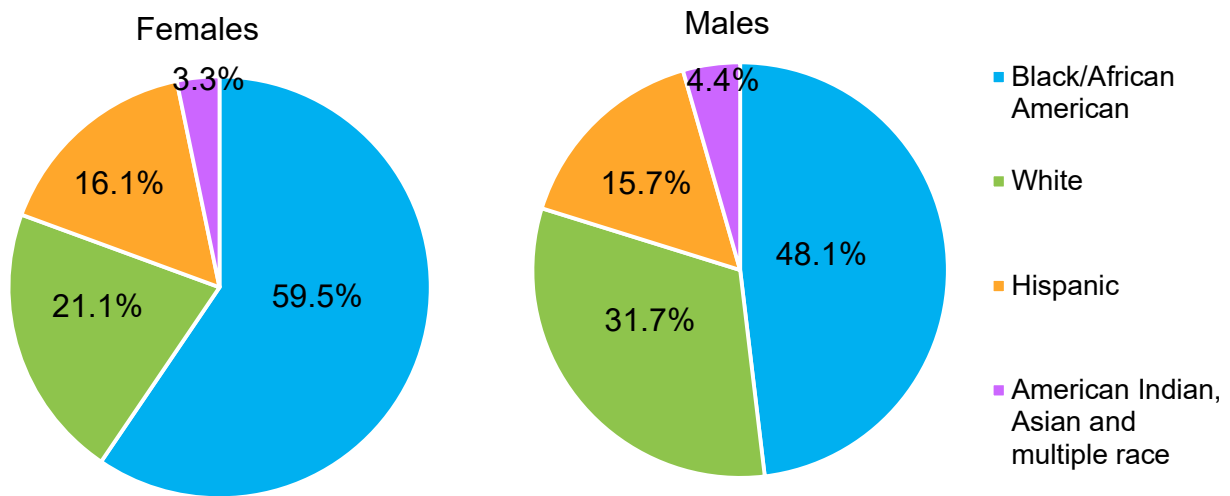
* Count may be incomplete due to lag in reporting.

Individuals who identified themselves as black/African Americans were 2,816 (50.6 percent) of all diagnosed cases from 2014 to 2018. Whites and Hispanics made up 1,635 (29.4 percent) and 881 (15.8 percent) of all the cases diagnosed, respectively. Individuals who identify as Asians, American Indian/Alaska Natives and multiple races made up 4.2 percent of all the diagnosed HIV cases (Table 7).

The number of people diagnosed with HIV infection by sex and race/ethnicity, Pennsylvania, 2014-2018

Black/African Americans made up 50.6 percent (2,816/5,565) of the total newly diagnosed HIV infections from year 2014 to year-end 2018. Among 1,222 females diagnosed in the five-year period, 727 (59.5 percent) were black/African American, 258 (21.1 percent) were white, 197 (16.1 percent) were Hispanic and 40 (3.3 percent) were Asian, American Indian, and multiple races (Figure 7). Among the 4,343 males newly diagnosed in the five-year period, 2,089 (48.1 percent) were black/African American, 1,377 (31.7 percent) were white, 684 (15.7 percent) were Hispanic and 193 (4.4 percent) were Asian, American Indian, and multiple races (Figure 7).

Figure 7: The Percentage of People Diagnosed with HIV Infection by Sex and Race/Ethnicity, Pennsylvania, 2014-2018



Data source: Pennsylvania HIV surveillance

Table 8: The Number of People Diagnosed with HIV Infection by Year of Diagnosis and Age at Diagnosis, Pennsylvania, 2014-2018

Age (years)	Cumulative cases through 2013	2014	2015	2018	2017	2018*	Five-year total from year 2014 to 2018		Cumulative cases through Dec. 31, 2018	
							No.	Percent	No.	Percent
0-12	734	4	6	3	1	1	15	0.3	749	1.2
13-14	88	2	1	1	0	0	4	0.1	92	0.1
15-24	6,986	262	265	257	250	222	1,256	22.6	8,242	13.3
25-34	18,217	336	348	377	349	335	1,745	31.4	19,962	32.1
35-44	17,950	241	217	202	215	160	1,035	18.6	18,985	30.5
45-54	9,052	229	212	185	155	137	918	16.5	9,970	16
55-64	2,836	104	100	88	76	86	454	8.2	3,290	5.3
≥65	771	32	25	24	32	25	138	2.5	909	1.5
Total	56,634	1,210	1,174	1,137	1,078	966	5,565	100	62,199	100

Data source: Pennsylvania HIV surveillance

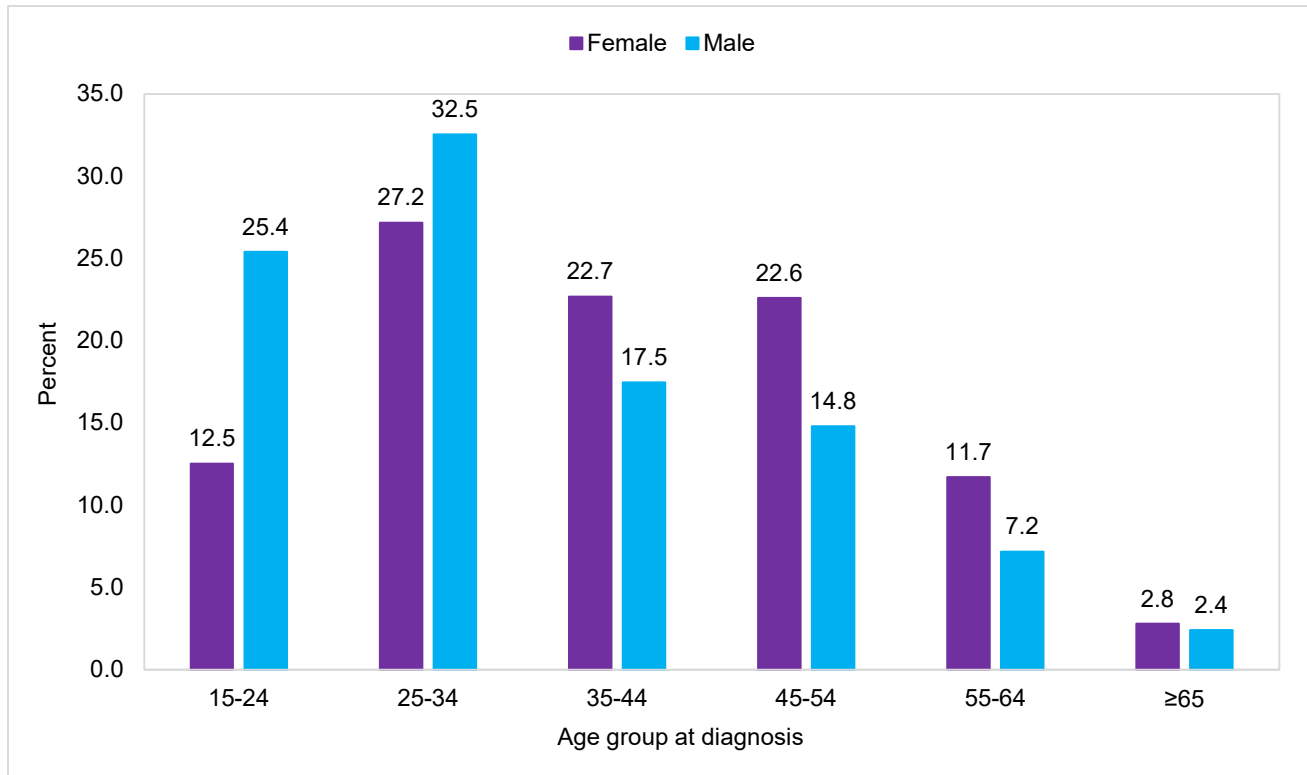
* Count may be incomplete due to lag in reporting.

Individuals age 25 to 34 are disproportionately impacted by the HIV epidemic accounting for the highest number of newly diagnosed HIV cases. This age group accounted for 19,962 (32.1 percent) of the total diagnosed cases while making up 13.2 percent of the general population. From 2014 through the end of 2018, the age group 25 to 34 also accounted for 1,745 (31.4 percent) of all newly diagnosed HIV cases. Overall, individuals in the age group 15 to 44 accounted for a total of 4,036 (72.5 percent) of all diagnosed HIV cases in the five-year period from 2014 through 2018 while making up 38.7 percent of the general population (Table 8).

The number of people diagnosed with HIV infection by sex and age group, Pennsylvania, 2014-2018

There was a total of 4,343 newly diagnosed HIV infections among males and 1,222 newly diagnosed HIV infections among females of all age groups between year 2014 and 2018. Male's age 25 to 34 accounted for the highest number of newly diagnosed HIV infections with 1,413 (32.5 percent) cases (Figure 8). The highest number of newly diagnosed HIV infection among females was 332 (27.2 percent) in the age group 25 to 34. A greater proportion (57.9 percent) of males were under age 35 and a greater proportion (59.7 percent) of females were age 35 and older at the time of diagnosis. This data along with other data presented in this overview speaks to the importance of having tailored interventions that addresses the population on different levels based on age, sex, and race/ethnicity.

Figure 8: The Percentage of People Diagnosed with HIV by Sex and Age Group, Pennsylvania, 2014-2018



Data source: Pennsylvania HIV surveillance

Table 9: The Number of People Diagnosed with HIV infection by Transmission Category and Year of Diagnosis, Pennsylvania, 2014-2018

Transmission category	Cumulative cases - 2013	2014	2015	2018	2017	2018	Five-year total from year 2014 to 2018		Cumulative cases through Dec. 31, 2018	
	No.	No.	No.	No.	No.	No.	No.	Percent	No.	Percent
MSM	20,876	617	630	617	556	461	2,881	51.8	23,757	38.2
IDU	15,145	66	69	60	77	96	368	6.6	15,513	24.9
MSM and IDU	2,857	29	27	27	23	25	131	2.4	2,988	4.8
Heterosexual contact	13,833	432	336	358	157	128	1,411	25.4	15,244	24.5
All pediatric mode	748	4	7	4	3	3	21	0.4	769	1.2
*Other	3,175	62	105	71	262	253	753	13.5	3,928	6.3
Total	56,634	1,210	1,174	1,137	1,078	966	5,565	100	62,199	100

Data source: Pennsylvania HIV surveillance

* Other transmission category included unknown risk factor, risk not reported, no risk factor identified and blood transfusion

Cumulatively, MSM accounted for the highest number of cases among all diagnosed HIV cases. In the last five years from 2014 through 2018, a total of 2,881 (51.8 percent) cases have been diagnosed among MSM. Heterosexual contact accounted for 1,411 (25.4 percent), IDU accounted for 368 (6.6 percent) and MSM and IDU accounted for 131 (2.4 percent) diagnosed HIV cases. In the last five years, the number of diagnosed HIV cases attributable to IDU increased from 66 cases in 2014 to 96 cases in 2018. This recent increase in IDU related HIV cases was also reported in the Philadelphia area.

The last known documentation in Pennsylvania’s surveillance system of HIV transmission through blood transfusion was in 2007. Historically, a total of 524 diagnosed HIV cases were acquired through blood transfusion from 1980-2007. Overall, the number of diagnosed HIV cases attributable to MSM and heterosexual contact have been decreasing from year to year and specifically, from 2014 through 2018 (Table 9).

The number of people diagnosed with HIV infection by sex and transmission category, Pennsylvania, 2014-2018

A total of 1,222 females were newly diagnosed with HIV during this five-year period, of which, 678 (55.5 percent) were through heterosexual contact and 136 (11.1 percent) were through IDU. Conversely, MSM accounted for 66.3 percent (2,881/4,343) of the newly diagnosed HIV infection during the same time period among males. Heterosexual contact and IDU both accounted for 16.9 percent (733/4,343) and 5.3 percent (232/4,343) of newly diagnosed HIV infections among males in the five-year period. MSM and IDU accounted for 131 (3 percent) newly diagnosed HIV infections among males.

Table 10: The Number of Newly Diagnosed HIV Cases by Race and Age at Diagnosis, Pennsylvania, 2014-2018

Age group (years)	Hispanic	American Indian	Asian	Black/African American	Multiple race	White	Total	Percent
0-12	0	0	1	9	1	4	15	0.3
13-14	0	0	0	3	1	0	4	0.1
15-24	191	1	15	766	34	249	1,256	22.6
25-34	287	3	44	858	44	508	1,744	31.3
35-44	216	4	25	459	17	315	1,036	18.6
45-54	127	4	10	429	10	338	918	16.5
55 - 64	44	1	5	228	5	171	454	8.2
≥65	16	1	5	64	2	50	138	2.5
Total	881	14	105	2,816	114	1,635	5,565	100

Data source: Pennsylvania HIV surveillance

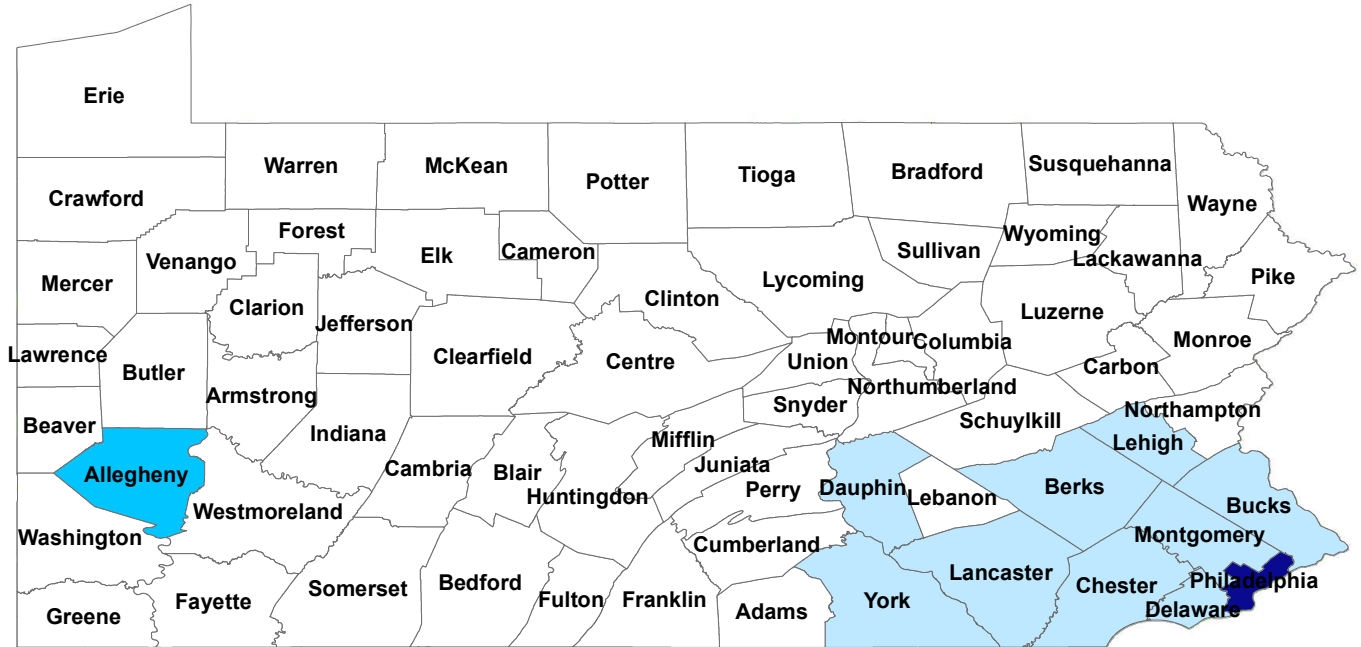
A total of 5,565 newly diagnosed HIV cases were reported from 2014 through 2018. Black/African Americans are disproportionately impacted in the HIV epidemic. Black/African Americans accounted for 2,816 (50.6 percent) of newly diagnosed HIV cases during this period compared to 1,635 (29.4 percent) among whites or 881 (15.8 percent) among Hispanics. Also, individuals 15 to 34 years of age accounted for 3,000 (53.9 percent) of all newly diagnosed HIV cases, with black/African Americans accounting for 1,624 (54.1 percent) of the total number in this age group. The number of newly

diagnosed HIV cases in the five-year period among age group 0 to 14 was 19, of which 12 (63.2 percent) were Black/African American.

Subsection III: People Living with HIV(PLWH) and HIV Diagnosed Prevalence Rate in Pennsylvania

This section describes the number of people diagnosed with HIV and alive at each year- end. It also includes people residing in Pennsylvania at each year-end regardless of the place of HIV diagnosis. It describes the location by county of PLWH using the last known address.

Figure 9: The Number of PLWH by County at Year-end 2018, Pennsylvania.

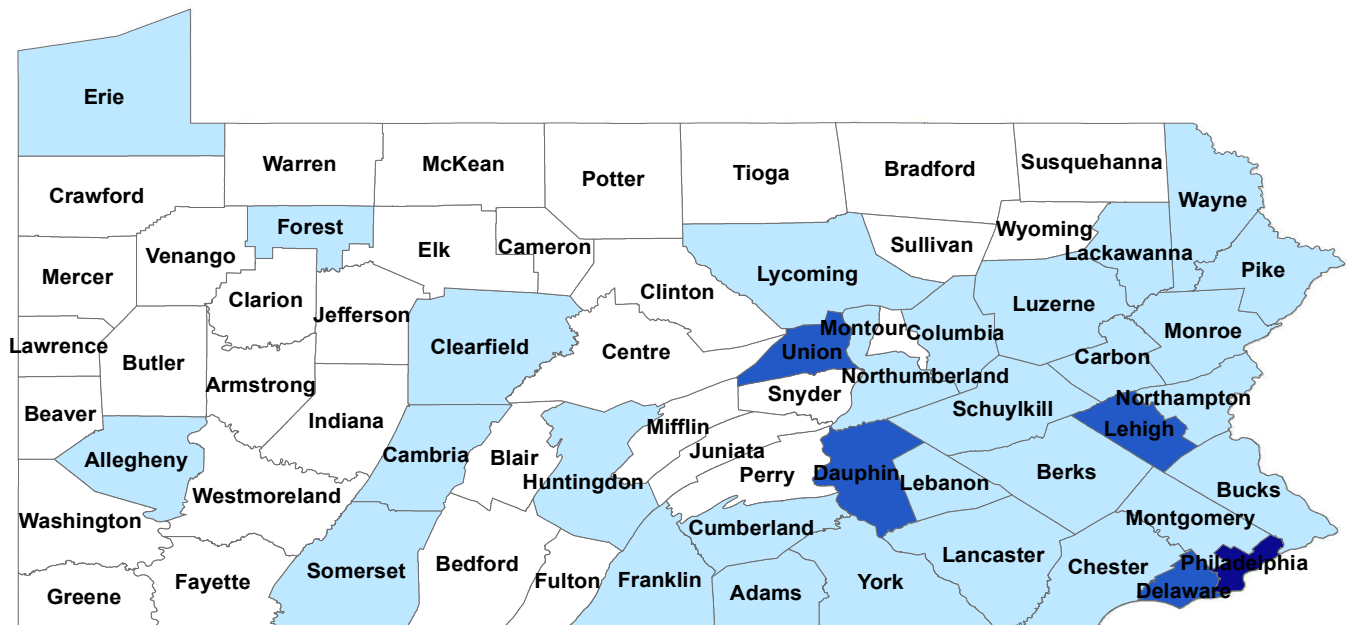


Data source: Pennsylvania HIV surveillance

Legend

- 1 - 500
- 501 - 2,500
- 2,501 - 5,000
- >=5,001

Figure 10: The Diagnosed Prevalence Rate (per 100,000 county population) of HIV by County at Year-end 2018, Pennsylvania



Data source: Pennsylvania HIV surveillance

Legend

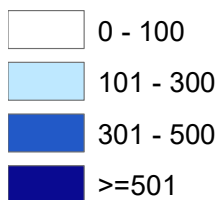


Table 11: The Number of PLWH by Year and Sex, Pennsylvania, 2014-2018

	2014	2015	2016	2017	2018	2018
Sex	No.	No.	No.	No.	No.	Percent
Female	8,772	8,890	9,419	9,569	10,107	27.5
Male	22,511	22,981	24,394	24,996	26,684	72.5
Total	31,283	31,871	33,813	34,565	36,791	100.0

Data source: Pennsylvania HIV surveillance

These estimates for PLWH in the commonwealth are based on the last known address reported in the surveillance system and this provides the closest count we can get, considering the immigration in and emigration out of Pennsylvania. The number of PLWH at year-end 2018 was 36,791. A total of 26,684 (72.5 percent) were males and 10,107 (27.5 percent) were females. The number of PLWH increased from 34,565 at year-end 2017 to 36,791 at year-end 2018 (Table 11). With advances in diagnosis, treatment options, availability of care and implementation of prevention measures, fewer people are getting infected with HIV and more people are living longer with the infection.

Table 12: The Number of PLWH by Year and Race/Ethnicity, Pennsylvania, 2014-2018

	2014	2015	2016	2017	2018	2018
Race/ethnicity	No.	No.	No.	No.	No.	Percent
Hispanic, all races	4,865	4,984	5,441	5,615	6,131	16.7
American Indian	36	38	43	45	48	0.1
Asian	227	236	269	284	314	0.9
Black/African American	15,787	16,105	16,808	17,148	18,043	49.0
Native Hawaiian	21	21	20	22	24	0.1
White	9,294	9,431	10,094	10,287	10,999	29.9
Multiple Race/unknown	1,053	1,056	1,138	1,164	1,232	3.3
Total	31,283	31,871	33,813	34,565	36,791	100.0

Data source: Pennsylvania HIV surveillance

Individuals who identified as black/African American are often disproportionately impacted by HIV. A total of 18,043 (49 percent) of PLWH at year-end 2018 were Black/African American compared to individuals who identified as white (10,999 or 29.9 percent) or Hispanic (6,131 or 16.7 percent) [Table 12].

Table 13: The Number of PLWH by Current Age at Each Year-end, Pennsylvania, 2014-2018

	2014	2015	2016	2017	2018	2018
Current age (years)	No.	No.	No.	No.	No.	Percent
0-12	78	75	70	67	60	0.2
13-14	31	26	30	24	22	0.1
15-24	1,270	1,187	1,124	1,071	1,094	3.0
25-34	4,032	4,224	4,537	4,626	5,039	13.7
35-44	5,884	5,633	5,762	5,818	6,204	16.9
45-54	10,943	10,759	10,962	10,533	10,428	28.3
55-64	7,009	7,607	8,467	9,106	10,004	27.2
≥65	2,036	2,360	2,861	3,320	3,940	10.7
Total	31,283	31,871	33,813	34,565	36,791	100.0

Data source: Pennsylvania HIV surveillance

Individual's age 45 to 64 accounted for 55.5 percent (20,432) of PLWH at year-end 2018. A total of 3,940 (10.7 percent) of PLWH were 65 years or older. More people are living longer with HIV infection with advances in pharmacotherapeutics and increased access to care.

Table 14: The Number of PLWH by Year and Transmission Category, Pennsylvania, 2014-2018

	2014	2015	2016	2017	2018	2018
Transmission category	No.	No.	No.	No.	No.	Percent
MSM	11,443	11,864	12,769	13,212	14,327	38.9
IDU	6,553	6,445	6,599	6,579	6,768	18.4
MSM and IDU	1,364	1,366	1,445	1,457	1,514	4.2
Heterosexual contact	9,629	9,815	10,431	10,497	10,948	29.8
All pediatric mode*	515	525	555	558	596	1.6
Other**	1,779	1,856	2,014	2,262	2,611	7.1
Total	31,283	31,871	33,813	34,565	36,791	100.0

Data source: Pennsylvania HIV surveillance

* All pediatric mode included perinatal exposure, risk not reported, no risk identified risk and received transfusion/transplant/clotting factor.

** Other transmission category included risk not reported, no risk identified risk and received transfusion/transplant/clotting factor in adults only.

Among PLWH, transmission through MSM still accounts for the highest number of cases. A total of 14,327 (38.9 percent) of PLWH who were alive at year-end 2018 were MSM compared to 10,948 (29.8 percent) who got infected through heterosexual contact or 6,768 (18.4 percent) PWID or 1,514 (4.2 percent) MSM and PWID (Table 14). PLWH with other mode of transmission were 2,611 (7.1 percent).

Subsection IV: Five-year Mortality Data Among People Diagnosed with HIV infection

Table 15: The Number of Deaths Among Persons with a Diagnosis of HIV Infection by Year of Death and Sex, Pennsylvania, 2014-2018

Sex	Cumulative deaths through 2013	2014	2015	2016	2017	2018*	Cumulative deaths from 2014-2018	Cumulative deaths through Dec. 31, 2018	
		No.	No.	No.	No.	No.		No.	Percent
Female	4,686	161	146	160	154	97	718	5,404	20.7
Male	18,758	457	405	414	403	272	1,951	20,709	79.3
Total	23,444	618	551	574	557	369	2,669	26,113	100

Data source: Pennsylvania HIV surveillance

* Count may be incomplete due to lag in reporting.

Among the 62,199 persons ever diagnosed with HIV infection while residing in Pennsylvania, the number of cumulative total deaths by year-end 2018 was 26,113 (42 percent). Out of the 15,302 females diagnosed in Pennsylvania at year-end 2018, a total of 5,404 (35.3 percent) experienced HIV-associated mortality. Among the 46,897 males diagnosed at year-end 2018, a total of 20,709 (44.1 percent) HIV-associated deaths have occurred. A total of 2,669 deaths were reported between 2014 and year-end 2018, with females accounting for 718 (26.9 percent) cases and males accounting for 1,951 (73.1 percent) cases. During this five-year period, the highest number of deaths occurred in year 2014. Of note is the decrease in the total number of HIV-associated deaths from 618 deaths in 2014 to 369 deaths in 2018 (Table 15).

Table 16: The Number of Deaths Among Persons with a Diagnosis of HIV by Year of Death and Race/Ethnicity, Pennsylvania, 2014-2018

	Cumulative deaths through 2013	2014	2015	2016	2017	2018*	Cumulative deaths from 2014-2018	Cumulative deaths through Dec. 31, 2018	
Race/ethnicity	No.	No.	No.	No.	No.	No.	No.	No.	Percent
Hispanic	2,488	87	57	76	78	42	340	2,828	10.8
American Indian	13	1	0	0	0	0	1	14	0.1
Asian	63	1	3	0	4	2	10	73	0.3
Black/African American	11,699	291	284	301	268	199	1,343	13,042	49.9
White	8,828	209	185	171	184	109	858	9,686	37.1
Multiple Race	353	29	22	26	23	17	117	470	1.8
Total	23,444	618	551	574	557	369	2,669	26,113	100

Data source: Pennsylvania HIV surveillance

* Count may be incomplete due to lag in reporting.

Black/African Americans had a disproportionately high HIV-associated mortality compared to other races/ethnicities. Black/African Americans accounted for 1,343 (50.3 percent) of all reported HIV-associated deaths in the period 2014 through 2018. Whites and Hispanics accounted for 858 (32.1 percent) and 340 (12.7 percent) HIV-associated mortality, respectively (Table 16).

Table 17: The Number of Deaths Among Persons with a Diagnosis of HIV by Year of Death and Age at Death, Pennsylvania, 2014-2018

Age (years)	Cumulative deaths through 2013	2014	2015	2018	2017	2018*	Cumulative deaths from 2014-2018	Cumulative deaths through Dec. 31, 2018 (Total)	
	No.	No.	No.	No.	No.	No.	No.	No.	Percent
0-12	152	0	1	1	0	41	43	195	0.7
13-14	13	0	0	0	0	0	0	13	0.0
15-24	372	4	1	4	5	3	17	389	1.5
25-34	4,606	27	30	38	27	17	139	4,745	18.2
35-44	8,115	67	57	66	49	34	273	8,388	32.1
45-54	6,273	220	175	143	152	84	774	7,047	27.0
55-64	2,835	203	189	215	189	128	924	3,759	14.4
≥65	1,078	97	98	107	135	62	499	1,577	6.0
Total	23,444	618	551	574	557	369	2,669	26,113	100

Data source: Pennsylvania HIV surveillance

* Count may be incomplete due to lag in reporting.

Individual's age 35 to 44 at the time of death contributed the most (32.1 percent) to cumulative mortality reported at year-end 2018. However, in the five-year period from 2014 through 2018, PLWH, age 55 to 64 accounted for the highest number (924/2,669 or 34.6 percent) of HIV-associated mortality (Table 17).

Table 18: The Number of Deaths Among Persons with a Diagnosis of HIV Infection by Transmission Category and Year of Death, Pennsylvania, 2012-2018

	Cumulative deaths through 2013	2014	2015	2016	2017	2018*	Cumulative deaths from 2014-2018	Cumulative deaths through Dec. 31, 2018 (Total)	
Transmission category	No.	No.	No.	No.	No.	No.	No.	No.	percent
MSM	8,930	164	153	147	158	93	715	9,645	36.9
PWID	8,113	201	182	178	162	128	851	8,964	34.3
MSM and PWID	1,417	41	27	41	28	17	154	1,571	6.0
Heterosexual contact	3,621	174	149	169	170	106	768	4,389	16.8
All pediatric mode	186	0	1	8	3	4	16	202	0.8
*Other	1,177	38	39	31	36	21	165	1,342	5.1
Total	23,444	618	551	574	557	369	2,669	26,113	100.0

Data source: Pennsylvania HIV surveillance

Dash (-) indicates a suppressed case count of less than or equal to 5.

* Other transmission category included unknown risk factor, risk not reported, no risk factor identified and blood transfusion

* Count may be incomplete due to lag in reporting.

Cumulative HIV mortality through year-end 2018 among individuals who identified as MSM accounted for 9,645 (36.9 percent) of all cases. This was followed closely by 8,964 (34.3 percent) PWID- related HIV-associated mortality and 4,389 (16.8 percent) HIV-associated mortality among heterosexuals. A total of 2,669 deaths were reported between years 2014 and 2018. During this period, the total number of deaths associated with PWID was 851 (31.9 percent), which was approximately a third of all HIV-related deaths compared to 715 (26.8 percent) among MSM and 768 (28.8 percent) among heterosexuals during this five-year period (Table 18).

Subsection V: Indicators of Risk for HIV Infection in Pennsylvania

The risk factors for HIV infection are those determinants that increase the likelihood of exposure to HIV infection. The Youth Risk Behavior Survey (YRBS) and the Pennsylvania Behavioral Risk Factor Surveillance System (BRFSS) are both proxies which are reviewed to determine these indicators of risk. This section of the epidemiologic overview will also provide information on the different risks by race and ethnicity, age and transmission category in individuals that are newly diagnosed with HIV infection. Please note that the YRBS is conducted in the spring of odd-numbered years, and the results are released the summer of the following year. For this overview, the most recent available data is the 2017 YRBS.

The YRBS is a national school-based survey conducted by CDC, states, territorial, tribal, and local governments. It obtains data from high school students from the ninth grade to the 12th grade. It monitors six types of health-risk behaviors including: behaviors that contribute to unintentional injuries and violence; sexual behaviors related to unintended pregnancy and sexually transmitted infections, including HIV infection; alcohol and other drug use; tobacco use; unhealthy dietary behaviors; and

inadequate physical activity. Three of these indicators will be examined in this profile, namely: behaviors that contribute to unintentional injuries and violence; sexual behaviors related to unintended pregnancy and sexually transmitted infections, including HIV infection; alcohol and other drug use.²¹

The BRFSS is a telephone survey that collects information on U.S residents regarding their health-related risk-behaviors, chronic health conditions and use of preventive services. In this report, a summary of self-reporting on HIV testing at year-end 2018 will be presented.

The YRBS focuses on high school students in grades nine to 12 and examines those factors that might predispose this group to HIV. Using 2017-2018 school enrollment reports from the Pennsylvania Department of Education, 538,117 students were enrolled in ninth to 12th grades educated by public local educational agencies.⁸ Based on the 2017 YBRS (most recent data), 86.5 percent of high school students in Pennsylvania were never tested for HIV despite 27.1 percent being currently sexually active.² Out of the 27.1 percent currently sexually active, 40.6 percent did not use a condom during the last sexual intercourse and 16.3 percent also used drugs or drank alcohol before last sexual intercourse.² Drug and alcohol use is a significant risk factor for HIV. Given that their use may lead to an increased participation in risky sexual behaviors that might expose an individual to HIV and other sexually transmitted diseases.³ The low level of HIV testing among this age group combined with high level of risk-taking behavior should be a source of concern to all.

Table 19: Selected Indicators of Risk for HIV Infection Among Adolescents Grade 9 to 12 in Pennsylvania, 2017

Selected YBRS sexual behaviors questions, 2017	Percent	95 percent CI*
Ever had sexual intercourse	37.6	34.6-40.8
Had sexual intercourse for the first time before age 13 years	3.7	2.8-4.9
Had sexual intercourse with 4 or more persons during their life	8.8	7.3-10.6
Were currently sexually active (had sexual intercourse with at least 1 person, during the 3 months before the survey)	27.1	24.6-29.8
Did not use a condom during last sexual intercourse (among students who were currently sexually active)	40.6	36.6-44.9
Did not use birth control pills before last sexual intercourse (to prevent pregnancy, among students who were currently sexually active)	76.4	72.5-79.8
Did not use an PWID (e.g., Mirena or ParaGard) or implant (e.g., Implanon or Nexplanon) before last sexual intercourse (to prevent pregnancy, among students who were currently sexually active)	96.6	94.9-97.8
Did not use a shot (e.g., Depo-Provera), patch (e.g., OrthoEvra), or birth control ring (e.g., NuvaRing) before last sexual intercourse (to prevent pregnancy, among students who were currently sexually active)	95.3	92.0-97.3
Did not use birth control pills; an PWID or implant or a shot or patch or birth control ring before last sexual intercourse (to prevent pregnancy, among students who were currently sexually active)	68.3	63.7-72.5
Did not use both a condom during last sexual intercourse and birth control pills; an PWID or implant or a shot or patch, or birth control ring before last sexual intercourse (to prevent pregnancy, among students who were currently sexually active)	86.8	83.5-89.5
Did not use any method to prevent pregnancy during last sexual intercourse (among students who were currently sexually active)	11.8	8.8-15.6
Drank alcohol or used drugs before last sexual intercourse (among students who were currently sexually active)	16.3	13.6-19.3
Were never tested for HIV (not counting tests done if they donated blood)	86.5	83.6-88.9

* Denotes 95% Confidence Interval. A confidence interval gives an estimated range of values which is likely to include an unknown population parameter, the estimated range being calculated from a given set of sample data.

Data source: <http://www.stat.yale.edu/Courses/1997-98/101/confint.htm>

Centers for Disease Control and Prevention. 2017 Youth Risk Behavior Survey. <https://nccd.cdc.gov/youthonline/App/Results.aspx?LID=PA>. Accessed on July 24, 2018

Table 20: The Percentage of Pennsylvania Adults Age 18-64, Ever Tested for HIV Infection, Pennsylvania, 2018

Socio-demographic characteristics	Percent	CI*
All	42	40-44
Sex		
Male	37	35-40
Female	47	44-49
Sexual orientation		
Lesbian, gay or bisexual	63	53-72
Heterosexual	41	39-43
Age group		
18-29	34	30-38
30-44	57	53-61
45-64	36	34-39
Educational status		
Less than high school	42	34-51
High school	39	36-43
Some college	45	41-48
College degree	43	40-46
Income		
Less than \$15,000	62	54-69
\$15,000-\$24,999	55	49-61
\$25,000-\$49,999	44	39-48
\$50,000-\$74,999	39	34-44
\$75,000+	40	37-43
Race/ethnicity		
White	36	33-38
Black/African American	76	70-81
Hispanic	58	49-65

* Denotes 95 percent Confidence Interval. A confidence interval gives an estimated range of values which is likely to include an unknown population parameter, the estimated range being calculated from a given set of sample data. Source: <http://www.stat.yale.edu/Courses/1997-98/101/confint.htm> Data source: Pa. Behavioral Risk Factor Surveillance System, 2017. <https://www.phaim1.health.pa.gov/EDD/WebForms/BRFSSstate.aspx>. Accessed June 19, 2019

Using the BRFSS data, an assessment of the level of HIV testing can be made. It should be noted that, in the HIV continuum of care, testing for HIV infection is an important component in estimating the number of PLWH, who have been diagnosed and are aware of their status. Table 20 describes the proportion of Pennsylvania residents age 18 to 64 who reported they have ever been tested for HIV infection. While the overall testing rate was at 42 percent, more females (47 percent) reported having ever been tested for HIV compared to males (37 percent). Likewise, 57 percent of individuals in age group 30 to 44 reported having ever been tested for HIV compared to 34 percent among age group 18 to 29 or 36 percent among age group 45 to 64. By race/ethnicity, 76 percent of Black/African

Americans reported having ever been tested for HIV infection compared to 58 percent among Hispanics or 36 percent among whites (Table 20).

In 2017, among those ages 18 to 64, 7 percent of all adults, 9 percent of males, and 6 percent of females, reported that they were either 1) treated for STDs 2) traded money or drugs for sex 3) had anal sex without a condom; or 4) had four or more sex partners in the past year. In addition, 16 percent of youths age 18 to 29 reported that they were either treated for STDs, traded money, or drugs for sex, had anal sex without a condom, or had four or more sex partners in the past year compared to 8 percent among age group 30 to 44 or 3 percent among age group 45 to 64. By race/ethnicity, 10 percent of Black/African Americans, 10 percent of Hispanics and 7 percent of whites reported that they were either treated for STDs, traded money or drugs for sex, had anal sex without a condom, or had four or more sex partners in the past year.

Newly diagnosed HIV infection by race and risk, Pennsylvania, 2014 to 2018

Approximately 52 percent of all newly diagnosed HIV cases from 2014 to 2018 were among MSM. Heterosexual contact accounted for 25.4 percent, IDU 6.6 percent, MSM and IDU 2.4 percent, and all pediatric mode, 0.4 percent.

By transmission category and race, 47.4 percent of all newly diagnosed HIV cases among MSM were black/African American compared to 14.8 percent Hispanic and 33.1 percent white. Also, among those that got infected through heterosexual contact, 60.8 percent were Black/African American, 19.7 percent were white, and 15.9 percent were Hispanic. Whites accounted for 47.3 percent of the newly diagnosed cases attributable to PWID compared to 25.5 percent among Blacks/African Americans or 25.5 percent among Hispanics.

Within each race, the statistics are different. Among Black/African Americans, MSM accounted for 48.5 percent of all newly diagnosed cases compared to 30.5 percent for heterosexual contact or 3.3 percent for PWID. Among whites, MSM accounted for 58.3 percent of all newly diagnosed cases compared to 17 percent for heterosexual contact or 10.6 percent for PWID. Among Hispanics, MSM accounted for 48.5 percent of all newly diagnosed cases compared to 25.4 percent for heterosexual contact or 10.7 percent for PWID.

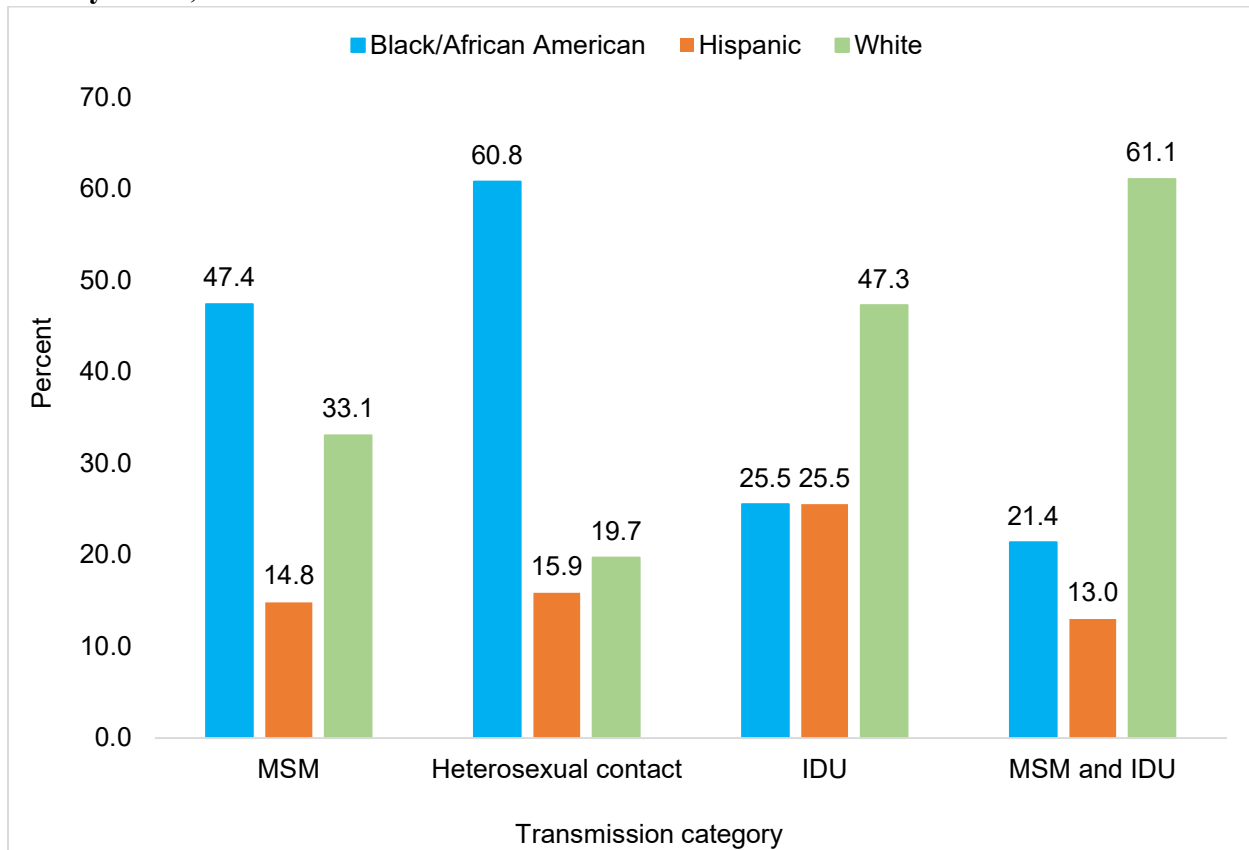
Table 21: The Number of Newly Diagnosed HIV Infection by Race and Transmission Category, Pa., 2014-2018

Transmission category	Asian	Black /African American	Hispanic	Multiple race	American Indian	White	Total	Percent
MSM	57	1,366	427	72	6	953	2,881	51.8
Heterosexual	25	858	224	20	6	278	1,411	25.4
PWID	2	94	94	3	1	174	368	6.6
MSM and PWID	1	28	17	5	0	80	131	2.4
All pediatric mode	1	13	2	1	0	4	21	0.4
Unknown	19	457	117	13	1	146	753	13.5
Total	105	2,816	881	114	14	1,635	5,565	100

Data source: Pennsylvania HIV surveillance

Dash (-) indicates a suppressed case count of less than or equal to 5.

Figure 11: Percent of Newly Diagnosed HIV Infection by Race and Transmission Category, Pennsylvania, 2014-2018

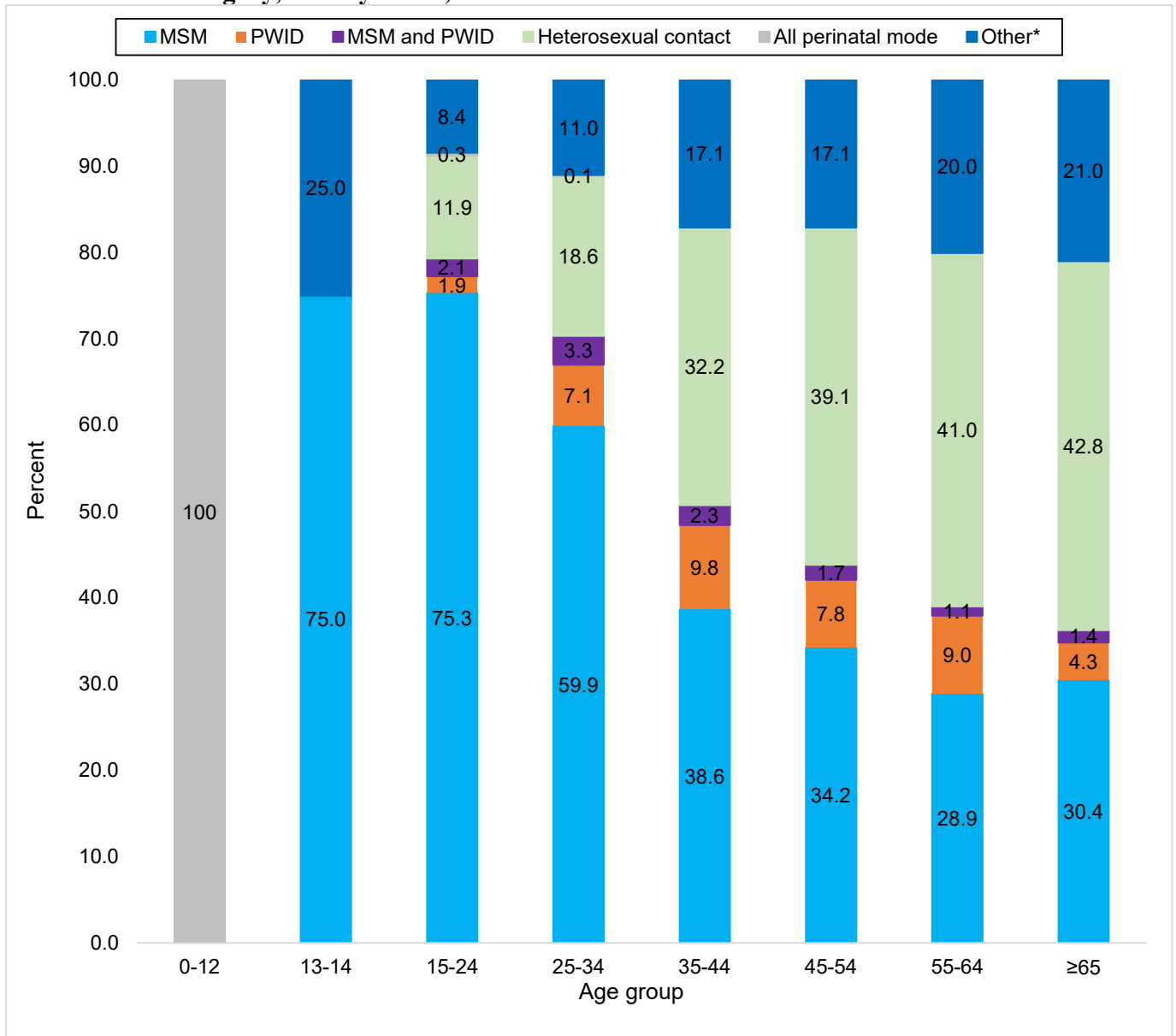


Data source: Pennsylvania HIV surveillance

Newly diagnosed HIV infection by age at diagnosis and transmission category

There are differences in the dominant transmission category in the different age groups. In age group 15-24, 75.3 percent of all newly diagnosed HIV cases were attributable to MSM and 11.9 percent were attributable to heterosexual contact. By comparison, in age group 55 to 64, 28.9 percent were attributable to MSM, while 41 percent were related to heterosexual contact. The proportion of newly diagnosed HIV cases in each age group will help tailor prevention programs that might prevent the occurrence of new cases in the Commonwealth of Pennsylvania.

Figure 12: The Percentage of Newly Diagnosed HIV Infection by Age at Diagnosis and Transmission Category, Pennsylvania, 2014-2018

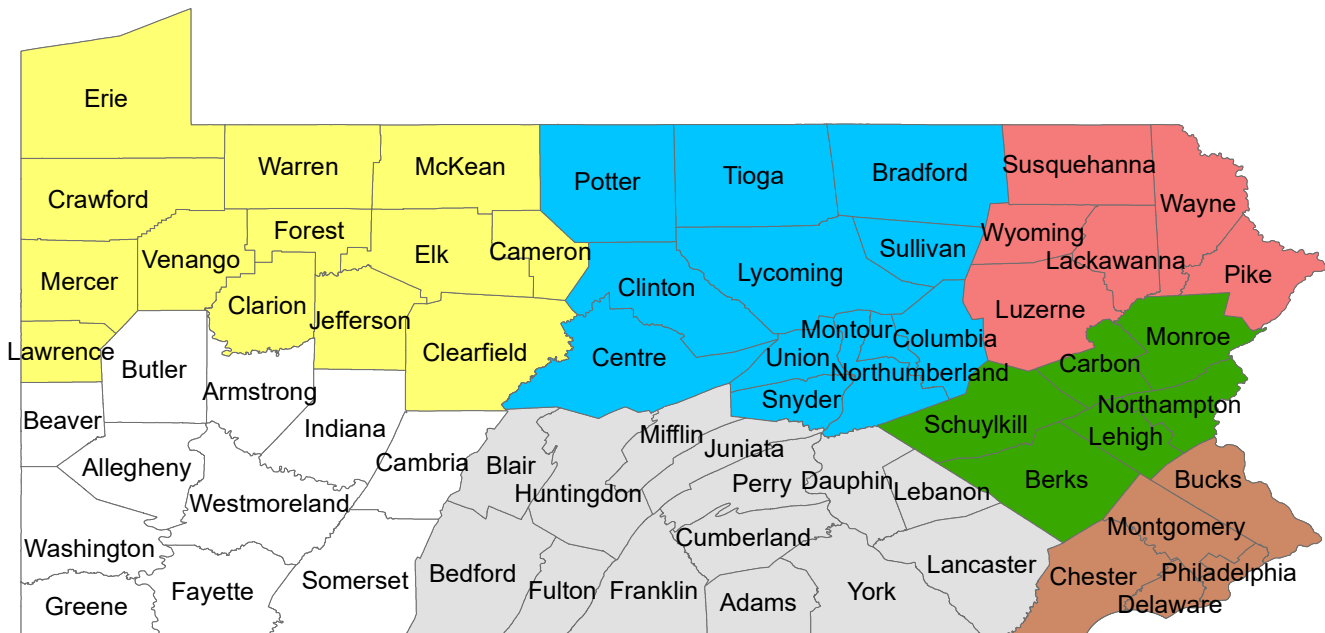


Data source: Pennsylvania HIV surveillance

* Other transmission category included unknown risk factor, risk not reported, no risk factor identified

Subsection VI: HIV Infection in the Counties and Subrecipients Regions

Figure 13: The Seven Regional HIV Care Subrecipients, Pennsylvania, 2018



Data source: Pennsylvania Department of Health, Division of HIV Disease.

Legend

- AIDSNET
- AIDS Activities Coordinating Office (AACO)
- Northcentral
- Northeast (NE) United Way
- Northwest (NW) Clarion
- Southcentral-Family Health Council (SC-FHC)
- Southwest-Jewish Healthcare Foundation (SW-JHF)

The Commonwealth of Pennsylvania has seven regional HIV care subrecipients (Figure 13) supported by the RWHP. The subrecipients role includes providing a statewide service delivery network to PLWH and their families. They are AIDS Activities Coordinating Office (AACO), AIDSNET, Northeast United Way of the Wyoming Valley (NE United Way), Northcentral District AIDS Coalition (Northcentral), Southcentral-Family Health Council of Pennsylvania (SC-FHC), Southwestern-Jewish Healthcare Foundation (SW-JHF) and Northwest Clarion (NW Clarion).

AACO encompassing Philadelphia, Chester, Delaware, Montgomery, and Bucks counties provides services in the region with the highest number of PLWH. A total of 22,805 (62 percent) of PLWH at year-end 2018 resided in the region served by AACO. Out of this, a total of 16,417 (72 percent) were males and 6,388 (28 percent) were females (Table 23).

About 13,830 (60.6 percent) of those PLWH residing in the AACO region were Black/African American, and 4,871 (21.4 percent) were white (Table 24). In addition, 13,546 (59.4 percent) were age

25 to 54. By transmission category, 8,575 (37.6 percent) were MSM; 4,371 (19.2 percent) were PWID and 7,600 (33.3 percent) were infected through heterosexual contact. The breakdown of PLWH in other regions served by the other subrecipients are highlighted in tables 22, 23, 24, 25 and 26.

Table 22: The Number of PLWH in Regions Served by RWHAP Part B Subrecipients, Pennsylvania, 2018

Regional Subrecipients	Number	Percent
AACO	22,805	62.0
AIDSNET	3,289	8.9
NE United Way	1,062	2.9
Northcentral	828	2.3
NW Clarion	818	2.2
SC-FHC	3,936	10.7
SW-JHF	4,053	11.0
Total	36,791	100.0

Data source: Pennsylvania HIV surveillance

Table 23: The Number of PLWH in Regions Served by RWHAP Part B Subrecipients by Sex, Pennsylvania, 2018

Regional Subrecipients	Female		Male		Total	
	No	Percent	No	Percent	No	Percent
AACO	6,388	17.4	16,417	44.6	22,805	62.0
AIDSNET	1,115	3.0	2,174	5.9	3,289	8.9
NE United Way	309	0.8	753	2.0	1,062	2.9
Northcentral	171	0.5	657	1.8	828	2.3
NW Clarion	203	0.6	615	1.7	818	2.2
SC-FHC	1,161	3.2	2,775	7.5	3,936	10.7
SW-JHF	760	2.1	3,293	9.0	4,053	11.0
Total	10,107	27.5	26,684	72.5	36,791	100.0

Data source: Pennsylvania HIV surveillance

Table 24: The Number of PLWH in Regions Served by RWHAP Part B Subrecipients by Race/Ethnicity, Pennsylvania, 2018

Race/ethnicity	AACO	AIDSNET	NE United Way	Northcentral	NW Clarion	SC-FHC	SW-JHF	Total	
								Number	Percent
Hispanic	3,260	1,330	209	118	130	878	206	6,131	16.7
American Indian	39	4	2	1	1	1	0	48	0.1
Asian	219	12	5	9	4	28	37	314	0.9
Black/African American	13,830	730	254	288	240	1,092	1,609	18,043	49.0
Native Hawaiian	11	1	2	0	1	3	6	24	0.1
White	4,871	1,059	546	377	405	1,762	1,979	10,999	29.9
Multiple race	574	153	44	35	37	172	216	1,231	3.3
Unknown	1	0	0	0	0	0	0	1	0.0
Total	22,805	3,289	1,062	828	818	3,936	4,053	36,791	100.0

Data source: Pennsylvania HIV surveillance

Dash (-) indicates a suppressed case count of less than or equal to 5.

Table 25: The Number of PLWH in Regions Served by RWHAP Part B Subrecipients by Age Group, Pennsylvania, 2018

Age (years)	AACO	AIDSNET	NE United Way	Northcentral	NW Clarion	SC-FHC	SW-JHF	Total	
								Number	Percent
0-12	30	6	2	2	1	16	3	60	0.2
13-14	15	2	0	2	0	3	0	22	0.1
15-24	686	77	31	35	35	103	127	1,094	3.0
25-34	3,361	339	128	73	86	437	615	5,039	13.7
35-44	3,911	485	177	135	139	655	702	6,204	16.9
45-54	6,274	1,004	326	255	256	1,229	1,084	10,428	28.3
55-64	6,018	1,017	287	239	229	1,072	1,142	10,004	27.2
≥65	2,510	359	111	87	72	421	380	3,940	10.7
Total	22,805	3,289	1,062	828	818	3,936	4,053	36,791	100.0

Data source: Pennsylvania HIV surveillance

Dash (-) indicates a suppressed case count of less than or equal to 5.

Table 26: The Number of PLWH in Regions Served by RWHAP Part B Subrecipients by Transmission Category, Pennsylvania, 2018

Transmission category	AACO	AIDSNET	NE United Way	North Central	NW Clarion	SC-FHC	SW-JHF	Total	
								Number	Percent
MSM	8,575	938	373	288	298	1,493	2,362	14,327	38.9
PWID	4,371	759	187	207	153	746	345	6,768	18.4
MSM and PWID	926	123	53	61	43	149	186	1,541	4.2
Heterosexual contact	7,600	914	316	148	210	1,025	735	10,948	29.8
All pediatric mode	349	72	29	23	17	74	32	596	1.6
Other*	984	483	104	101	97	449	393	2,611	7.1
Total	22,805	3,289	1,062	828	818	3,936	4,053	36,791	100.0

* Other transmission category included unknown risk factor, no risk reported, no identified risk factor and received blood transfusion/transplant.

Data source: Pennsylvania HIV surveillance

The number of PLWH and diagnosed prevalence rate by county, Pennsylvania at year-end 2018, the number of PLWH and the diagnosed prevalence rate of HIV infection in Pennsylvania was 36,791 and 287 per 100,000 population, respectively. However, some counties had rates that were higher than the overall state rate. Such counties were: Dauphin, Delaware, Lehigh, Philadelphia, and Union. Information on the PLWH/diagnosed prevalence rate of HIV infection at the county level will assist in making informed decisions regarding HIV prevention and care resource allocation.

Table 27: The Number of PLWH at Year-end 2018 and Diagnosed Prevalence Rate by County, Pennsylvania

County	PLWH at year-end 2018		Estimated diagnosed prevalence rate per 100,000 county population
	Number	Percent	
Adams	111	0.3	108
Allegheny	3,024	8.2	248
Armstrong	34	0.1	52
Beaver	148	0.4	90
Bedford	34	0.1	71
Berks	1,063	2.9	253
Blair	107	0.3	87
Bradford	46	0.1	76
Bucks	887	2.4	141
Butler	109	0.3	58
Cambria	136	0.4	103
Cameron	1	0.0	22
Carbon	78	0.2	121
Centre	153	0.4	94

County	PLWH at year-end 2018		Estimated diagnosed prevalence rate per 100,000 county population
	Number	Percent	
Chester	573	1.6	110
Clarion	19	0.1	49
Clearfield	108	0.3	136
Clinton	23	0.1	59
Columbia	67	0.2	102
Crawford	63	0.2	74
Cumberland	319	0.9	127
Dauphin	1,014	2.8	366
Delaware	1,757	4.8	311
Elk	6	0.0	20
Erie	360	1.0	132
Fayette	95	0.3	73
Forest	15	0.0	206
Franklin	170	0.5	110
Fulton	9	0.0	62
Greene	26	0.1	71
Huntingdon	61	0.2	135
Indiana	47	0.1	56
Jefferson	8	0.0	18
Juniata	14	0.0	57
Lackawanna	322	0.9	153
Lancaster	858	2.3	158
Lawrence	72	0.2	84
Lebanon	184	0.5	130
Lehigh	1,134	3.1	308
Luzerne	457	1.2	144
Lycoming	187	0.5	165
McKean	25	0.1	61
Mercer	100	0.3	90
Mifflin	20	0.1	43
Monroe	362	1.0	214
Montgomery	1,148	3.1	139
Montour	14	0.0	77
Northampton	474	1.3	156
Northumberland	101	0.3	111
Perry	32	0.1	69
Philadelphia	18,440	50.1	1,164
Pike	133	0.4	238

County	PLWH at year-end 2018		Estimated diagnosed prevalence rate per 100,000 county population
	Number	Percent	
Potter	4	0.0	24
Schuylkill	178	0.5	125
Snyder	27	0.1	67
Somerset	81	0.2	110
Sullivan	5	0.0	82
Susquehanna	30	0.1	74
Tioga	19	0.1	47
Union	182	0.5	406
Venango	24	0.1	47
Warren	17	0.0	43
Washington	143	0.4	69
Wayne	106	0.3	207
Westmoreland	210	0.6	60
Wyoming	14	0.0	52
York	1,003	2.7	224
Pa. total	36,791	100.0	287

Data sources: Pennsylvania HIV surveillance

Pennsylvania Dept. of Health Enterprise Data Dissemination Informatics exchange (EDDIE). Population by county. Accessed May15, 2018. <https://www.phaim1.health.pa.gov/EDD/WebForms/PopCntySt.aspx> . Data obtained from

U.S. Bureau of Census for 1990, 2000, and 2010. Pennsylvania State Data Center at Penn State Harrisburg for non-census years.

*County population data used was for year 2017

Section 3: HIV care continuum

The HIV care continuum is a series of steps of medical care from the time an individual is diagnosed with HIV up to the successful treatment of HIV infection with medications which results in viral suppression or undetectable viral load. The whole goal of the HIV care continuum is to identify the number of PLWH who are engaged at each stage of the continuum. This helps identify any gaps in medical care that can be addressed through improved medical service delivery and policy changes that will influence how services are delivered.

The HIV care continuum consists of several steps which are:

- Diagnosis of HIV infection;
- Linkage to care;
- Receipt of care;
- Retention in care; and
- Viral suppression.

This section of the epidemiology overview will not be updated with information on receipt of care, retention in care and viral suppression as current Pennsylvania HIV regulations do not permit reporting of all CD4 T-lymphocyte test and viral load test results. Nevertheless, this overview is able to report on linkage to care. The national HIV/AIDS strategy (NHAS) for the United States, updated to 2020 monitors 10 indicators to measure progress towards achieving goals of the strategy. Indicator 4 of the

strategy is: Increase the percentage of newly diagnosed persons linked to HIV medical care within one month of diagnosis to at least 85 percent, from the baseline of 70.2 percent. More information on the NHAS goals and indicators can be found at <https://files.hiv.gov/s3fs-public/nhas-indicators-supplement-dec-2016.pdf>

Definitions

Linked to care: The number of people diagnosed with HIV in calendar year 2018, who had one or more viral load (VL) test or CD4 test and are linked within one month of diagnosis. The data obtained in this step is not comparable to other steps of the continuum because the denominator is different and restricted to the number of cases diagnosed in a stated given calendar year.

Calculation of indicator:

Numerator: Persons aged 13 years and older with HIV diagnosed during calendar year 2018 and who had one or more VL or CD4 test within one month of HIV diagnosis.

Denominator: Persons aged 13 years and older with HIV infection diagnosed during calendar year 2018.

A total of 966 people were newly diagnosed with HIV infection in 2018. However, 965 were age 13 and older and 772 (80 percent) were linked to care within one month of HIV diagnosis. Pennsylvania is on track to achieving the goal of 85 percent by 2020. Table 28 provides more information on linkage to care in 2018.

Table 28: The Number of People Diagnosed with HIV who Were Linked to Care Within 30 Days of Diagnosis, Pennsylvania, 2018

Characteristics	The number of newly diagnosed HIV infection	The number linked within 30 days after HIV diagnosis	Percent linked
Total	965	772	80.0
Sex			
Female	210	172	82.0
Male	755	600	79.5
Race/ethnicity			
Asian	21	21	100.0
Black/African American	457	366	80.1
Hispanic	175	139	79.4
Multiple race	19	13	68.4
American Indian/Alaska Native	1	1	100
White	292	232	79.5
Transmission category			
Heterosexual contact	128	100	78.1
People who inject drugs (PWID)	96	68	70.8
Men who have sex with men (MSM)	461	377	81.8
MSM&PWID	25	18	72.0
All pediatric mode*	2	2	100
Unknown	253	207	81.8
Age group			
13-14	0	0	0
15-24	200	171	85.5
25-34	344	260	75.6
35-44	169	129	76.3
45-54	133	112	84.2
55-64	93	79	84.9
≥65	26	21	80.8

All pediatric mode* includes perinatal exposure
 Data source: Pennsylvania HIV surveillance

B. HIV Care Continuum

This subsection outlines the HIV Care Continuum developed for Pennsylvania as a part of the Statewide Coordinated Statement of Need (SCSN)/Needs Assessment process.

1. HIV Care Continuum

This section of the epidemiologic overview provides information about the continuum of care experience for Pennsylvanians who are infected with HIV. The prevalence-based HIV care continuum, which describes the number of people who are at each step of the continuum as a percentage of the total number of people living with HIV, was used for this analysis. HIV diagnosed/prevalence includes both people whose infection has been diagnosed and those people who are HIV infected but unaware of their positive HIV status.

The stages of the HIV treatment cascade:

1. Infected with HIV
2. Diagnosed with HIV Infection
3. Linkage to Care
4. Retention in Care
5. Prescribed ART
6. Viral Suppression

The achievement of viral suppression in the treatment cascade has taken on even greater importance with the advent of U=U. The CDC has confirmed the medical consensus that a person who has undetectable levels of viral load is unable to transmit HIV (i.e. untransmittable), which has led to the common summation of this fact as U=U; undetectable equals untransmittable.

Data Source: The data used came from the Enhanced HIV/AIDS Reporting System (eHARS). Pennsylvania's HIV Surveillance Program uses eHARS to collect, manage, analyze, and report HIV/AIDS case's surveillance data to CDC.

Additional data were received from Special Pharmaceutical Benefits Program (SPBP) and CAREWare datasets. SPBP is Pennsylvania's equivalent of an AIDS Drug Assistance Program

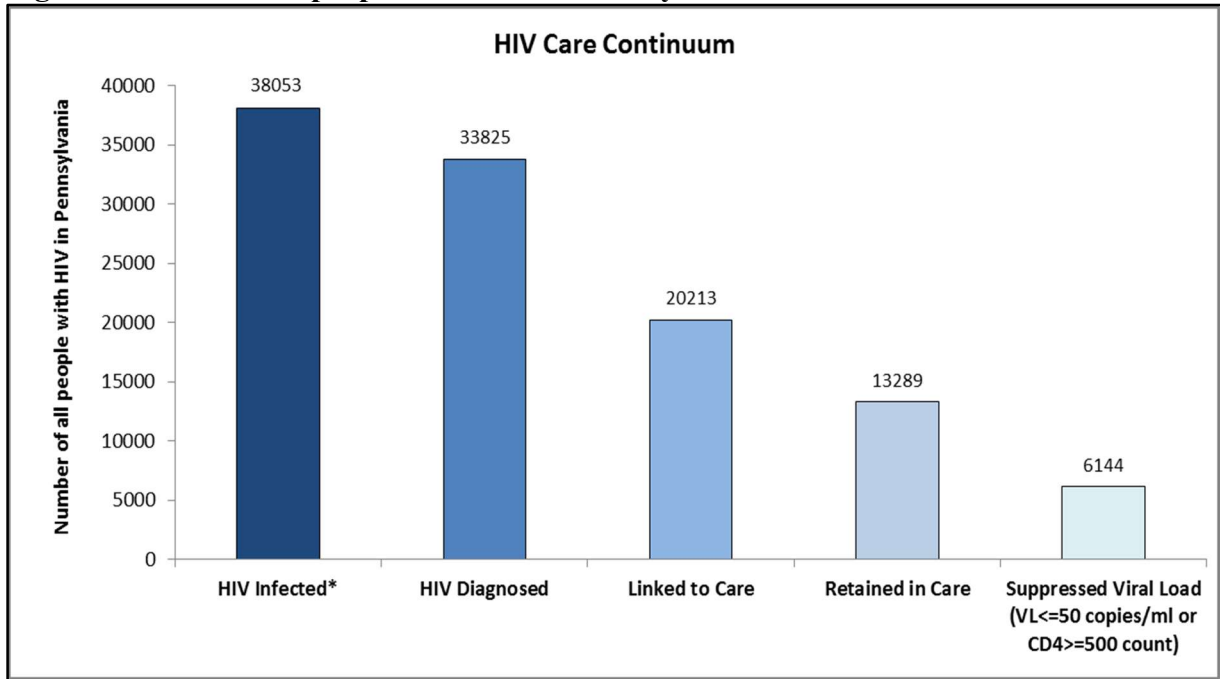
(ADAP). SPBP provides pharmaceutical assistance and specific lab services to low- and moderate-income population living with HIV/AIDS who are not eligible for pharmacy services under the Medical Assistance Program. CAREWare has data for HIV clinical and supportive care.

Method: The Statistical Analysis Software (SAS) version 9.4 was used to create the model for HIV treatment cascade. Following methods were used to create five bars in the graph:

1. HIV Infected (Prevalence): First, we have identified all the HIV diagnosed cases through December 31, 2014 who were alive by December 31, 2015 in Pennsylvania. We estimated the number for HIV infected individuals who were unaware of their positive HIV status. According to the CDC, one in eight infected individuals is unaware of their HIV status. Thus, the final prevalence for HIV was calculated by adding the number of unaware populations with the total HIV diagnosed cases as of December 31, 2014.
2. HIV Diagnosed: We have identified all the HIV diagnosed cases through December 31, 2014 who were alive by December 31, 2015 and residing in Pennsylvania using SAS. It was calculated as part of the prevalence estimate above.
3. Linked to Care: In this section, we measured the percentage of people diagnosed with HIV who had one or more of the following in 2015 (also considered January 2016, in-case there was a reporting delay):
 - a) Viral Load Test (VL)
 - b) CD4 Test
 - c) Treatment Information (SPBP and CAREWare)
4. Retained in Care: We looked for evidence of at least two lab tests at two different time periods (30 days apart). Specifically assessed for CD4 and/or VL tests.
5. Suppressed VL: Number of diagnosed persons with VL suppression. We assessed evidence of VL ≤ 50 copies and/or CD4 ≥ 500 count.

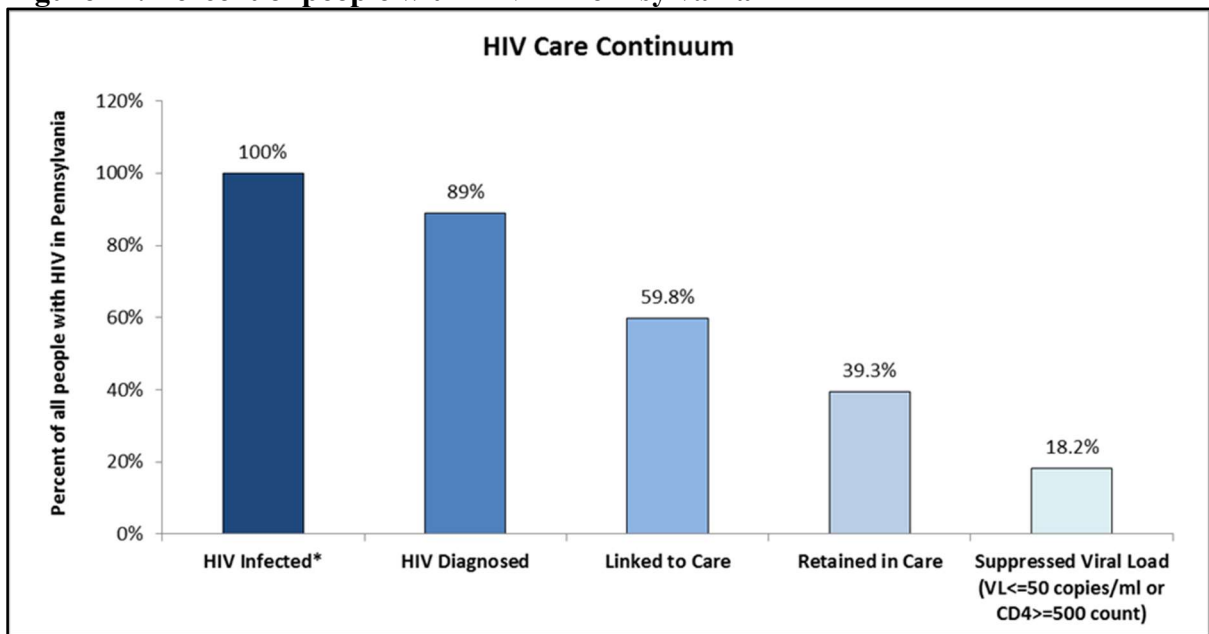
Result: A total of 33,825 people were diagnosed with HIV infection through December 31, 2014 and were still alive by December 31, 2015 in Pennsylvania. Approximately 4,228 people (national estimate one in eight infected individuals) were HIV infected but did not know or unaware of their positive HIV status in Pennsylvania. The total estimated prevalence of HIV infection was 38,053 individuals in Pennsylvania (Figure 13 and 14).

Figure 13: Number of people with HIV in Pennsylvania



* Includes those people who were unaware of their HIV infection.

Figure 14: Percent of people with HIV in Pennsylvania



* Includes those people who were unaware of their HIV infection.

There are obvious limitations in our HIV Care Continuum Cascade. We could not create one bar (Prescribed Antiretroviral Therapy (ART) in the graph for the HIV Treatment Cascade. Data collection on ART is very limited and presentation would not be representative.

Current Pennsylvania HIV regulation permits reporting of only detectable VL tests and CD4 results that are below 200 cells/ul or 14 percent. This makes it less likely to receive CD4 and VL test results outside these limits. The excluded test results are the very essential test results necessary for assessing HIV Care Continuum. In addition, Medicaid data could have helped to provide additional information but was not available to us to use for this analysis.

In summary, the chart provided above demonstrates a minimum estimate of the HIV Care Continuum for PLWH in Pennsylvania.

2. Engagement Disparities

Due to the data limitations identified above, it is difficult to fully describe disparities in engagement among key populations along the continuum of care. The examination of the state HIV testing, and epidemiological data indicates that despite efforts to implement routine and targeted testing and other prevention activities, more work must be done to actively engage the most disproportionately affected populations. For example, national data and statewide literature reviews conducted by the HPG indicated that transgender individuals experience disproportionate

health disparities and barriers likely affecting all points on the care continuum, yet data collection limitations currently prevent the state from accurately gauging this need.

In consultation the Pennsylvania Office of Health Equity and the state's epidemiology, the HPG has identified a need to continue to advance greater racial equity throughout the HIV Cascade. The systemic impacts of racial inequities and ongoing discrimination throughout both social settings and within prevention and healthcare settings, and the impacts and outcomes of which are reflected in the epidemiological data above, perpetuates the disproportionate impact and burden that black and Latinx communities continue to experience in relation to HIV. Recognizing the need to further engage young black and Latino men MSM has led to specific activities in this Plan to reduce new infections and identify more PLWH who are not aware of their status within the black community specifically. These goals will be pursued by focusing on targeted testing and partner services as well as expanding demonstration projects. The DOH has plans to replicate interventions that have been proven to be successful in other areas within the jurisdiction to affect the HIV Care Continuum relative to this population.

Unique disparities exist for PWID (People Who Inject Drugs) in multiple areas of the Care Continuum (e.g., unique difficulties linking to care, remaining in care, knowing their status, etc.). Future efforts to engage are contingent on the availability of funds, the approval of the determination of need that has been submitted to the CDC, and the authorization for legal operation of syringe service programs statewide. Currently, the Pennsylvania Expanded HIV Testing Initiative (PEHTI) is working with drug and alcohol (DA) treatment providers to build those organizations' capacities to do routine HIV testing. PEHTI also provides instruction to these groups around leveraging private insurance to cover the cost of expanded testing or testing in non-traditional settings. In some cases, they also provide testing support for uninsured or underinsured communities, including the possibility of working with or supporting detox centers within Pennsylvania.

3. Planning

The HIV Care Continuum is heavily incorporated into the planning and prioritizing processes of the HPG and its recommendations to the Division. Specifically, the HPG has influenced the state's plan to improve engagement and outcomes along the Continuum, and the HPG has relied heavily on the structure of the Continuum (diagnosed, linked to care, retained in care, prescribed antiretroviral treatment (ART), and virally suppressed) in its rigorous Priority Setting and

Resource Allocation (PSRA) workgroup activities. The Continuum planning and PSRA processes are described in detail here to demonstrate the HPG's success using the HIV Care Continuum in planning and because these two reports represent the template that the HPG is committed to using and improving upon in 2017 – 2021.

Improving Engagement and Outcomes

In looking at the stages along the continuum of care, the following is information on how the Department is planning to improve engagement and outcomes at each stage of the HIV Care Continuum:

- **Infected with HIV:**

The department has demonstrated its commitment to a High Impact Prevention (HIP) approach by setting policy guidance on the types of strategies and activities that are eligible for state and federal funding and strengthening the language in written agreements with providers to achieve the maximum impact in prevention efforts for those at greatest risk of HIV infection. In Pennsylvania, the HIP approach includes a combination of routine HIV testing in clinical settings, and HIV testing specifically intended to reach high risk populations in non-clinical settings. The department also employs Partner Services (PS) as a strategy to reduce new infections by identifying HIV positive and high-risk negative individuals and making appropriate referrals/linkages (i.e. medical care, Pre-Exposure Prophylaxis (PrEP), other evidence-based interventions or support services). Coupled with those efforts, we require condom distribution to be incorporated into all HIP activities. We are also committed to implementing and replicating innovative interventions to reach high risk and disproportionately impacted populations where feasible to reduce HIV/STD incidence.

- **Diagnosed with HIV Infection:**

HIV testing providers and sites are selected utilizing epidemiological information, and often in collaboration with other program areas, such as STD. The type of strategy (i.e. conventional/laboratory-based, or point of care/rapid) utilized in each site is selected based on a number of criteria such as cost or the likelihood of the client returning for test results in order to increase the potential for success in identifying and making individuals aware of their HIV

infection. The Department will continue to expand the use of more advanced testing technology in order to identify HIV infections as early as possible, including acute infections. Named partners of PLWH are at extremely high risk for infection so early notification and testing through PS is a critical strategy to improve engagement and outcomes for this stage of the continuum as well. The Department will continue to monitor and evaluate its testing and PS activities on a regular basis to ensure that we are identifying new HIV infections through our efforts and linking clients to appropriate services along the continuum in a timely manner.

- Linkage to Care:

There are several efforts currently being utilized to engage newly identified HIV positive individuals in care. All seven lead agencies (regions) are required to fund ARTAS. ARTAS is a proven effective intervention to link recently diagnosed persons with HIV to medical care soon after receiving their positive test. All department contracted HIV testing providers are required through their written agreements to coordinate and collaborate with other providers in the region to ensure successful referral and linkage to care and other support services.

- Retention in Care:

The provision of RW Part B funded core and support services continue to assist clients in retention in care. Medical case management, medical transportation, housing support and emergency financial assistance are just a few examples of support provided to clients to maintain stability for retention in care.

The department will also continue to push for more data sharing agreements within the state agencies, such as accessing Medicaid data for HIV services provided. The use of the Ryan White Part B and limited lab reporting hampers the department's ability to accurately report on the known diagnosed individuals and services received that are funded by private and public insurance programs.

- Prescribed ART:

In order to ensure access to medications the department will undertake a number of activities to minimize the burden on clients to access and or maintain their medication treatment regimens. One such action is through the provision of insurance premium assistance for SPBP

clients who are uninsured. Another means of supporting access and adherence to medications will be through the use of SPBP rebates to provide housing assistance for clients who are in unstable living situations. The SPBP will work with the claims and enrollment processing vendor to streamline the application process and logistics involved with applying/reapplying for SPBP benefits. Additionally, supporting health literacy and peer navigation activities will enhance the ability of clients to not only access but optimize the medication treatments necessary to achieve and maintain a suppressed viral load.

- **Viral Suppression:**

As mentioned, the limitations of data reporting hampers the department's ability to determine the true numbers of individuals that are virally suppressed.

Priority Setting and Resource Allocation Planning Process

The PSRA workgroup created the HPG template for Pennsylvania's priority setting and resource allocation recommendations for Ryan White funding, and then implemented that planning template in 2014. This process will be outlined here as the template for Pennsylvania's priority setting and resource allocation process for 2017 through 2021. For these activities, per Ryan White funding specifications some components of this process included the Philadelphia EMA.

In early 2014 the HPG PSRA subcommittee began planning for the yearlong process of setting priorities and recommending funding for the jurisdiction. The group reviewed several procedural methodologies and arranged an extensive year-long fact-finding process for the full HPG. This consisted of division section reports, epi data, HRSA guidance, and service data presentations from state staff related to the priorities and services offered in the state. At the same time, the group developed a standardized presentation – including the format, data, questions, and slides – summarizing this wealth of information (based around the HIV Care Continuum and utilized the most up-to-date epidemiological data available from the division to map stages of the Continuum throughout Pennsylvania) that consumers around Pennsylvania would all see to give them a clear understanding of what priority setting is and what the state of HIV infection and services in their region were.

The PSRA approved a hybrid methodological approach to gather stakeholder input, developed, and implemented by support staff at the University of Pittsburgh, which combined aspects of structured focus group interviews with a less formal town hall style setting. This maximized utility and participant comfort level and fit into the time available. All presentations included an overview and explanation of the priority setting and resource allocation process, a list of currently funded services in their region (updated by HPG members from that region), the National HIV Care Continuum and its specific incidences in Pennsylvania; and regional epidemiological data (from the division and the Pennsylvania Department of Health Bureau of Epidemiology). HPG members volunteered their organizations or worked with other regional contacts to serve as hosts for these sessions, and each host was primarily responsible for advertising among consumers in their area. HPCP specialists from the University of Pittsburgh provided all other supplies as well as an equitable experience and discussion for data collection. A total of eight sites were selected to maximize geographic and target population distribution within time and resource constraints. These locations were Philadelphia, Wilkes-Barre, Bethlehem, York, Pittsburgh, Johnstown, DuBois, and Williamsport. Sessions were conducted between mid-July and mid-September 2014. Consumers in these locations combined this data-driven presentation by the staff and HPG members with their own knowledge and experiences to create recommendations for statewide priority setting. A total of 101 consumers participated in providing input for statewide priority setting (96 percent providing usable data), and demographic information and survey feedback was also collected and presented to both the HPG and state regarding the efficacy of the process. Participants reported very high levels of satisfaction with the process and the opportunity to participate and have their opinions heard by the state. Post-process evaluation was also conducted by the staff to assess areas for improvement and as well as possible alternative, low-cost methods of gathering similar information in the future.

At the end of planning year 2014, these responses were compiled and presented by University of Pittsburgh staff to create a composite picture of consumers' impressions of priorities, needs, and gaps in care based on the data they had been presented from the Continuum. These results were made available to each of the regions, the full HPG membership, and to all interested consumers and stakeholders through the state's HIV Planning website, www.stophiv.org. The statewide data presentation was then also presented to the full HPG, who then incorporated all this information and, through a rigorous process of incremental approval,

enumerated the ranks of all 27 Ryan White priorities to be implemented statewide (excluding the Philadelphia EMA). This format, which the HPG developed over the course of the year, included voting on the priorities through an anonymous wireless electronic voting system (handheld clickers administered and recorded via computer by HPCP) in sets of 10. Only voting members could participate, though the meeting was open to anyone who wished to observe. Comments could also be written by anyone present and passed to voting members for consideration, as well.

First, the members voted on whether they thought each priority was a high (top 10) priority, middle priority (11-20) or lower priority (21-29). Once the voting of all priorities established the top 10, voting members proceeded to discuss and rank each of these 10 individually, using specific points from the past years' worth of HPG data presentations, the continuum, and the stakeholder survey and feedback. Once a ranking was established for these 10, it was voted on, approved, and set aside. The next 10 were then evaluated in a similar manner, and then the final set. Finally, the full list was voted on for full, final approval. Using this ranking, Ryan White resource allocation recommendations (including the Philadelphia EMA) followed a similar process the next day. The HPG members approved the priority rankings unanimously with no abstentions and the resource allocation recommendations with 98 percent in favor. These rankings and the stakeholder feedback report are available in Appendix A.

C. Financial and Human Resources Inventory

1. Jurisdictional HIV Resources Inventory

Jurisdictional HIV Resources Table

Funding Source	Funding Amount	Funded Service Provider Agencies	Services Delivered	HIV Continuum Steps Impacted
State appropriation	\$ 17,436,000	Pennsylvania Department of Health, subcontracted agencies, and community-based providers	HIV Prevention and Care Services	Diagnosed, linked to care, retained in care, prescribed ART, virally suppressed
HRSA	\$ 23,116,620	Ryan White Part A Philadelphia EMA; Philadelphia Planning Council; subcontracted agencies, and community-based providers	Outpatient Ambulatory; Oral Health Care; Mental Health; Medical Nutrition Therapy; Medical Case Management; Outpatient Substance Abuse; Emergency Financial; Food Bank/Home-delivered meals; Housing; Legal; and Medical Transportation Services	Linked to care, retained in care, prescribed ART, virally suppressed
HRSA	\$ 1,981,425	Part A MAI (Minority AIDS Initiative) City of Philadelphia	Outpatient Ambulatory Health; and Medical Case Management services.	Linked to care, retained in care, prescribed ART, virally suppressed
HRSA	\$ 39,015,039	Ryan White Part B Pennsylvania Department of Health, 7 regional sub-recipients and community-based providers	ADAP Medications; Health Insurance for Medications; Insurance Cost Sharing Assistance; Outpatient Ambulatory; Oral Health Care; Home Health care; Hospice; Mental Health ; Medical Nutrition Therapy; Medical Case Management; Outpatient Substance Abuse; Emergency Financial; Food Bank/Home-delivered meals; Health Education/Risk Reduction;	Linked to care, retained in care, prescribed ART, virally suppressed

			Housing; Legal; and Medical Transportation; Psychosocial Support; and Respite Services	
Funding Source	Funding Amount	Funded Service Provider Agencies	Services Delivered	HIV Continuum Steps Impacted
HRSA	\$ 11,244,605	Ryan White Part C AIDS Care Group; Albert Einstein Medical Center; Allegheny-Singer Research Institute. Clarion University; Community Health Net; Drexel University; Esperanza Health Center; Family First Health Corp.; Greater Philadelphia Health Action; Hamilton Health Center; Kensington Hospital; Keystone Rural Health Center; Lancaster General Hospital; Lehigh Valley Hospital; Pennsylvania State University; Philadelphia	Outpatient Ambulatory Health Services; HIV Counseling and testing; Outpatient Ambulatory; Oral Health Care; Home Health care; Hospice; Mental Health ; Medical Nutrition Therapy; Medication Adherence; Medical Case Management; Outpatient Substance Abuse; Non-Medical Case Management; Emergency Financial; Food Bank/Home-delivered meals; Health Education/Risk Reduction; Housing; Legal; and Medical Transportation; Psychosocial Support; Respite and Outreach Services	Diagnosed, linked to care, retained in care, prescribed ART, virally suppressed

		Fight; Philadelphia Public Health Department; Pinnacle Health Medical Services; Reading Hospital and Medical Center; Scranton Temple Residency Program, Wright Center; St. Luke's University Health Network; University of Pittsburgh Medical Center, Presbyterian Shadyside		
Funding Source	Funding Amount	Funded Service Provider Agencies	Services Delivered	HIV Continuum Steps Impacted
HRSA	\$ 2,677,278	Ryan White Part D Family Planning Council Southeastern Pennsylvania – Access Matters; Mazzoni Center;	Coordinated HIV Services and Access to Research for Women, Infants, Children, and Youth	Retained in care
HRSA	\$ 144,262	Ryan White Part F: Health Federation of Philadelphia; Temple University;	Oral health services for persons living with HIV.	linked to care, retained in care, prescribed ART, virally suppressed

		Wellspan Health		
Funding Source	Funding Amount	Funded Service Provider Agencies	Services Delivered	HIV Continuum Steps Impacted
HRSA	\$ 464,580 Pennsylvania	Mid Atlantic AETC	Training and technical assistance.	Retained in care, virally suppressed
HUD/HOPWA	\$ 10,576,044	Pennsylvania Department of Health, Philadelphia and Pittsburgh	Housing support for eligible individuals living with HIV.	Retained in care
CDC	\$ 18,962,796	Pennsylvania Department of Health, Philadelphia, subcontracted agencies, and community-based providers directly funded by CDC	Comprehensive HIV Prevention Program activities, including: HIV testing (including expanded HIV testing); prevention with positives (including partner services and linkage to care); condom distribution; policy initiatives; social marketing/media/mobilization; evidence-based prevention interventions; PrEP-related activities {not medication}; monitoring, evaluation, and quality assurance; jurisdictional HIV prevention planning; capacity building and technical assistance; HIV surveillance; demonstration projects.	Diagnosed, linked to care, retained in care

2. HIV Workforce Capacity

The Division of HIV Disease works closely with the MidAtlantic AIDS Education and Training Center (MAAETC) for workforce capacity assessment and training. For the MAAETC’s complete HIV Workforce Capacity report, please see Appendix B.

3. Funding Sources and Continuum Continuity

CDC HIV prevention funds are supplemented by state funds in order to implement a Comprehensive High Impact HIV Prevention Program within the jurisdiction. The focus areas of the program are to implement the core components (as defined by CDC) of HIV testing, prevention with positives, condom distribution, and policy initiatives. All testing activities have built-in protocols to ensure linkage to care and partner services.

State appropriated funding for HIV services are also utilized to supplement HRSA Ryan White Part B services and housing services funded by the United States Office of Housing Development, Housing Opportunities for Persons with AIDS (HOPWA). CDC and state funds are combined with Ryan White Part B funds to support Integrated HIV Planning which serves to assist the DOH in developing seamless service delivery across the entire continuum.

This combination of state and federal funding also supports capacity building for providers, social marketing/media/mobilization efforts; evidence-based behavioral interventions and strategies for both HIV positive and negative individuals, some of which are designed to support linkage to care, navigation, and retention in care; and finally, this funding supports monitoring and evaluation to measure the effectiveness of our program.

Ryan White Parts A, B and C funding provides patient services for specified service needs for eligible patients/clients that are both active clinic patients and those who are also receiving medical case management services. The complete listing of services provided by these funds is included in the funding chart in section I. C. 1. Identified needs of clients presenting for services are usually managed by the medical case managers assigned to each client. For example, a patient who is currently only receiving clinic services suddenly requires help with a utility payment, that patient would be assigned a case manager who would then seek to certify the client for Ryan White funded services at the same time of the medical visit. This would be the medical home model. Several funded agencies also utilize 340 B program income to fund other client service needs that fall outside of the usual budgeted line-item services.

The Ryan White Part B funds earmarked for ADAP services are utilized for the medications and insurance programs managed by the SPBP. As a condition of the award, the SPBP is also a 340B entity which ultimately provides a reduction in the overall cost of the medications provided via the program. The rebates collected on medications purchased with federal funds are used as a refund of expenditures for medications. HRSA would permit these

funds to be utilized to support any Ryan White core services providing it doesn't have an adverse effect on access to medications. The state portion of rebates is utilized to support integrated HIV initiatives by the Division of HIV Disease including new approaches to existing activities. The use of state and federal rebates will also pave the way for collaboration with ancillary programs to provide a more holistic support for clients. Additional supports for Hepatitis C, PrEP, peer navigation, mental health services, health literacy and additional supports for the AIDS Minority Initiative (MAI) are all currently either identified or being considered for initiation as funding and collaboration permits.

Integrating funds and services at agencies that receive HIV funds from multiple sources creates the opportunity for constructing budgets in a manner which ultimately streamlines patient/client access to care and non-medical support services, which in turn, improves individual health outcomes while reducing resource redundancy and overall healthcare cost. This medical home model provides documented improvements in service coordination, met needs, and data quality.

4. Additional Resources Needed

Increased CDC funding is needed to support initiatives such as Hepatitis C and other co-infection prevention efforts as increased needs continue to be identified in the jurisdiction. System enhancements could be in the form of:

- Transparent sharing of federal funding applications and awards;
- implementation plans and allocations reports across all agencies funded within the state which would achieve open communication to assure true integration of both services;
- funds to enhance services available to eligible individuals across the Commonwealth.

Additionally, the SPBP can generate rebates from drug purchases. The state portion of the rebates can be utilized to support an array of Ryan White HIV services in addition to providing medications. Currently, the program has initiated collaborations with the division's prevention section for: the future provision of PrEP services; replicating Project SILK in other areas across the state; collaborating with the Care section for possible assistance with medical case management, emergency housing, and insurance premium payments. The SPBP has also identified – in consultation with the work of the HPG –

Hepatitis C drugs, Health Literacy, Peer Navigators, and Mental Health services as areas to expand or initiate future services.

D. Assessing Needs, Gaps, and Barriers

1. Needs Assessment Process

This section describes the processes used for a collaborative and coordinated needs assessment that supports greater alignment and access to HIV prevention, care, and treatment services throughout the commonwealth. The goals of this need's assessment process are to: (1) identify and describe HIV prevention and care services that currently exist and those that are needed; (2) enhance the quality of services for persons at higher risk for HIV and PLWH, based on stakeholder feedback; and (3) identify barriers that impede access to existing services. In order for Pennsylvania to best identify prevention and care needs, the Division of HIV and the subcommittees of the HIV Planning Group direct the gathering of available information for the purpose of statewide planning and application to the CDC and HRSA. Needs are assessed by the Division of HIV and HIV Planning Group by looking at any available statewide data and additional assessments in order to garner up to date perceived needs in HIV prevention and care.

In 2013-2016, at the direction of the DOH and HPG, the Department's contractor, the University of Pittsburgh's HIV Prevention and Care Project, conducted needs assessments focusing on statewide capacity building; linkage to care with a focus on rural areas; HIV testing barriers in emergency departments and opt-out settings; HIV-related stigma; transgender disparities in testing and care; HIV prevention and care needs of the disability community, and; assessments of need from the Department's recent demonstration project, Project Silk, which serves black and Latinx gay and bisexual male youth, ages 13-29. These needs assessment processes determine needs for specific populations, including: PLWH who know their HIV status, but are not in care; persons at higher risk for HIV infection; disparities in access to care for certain populations and underserved groups; and coordination among HIV prevention, care, and treatment programs, as well as other necessary services including substance abuse and mental health services, housing, and transportation. In order to recruit and retain participants in the need's assessment processes, focus group discussions, semi-structured interviews, survey assessments and townhall meetings with target populations and service providers for HIV Prevention and Care

were conducted. Local health departments and community agencies are also provided with these needs assessment findings to assist their prevention and care activities. This process of identification and assessment of needs in the jurisdiction will continue along rigorous and varied avenues of assessment in 2017-2021.

2. Service Needs

The coordinated needs assessments point to several HIV prevention and care service needs among special populations at risk for HIV and PLWH including sexual and gender minority populations, injection drug users, people with disabilities and people living in rural areas of Pennsylvania. Disparities in access to care for certain populations and underserved groups requires increased coordination among HIV prevention, care, and treatment programs, as well as other necessary services including substance abuse and mental health services, housing, and transportation. The service needs assessment findings of the Division of HIV Disease, in concert with the HPG and the HPCP, are outlined below.

Gay, bisexual, and other men who have sex with men of all races and ethnicities and geographical location face challenges along the care continuum, particularly in terms of getting tested, being linked, and being retained in care. In 2015, the Incidence Subcommittee decided that it needed to gather current data indicating up-to-date incidence rates in the state. After some discussion, it became clear that in Pennsylvania those data operate on a time delay. Working with DOH staff, the Subcommittee concluded that existing 2013 incidence data was sufficient to clearly show that black and Latinx (the non-binary gender neutral/gender inclusive spelling of 'Latino/a') gay and bisexual male youth and trans youth age 13- 29 currently account for a significant proportion of new HIV cases entering the Continuum. The subcommittee then requested from the University of Pittsburgh HPCP staff a literature review regarding the usefulness of HIV testing at emergency departments for reaching black and Latinx gay and bisexual male youth and trans youth. They also reviewed data about the rates of HIV testing of this population at HIV testing sites in the state. These reviews allowed the HPG and the Division to develop a clearer, evidence-based understanding of where these subpopulations were located within the continuum of care (i.e., estimating those unaware of their status, not linked to care, or not retained in care). The subcommittee found that the literature about routine testing of patients at emergency departments does not yet indicate whether such testing is effective. Most of the literature focused on the feasibility of establishing such testing, and reports about its

implementation were not yet conclusive. The examination of the state HIV testing, and epidemiological data indicates that despite efforts to implement routine and targeted testing and other prevention activities, more work must be done to actively engage this most disproportionately affected population.

To drive these efforts, the Incidence Subcommittee developed resolutions as recommendations to the state. Specifically, the subcommittee requested that the division “work with young black and Latino men who have sex with men (MSM) in hopes of reducing new infections, by identifying PLWH who are not aware of their status, with the focus on targeted testing and partner services as well as expanding demonstration projects similar to Project Silk.” Project Silk is an innovative program in the Pittsburgh Metropolitan Statistical Area that provides a safe and supportive space for young MSM and transgender individuals. This recreation-based public health intervention provides HIV and STD prevention and linkage to HIV care as well as a number of other support services. Project Silk has demonstrated consistently high levels of identifying new HIV cases in addition to successfully linking into care a significant number of young men who had tested positive for HIV but who were not linked to care or had later been lost to care. [Please see Appendix F1 for a full description of this project.] The subcommittee concluded that this project would be especially relevant to promote increased testing among this high-incidence group and to improve retention. It therefore recommended that the department replicate the project in other areas within the jurisdiction to affect the HIV Care Continuum relative to this at-risk population.

Additionally, after further engagement with data and issues specific to Pennsylvania in 2016, the subcommittee identified people who inject drugs (PWID) as having significant and disproportionate impacts on multiple areas of the Care Continuum (e.g., unique difficulties linking to care, remaining in care, knowing their status, etc.). Accordingly, the subcommittee created recommendations for the state and this IHPCP document to address the needs of this population. The subcommittee recommends that, “in the interest of preventing HIV transmission among individuals who inject drugs, both federal and state HIV resources be utilized to provide comprehensive and relevant HIV prevention and care services targeted to PWID’s. In accordance with guidance released to date, federal funds cannot be used to purchase injection equipment though they can be used to support syringe service programs in other ways; state funds may or may not be subject to similar restrictions. These efforts are contingent on the availability of funds,

the approval of the determination of need that has been submitted to the CDC, and the authorization for legal operation of syringe service programs statewide.” The HPG is pleased to note that at the time of publication (2016) the CDC had approved Pennsylvania’s determination of need request that was generated by these recommendations. In 2019, the HPG formally requested that the division of HIV disease pursue approval for its staff and/or HPG members to have a presence at Opioid Taskforce meetings in the various regions across the state.

Transgender women, especially black transgender women, are similarly not being reached by current prevention and care services. To address a gap in knowledge concerning the use of HIV services by transgender people in Pennsylvania, a needs assessment was conducted and included a scientific literature review of local and national data sources focusing on health disparities among transgender individuals within the HIV treatment cascade and an assessment to identify HIV staff’s level of transgender health awareness, with a focus on possibilities for future competency training needs. The following is the HPG’s summary of these findings as they apply or likely apply to Pennsylvanians along the continuum.

Risk factors affecting the likelihood of contracting HIV were found to include unprotected/unsafe sex practices, experiencing violence, drug use, unsafe hormone injection practices, commercial sex work, and social marginalization and poverty. For testing, national data suggests that HIV rates for transgender persons are impacted by socioeconomic variables, but overall are likely even higher than those of gay or bi-identified MSM. For Pennsylvania, known risk behaviors were significantly higher among Black/African Americans, and high levels of experiences of abuse, forced sex (for both Male to Female (MtF) and female to male (FtM) individuals) and reported denial of medical services were reported (Kenagy, 2005). Additionally, social and economic discrimination and stigma, lack of employment and housing opportunities, and a lack of understanding of transgender issues in medical, correctional, and religious communities significantly impact testing (Lombardi, 2007). For treatment, the review found that transgender individuals are more likely to experience barriers or discrimination accessing healthcare; however, new data suggests that transgender individuals who *do* enter into treatment attain nearly identical health outcomes as other HIV positive people (Lombardi, 2009; Yehla *et al.*, 2013; Feldman, Romine, Bockting, 2014). Peer (i.e. transgender) navigation and support systems are strongly correlated with improved mental and physical health outcomes (Bockting, 2013; Bockting, Rosser, Coleman, 2000). Retention and competent care are also identified as

issues, as transgender people are more likely to experience mistreatment in healthcare settings. Themes surrounding mistreatment include gender insensitivity, displays of discomfort by staff/practitioners, denial of service, substandard care, verbal abuse, and/or forced or unwanted care (Lombardi, 2009; Kosenko *et al.*, 2013). However, individuals who do receive appropriate care seem to achieve nearly equitable results in viral suppression, treatment adherence, and retention in care (Yehla *et al.*, 2013). The review also highlighted federal changes in 2015 to Medicare coverage for transgender people as well as the banning of provider denial of transgender preventative care.

Based on this review, an assessment was designed with input from the HPG and implemented by the HIV Prevention and Care Project. This nine-question survey was designed to identify HIV staff's level of transgender health awareness, with a focus on possibilities for future competency training needs. All responses were anonymous and collected electronically over a two-week period using the state Department of Health's existing email contact lists for HIV service providers and the Qualtrics Online Survey platform. The assessment received 301 electronic responses from Health Department and district office staff, county or municipal staff, participating provider staff, and grantee staff; responses were received from all regions of the state and from individuals working (either in one county or in a region) in 57 of Pennsylvania's 67 counties. Data and findings were presented to the HIV Planning Group's Health Disparities group in September 2015. Eighty-eight percent of respondents reported serving transgender clients and 83 percent of respondents reported that awareness and sensitivity to transgender health issues is actively promoted in their office or agency. Sixty-one percent of respondents reported having engaged in training that significantly addressed transgender health needs and 92 percent expressed interested in attending trainings to enhance ways of better serving transgender clients. Though the sample size is not large, survey results suggests that the greatest gaps in training and knowledge confidence for serving transgender individuals exists among Department of Health staff, county/municipal staff, and regional grantee staff. Similarly, the data suggest that District and county/municipal offices are least likely to promote transgender health issues and competency among their staff. Finally, this assessment demonstrated that there is a statistically significant difference ($X^2 = 13.99$, $p < .001$) in knowledge confidence between employees in agencies that promote transgender health issues and those that do not.

Another service need involves the HIV prevention and care needs of the disability community. Despite the fact that people with disabilities (PWD) get infected with HIV and people with HIV are more likely to experience disabilities, existing healthcare and wellness systems are not sufficiently responsive to the needs of persons with disabilities. In 2014, a survey was conducted with people living with a disability and service providers at the Living Well with a Disability Conference in Lancaster, Pennsylvania and found that access to education, prevention, screening, diagnosis, treatment and services for HIV/AIDS and other sexually transmitted diseases among people with disabilities are limited in the commonwealth. There is a need for HIV awareness outreach among not only people living with disability, but also targeting personal attendants and service providers. A key finding was the lack of awareness of accessible HIV services. Several service providers of disability organizations expressed the need for training on how to support their clients in navigating and negotiating their HIV needs. Further, it was found that communication challenges lead to misinformation and neglect. Engaging with the disability community online through accessible formats is a preferred method of communication. One key finding from this assessment regarding service needs and gaps is that PLWH will increasingly require more accessible service agencies and facilities as the population continues to age and intersect with PWD. Those facilities or providers that are hospital-based may meet accessibility standards, but those that are community-based commonly may need assistance identifying internal accessibility issues or resources. Stakeholders also indicated that accessibility features should be indicated in the state's provider resource listing.

In 2014, a comprehensive needs assessment of linkage to HIV Care in Pennsylvania was conducted and included a review of statewide data on linkage to care, a scientific literature review of local and national data sources and an assessment focusing on linkage to care in rural areas of Pennsylvania (Appendix F3). More than half of the respondents identified these factors as essential to successful linkage: client-centered approach, active referrals, early intervention, and in-person linkage to care (LTC) support at time of confirmatory results with education around HIV, disclosure and LTC resources (insurance, housing, substance abuse, food). Challenges with transportation emerged as a key barrier to LTC from rural areas in terms of distance to HIV provider clinics and a lack of confidential transport options for clients. Structural barriers included too few field staff and providers, long waiting time for first appointment and availability and access to dental services. Respondents also cited negative healthcare experiences in testing and

post-test counseling with medical providers and the need to ensure confidentiality within contexts of extreme stigma (HIV, MSM, IDU) as a barrier to LTC from rural areas. Demographically, younger gay men (<30) and older heterosexually married MSMW were reported as taking longer and less likely to link to care. Clients with dual diagnoses, namely depression and substance abuse, faced greater challenges in linking to care. Recommendations were compiled by the HPCP from the HPG Needs Assessment Subcommittee discussions, from the scientific literature review of local and national data sources focusing on linkage to HIV/AIDS care (LTC) and from the assessment focusing on LTC from rural areas of Pennsylvania. These recommendations were discussed and modified by the Needs Assessment Subcommittee. They were presented to the HPG in January 2015 and passed unanimously. These recommendations are included below:

1. The Department should adopt a definition for linkage to care to be used uniformly throughout the state.
2. The Department should mandate formal linkages between testing and treatment sites when possible to overcome fragmentation of care and to help make various service providers accountable for linkage processes.
3. The Department should, when possible, encourage and fund co-location of testing, HIV care and nonmedical services to facilitate timely linkage to care, especially in rural Pennsylvania.
4. The Department should adopt a definition for linkage to care to be used uniformly throughout the state.
5. The Department should mandate that all funded HIV test sites provide comprehensive patient education around HIV, disclosure and LTC resources at point of confirmatory results.
6. The Department should support HIV testing providers where possible to establish linkages and provider agreements with those who provide services related to practical barriers to LTC, including food and housing services, insurance, benefits counseling, health-related transportation, child-care services, disability services, language translation and mental health and substance abuse services.
7. The Department should create a mechanism to increase the number of PPA contracted agencies so that the DOH can better track LTC.

8. The Department should create and implement a plan to reduce stigma related to HIV (HIV, sexual practices, drug use) throughout the state.
9. To address the structural barrier in rural areas of too few field staff to meet the immediate linkage to care needs of clients, the DOH should collaborate with the Bureau of Community Health Systems to identify mechanisms to increase field staff in underserved areas.
10. To address the structural barriers in rural areas of too few medical providers which leads to long wait times for first appointments and limited availability, the DOH should offer training to providers who are interested in working with rural consumers.
11. The Department should create a plan to make telemedicine available around the state for HIV prevention and care services. The DOH should request technical assistance from HRSA around telemedicine to identify other states with large rural populations with effective programs for rural HIV care in order to increase the utilization of telemedicine for HIV care services in Pennsylvania.
12. The Department should increase access to dental health services in rural areas by offering training to dentists who are interested. The DOH should also explore the feasibility of using mobile dental health units for rural medical care and facilitate linkages to dental schools.
13. The Department should implement a cost-effective system for using certified peer specialists in supporting the linkage to care process.
14. The Department should require a marketing plan from all providers to make sure that demographically indicated subgroups are being reached.
15. The Department should encourage culturally competent marketing of HIV services to Spanish-speaking populations in order to reduce barriers to HIV services.
16. The Department should consider ways to ensure that medical providers, including primary care providers and emergency room providers, are following the CDC recommendations for HIV testing as part of routine care.
17. The Department should continue efforts to require mandatory lab reporting (all CD4 and viral loads) in order to ensure a more thorough perspective on the continuum of care in Pennsylvania.
18. The Department should require all contracted HIV testers, case managers and HIV clinic staff and providers to be trained on client-centered strength-based approaches to timely linkage to care. Such approaches include the following elements:
 - a. In-person LTC support at time of confirmatory results, particularly in rural areas;
 - b. Active referrals;
 - c. Early intervention;

- d. Conducting meetings in client's chosen location and time; and
 - e. Transportation assistance.
19. The Department should mandate that ARTAS or other similarly proven evidence-based LTC interventions be available to all HIV-related staff throughout the state.
 20. The Department should make trainings available as new evidence-based interventions are mandated before sites are required to implement them.
 21. The Department should mandate that ALL staff of all HIV prevention and treatment programs be trained in cultural competency in terms of race, gender, age, drug-use and sexual practices in order to offer culturally competent and non-judgmental services.
 22. The Department should create a template that can be used to establish formal linkages between HIV testing and treatment sites, when possible. All HIV testing staff should be trained on how to use and maintain these linkages.
 23. The Department should require that all contracted HIV testers and field staff to be trained on how to offer comprehensive patient education at time of confirmatory results. This includes training on how to evaluate and support clients in meeting medical, physical, psychosocial, environmental, and financial needs to support a client's readiness to engage in HIV care.
 24. The Department needs to mandate that all HIV testers, program planners and those implementing LTC programs be trained on dual diagnosis and linkage procedures to mental health and substance abuse services.
 25. The Department and The MAAETC should collaborate and coordinate on training on LTC.
 26. Challenges with transportation emerged as a key barrier to LTC from rural areas in terms of distance to HIV provider clinics, cost of transportation and a lack of confidential transport options for clients. The DOH should gather data on transportation options and problems faced by clients by region when linking to HIV care from rural areas.
 27. The Department should gather more data on use of HIV services by transgender people.

The Commonwealth of Pennsylvania has extremely diverse areas, with every area having different training and technical assistance needs. In 2013, a survey was designed to assess the training and technical assistance needs of organizations providing HIV care, treatment, and prevention in Pennsylvania. Budget constraints, location of trainings and burden of services resulting from staff being out of the office for multiple days were the more significant barriers to cultural competence in these agencies. These findings point to the need for standard measures to

ensure cultural competence and regular cultural competency training. In 2015, a survey was conducted to examine the HIV Prevention staff and facilitator training and technical assistance needs of organizations providing HIV Care, Treatment and Prevention in Pennsylvania in order to inform the development of quality HIV prevention and care trainings. Data was analyzed to reflect the greatest current and upcoming training needs on the regional level. Cultural competency, social networking, ARTAS, HIV 101, motivational interviewing, HIV Fundamentals Counseling Refresher, couples testing, Healthy Partnerships, Partnership for Health, and Personalized Cognitive Counseling trainings were found to be the greatest training needs of the state. Regional data was also selectively aggregated to reflect logical combinations of regional needs. These results suggest that some training, if offered in tandem with neighboring regions, could reduce the number of trainings required around the state. While this broad-level data cannot incorporate specific locations of agencies (which might affect some of the specific viabilities the model indicates), these results suggest ways to increase efficiency through minimizing training duplication and associated costs.

3. Service Gaps

Several service gaps were identified by and for persons at higher risk for HIV and PLWH by the coordinated needs assessment process. As noted in the Workforce Capacity report and the Linkage to Care Needs Assessment (Appendix E and Appendix F3) there is a shortage of primary care physicians and HIV specialists throughout the state, especially in rural areas. There is also a shortage of dental care providers who serve HIV positive patients in rural Pennsylvania (Appendix F2). Clients have experienced interactions with healthcare professionals who lack training in HIV care and are unfamiliar with the needs of individuals living with HIV. Such limited access to infectious disease doctors statewide often leads to individuals not receiving medical care in a timely manner due to these physicians carrying an unmanageable caseload. Having access and time for transportation to these limited care services is also a challenge. The HPG has also identified as a gap that some staff at all levels of care—individuals, care providers, and insurance companies—experience delays or gaps attaining and maintaining education and training.

For sexual and gender minority populations of all ages, stigma related to sexuality continues to be experienced at all levels and types of care (see Appendix F1-2). In rural areas of Pennsylvania and nationally, sexual minority men and their direct service providers report stigma

at the community-level and in healthcare settings as a major barrier in linking to care. Among young men who have sex with men and transgender populations, age 13 – 29, it is still often observed that healthcare providers lack knowledge of the population - for example, experience with hormone treatment - and therefore less than adequate care is offered. Cultural competency training focusing on sexual and gender minority communities may help with this need. Until further HIV education is provided to healthcare professionals the existing stigma will continue to hinder patients in accessing services.

The need to increase health literacy is an ongoing capacity need. Gaining the necessary healthcare coverage, understanding the complexity of insurance benefits, and accessing necessary system supports such as housing and mental health and substance abuse services are challenges. In response to barriers identified in the Linkage to Care needs assessment process, the Access subcommittee identified the need for a cost-effective system for using certified peer specialists in supporting health literacy and the linkage to care and retention process. This type of position differs from traditional field staff, and as defined by the division of HIV disease as a field staff position that provides education, consultation, coordination, collaboration, investigation, intervention, and evaluation for the STD and HIV/AIDS programs within the commonwealth. The position requires independent judgment and initiative in assessing, planning, implementing, and evaluating communicable disease surveillance and control programs.

In response, this subcommittee developed a peer navigation framework with the following goals: to increase access and improve health outcomes of PLWH across Pennsylvania and to standardize a curriculum to train peer navigators to assist PLWH obtain optimal health through the navigation of both medical and non-medical services. This framework will be modified to meet the needs of different geographic areas and populations in order to reduce disparities in navigation services across the state of Pennsylvania. The planning process entailed investigating the use of peers for other chronic conditions, receiving a presentation from a successful health system navigator program in Philadelphia, identifying possible funding streams and model development including identifying preferred qualifications, competencies, peer job responsibilities, organization/program responsibilities, evaluation and outcome metrics and eligibility based on high risk assessment indicators. The model was presented to the full HPG in March and received support as a recommendation. See Appendix F3 for this framework.

4. Barriers

Pennsylvanians can often face many barriers to HIV prevention and care services. The jurisdiction and the HPG have identified several barriers affecting testing and care in Pennsylvania based on the SCSN from 2012, epidemiological data and the coordinated needs assessment process. In addition to specific barriers in the targeted risk groups discussed above, general barriers to HIV prevention and care include:

- a) Social and structural barriers
 - i. Poverty
 - ii. Stigma related to sexuality, HIV, drug use, and mental health within larger community and within healthcare settings
 - iii. Aging populations and people with disabilities are often not offered HIV testing nor considered to be at risk.
- b) Federal, state, or local legislative/policy barriers
 - i. Citizenship disclosure, undocumented status is a barrier to gaining healthcare coverage. Lack of knowledge on the part of undocumented clients to access Ryan White care without being deported is also a barrier to gaining healthcare coverage.
 - ii. Requirements for sexual health education in public schools are too broad and are at the discretion of local school districts/boards.
 - iii. State laws create barriers to implementation of syringe services programs.
 - iv. Lack of complete CD4 and viral load reporting.
 - v. Limited data sharing across state agencies and within agencies.
- c) Health department barriers
 - i. There is a need to enhance cultural competency.
 - ii. Time (when services are offered, especially for youth).
 - iii. Lack of integrated data systems.
 - iv. Lack of comprehensive and consistent data elements specific to gender.
- d) Program barriers
 - i. There is a need to enhance cultural competency.
 - ii. Not enough physicians that specialize in primary care and HIV Care
 - iii. Lack of integrated data systems.
- e) Service provider barriers
 - i. Several stakeholders are not involved with planning for HIV services and need to be involved in order to address gaps in components of HIV prevention and care more effectively including youth, consumers of color and undocumented individuals.
 - ii. There is a shortage of primary care physicians and HIV specialists throughout the state, especially in rural areas.

- iii. There is a shortage of dental care providers trained in serving HIV positive clients throughout the state, especially in rural areas.
- iv. Lack of communication between doctors and continuity of care between medical disciplines.
- v. Delay of treatment or not receiving medical care in a timely manner due provider shortage and busy schedules
- vi. There is a need to enhance cultural competency.

f) Client barriers

- i. Literacy (educational and medical)
- ii. Lack of awareness of the healthcare system and how to gain the necessary healthcare coverage and system supports
- iii. Transportation related to a lack of HIV clinicians/specialists in the state; complexity of transportation systems including limitations of county transportation systems to cross county/regional lines, a lack of transportation funding.
- iv. Poverty and daily living needs, including access to food
- v. Housing instability/homelessness
- vi. Time (when services are offered)
- vii. Stigma in community and in healthcare settings– sexuality, gender identity, HIV status, PWID, and mental health. This includes fear associated with getting tested and getting treatment, psychological denial of the disease and intimidation and isolation from the disease.
- viii. Mental health and substance abuse which impact perception of status, housing stability, personal behavior, delay of treatment, and retention in care.
- ix. Client fear of HIV criminalization and/or their HIV status becoming public

E. Data: Access, Sources, and Systems

1. Data Sources

The main data sources and systems for the Department. of Health’s Division of HIV Disease, Bureau of Epidemiology & Bureau of Health Statistics and Research, and the HPG are listed below.

Division of HIV Disease

- a) The main data sources for the HIV Prevention section include:
 - Evaluation Web (EvalWeb®) – Software system contracted by CDC to collect and report on publicly funded HIV testing and related risk reduction activities (e.g. re-engagement, condom distribution, CDC resource allocation).

- PA-NEDSS – Pennsylvania’s National Electronic Disease Surveillance System, the DOH database in which HIV partner services and surveillance data is collected and maintained.
- b) The main data sources for the HIV Care Section include:
- The main data source for Ryan White program services the Ryan White HIV/AIDS Program Services Report (PSR) and quality improvement data, which is captured in CAREWare and a Pennsylvania specific program, the Web-portal.
 - HOPWA service data is captured by a variety of locally developed data spreadsheets.
- c) The main data sources for the SPBP section include:
- SPBP claims and enrollment data are housed in Unix and Magellan First CI. These systems are managed by Magellan Health Services (MHS). MHS provides claims and enrollment processing services for the SPBP.
 - CAREWare is utilized solely for purposes of organizing and submitting data for the annual ADAP Data Report (ADR). Currently, the SPBP CAREWare system is not networked with other CAREWare systems. Information is uploaded into the system specifically for the purpose of submission to HRSA.
 - SPBP collaborates with the DOH Prevention and Epidemiology programs for access to additional data to complement what the program is capable of collecting. This ensures compliance with HRSA reporting requirements as well as a reduction in the burden on clients to provide the necessary information during enrollment.
 - The SPBP Customer Service Line (CSL) utilizes the Verizon Virtual Contact Center to manage all calls received. This system also produces reports of all caller and agent activity relative to the calls received. These reports, along with internal spreadsheets and logs, provide a means of managing and monitoring the CSL activities and provide indications of trends and other concerns to be addressed. This system also tracks capabilities for refill and processing exception requests and appeals.

Bureau of Epidemiology and Bureau of Health Statistics and Research

This section describes the main data sources and systems used for the creation of the Statewide Coordinated Statement of Need/Needs Assessment (SCSN) used in this Plan. The following main data sources were used:

- **eHARS HIV Surveillance data:** eHARS is used in conjunction with the Pennsylvania National Electronic Disease Surveillance System (PA-NEDSS) to conduct HIV surveillance activities in PA. PA-NEDSS serves as the front end for case reporting, investigation and processing of electronic laboratory reports for cases outside of Philadelphia. Data from PA-NEDSS are extracted daily and imported into eHARS. The Philadelphia Department of Health does not use PA-NEDSS for its primary HIV surveillance activities but enters data directly into eHARS that is hosted by the state in Harrisburg.
- **Ryan White HIV/AIDS Services Report (RSR) and AIDS Drug Assistance Program (ADAP) Data:** The ADAP in Pennsylvania is also known as the SPBP. The RSR and ADAP are matched to eHARS data to identify individuals who have received services through the Ryan White Care Services.
- **Other data sources used:** Behavioral Risk Factor Surveillance System (BRFSS), Sexually Transmitted Diseases (STD) surveillance, Hepatitis C Surveillance, Tuberculosis Surveillance, vital statistics (mortality data) and both the American Community Survey (ACS) and population data from the U.S. Census Bureau.

HPG Planning Sources

Many diverse sources have been used for needs assessment for HIV planning. The main sources of data for the need's assessments of capacity building training and technical assistance needs included surveys of administrative staff and direct service staff of HIV organizations providing HIV Care, Treatment and Prevention from throughout the state of Pennsylvania. The main source of data for the need's assessment of Disability and HIV Disease included formative interviews with participants of the Living Well with a Disability Conference and Expo held in Lancaster, Pennsylvania. The main sources of data for the Needs Assessment of Linkage to HIV/AIDS care included a comprehensive literature review of scientific journal articles, qualitative structured telephone interviews with frontline staff involved with linking HIV clients from rural areas of Pennsylvania to HIV care from every region of the state and ongoing input from the Pennsylvania HIV Planning Committee. The main sources of data for the Needs Assessment of Transgender Health included a scientific literature review, electronic survey responses from Health Department and district office staff, county or municipal staff, participating provider staff, and grantee staff. All research, data collection and literature

reviews (excluding epidemiology) for the HPG are conducted or overseen by the HIV Prevention and Care Project at the University of Pittsburgh unless otherwise noted.

2. Data Policies

An important constraint for assessing measurement of the care continuum is Pennsylvania's HIV reporting regulations; these do not require the reporting of all viral load and/or CD4 test results to surveillance. Under Pennsylvania's regulations, reporters are only required to report detectable viral load tests and CD4 results that are below 200 cells/ μ l or 14 percent. While many laboratories voluntarily report all tests, the lack of a requirement to report all tests results in under-estimating the proportion of individuals who are in care or continuously engaged in care. Also, as previously discussed, access to Medicaid data could provide the division with helpful information on HIV care and ART uptake.

3. Data and Unmet Planning Needs

The HPG receives annual updated presentations from the division of HIV regarding the state of the epidemic in Pennsylvania. While additional and contemporaneous data sets are always desirable, the HPG has discussed this issue at length and recognizes the limitations and difficulties inherent in collecting and processing said data before it can be made available for use. For example, as noted earlier in this section, data on gender identity are not currently available. This lack of epidemiologic data on trans people presents challenges in planning and providing services to this population throughout Pennsylvania. Overall, however, the HPG remains confident that the division processes all data and makes it available as quickly as possible.

The division also recognizes that a lack of integration of the various state data systems, as well as the limitations the state's reporting regulations place on the reporting of all CD4 & viral load tests (not all of which are reportable) also create challenges for the development of the HIV Care Continuum.

Additionally, the HPG is able to request additional data gathering and presentations throughout the year based on the work and needs of the Incidence, Access, and Disparities subcommittees. Those operations and findings are summarized in Section 1, B, 3 (Planning) and throughout this planning document. These operations and additional data sources are valued additions assisting in developing a robust understanding of the state of the disease in the commonwealth and developing effective planning responses accordingly.

Finally, it should be noted that the HIV Epidemiology Investigations Section, Bureau of Epidemiology has an online submission form available to organizations and the public for contributing supplemental local, regional, or statewide data sources/analyses for use in comprehensive prevention and care planning and the Integrated HIV/AIDS Epidemiologic Profile for Prevention and Care. See Appendix C for a sample of this document.

Section II: Integrated HIV Prevention and Care Plan

A. Integrated HIV Prevention and Care Plan

1. Integrated HIV Prevention and Care Plan Chart

2015-2020 NHAS (National HIV/AIDS Strategy) Goal: Reducing New HIV Infections					
2017-2021 State Objective 1: By 2021, reduce the number of new HIV infections by 10 percent					
Strategy A: Intensify HIV prevention efforts in the communities where HIV is most heavily concentrated.					
Activity #	Timeframe	Activity	Target Population	Responsible Parties	Data Indicators
1	Ongoing	Allocate CDC, HRSA, and state funding consistent with the geographic distribution of the epidemic.	PLWH, MSM, High risk heterosexuals, and PWID (of all races and ethnicities including MSM/PWID)	Department of Health	Proportion of overall funding allocated to each Pennsylvania prevention and care jurisdiction
2	Ongoing	Focus prevention efforts/activities on high-risk and disproportionately impacted populations	PLWH, MSM, High risk heterosexuals, PWID (of all races and ethnicities including MSM/IDU); Black MSM; Black and Latinx women and men, young Black MSM age 15-24, and transgender women	Department of Health, and CDC and state funded providers	HIV testing data Partner services data Linkage to care data Other prevention service utilization data
3	By the end of 2021	Refine Enhanced Health Promotion and Screening (EHPS) protocols which seek to expand HIV screening, including early detection of HIV in healthcare settings through routinizing opt-	High risk individuals Individuals unaware of their status	Pennsylvania Expanded HIV Testing Initiative Department of Health Healthcare providers	Number of HIV tests performed Acceptance rates HIV positivity rate

		out testing at STD clinics, Community Health Centers, County Jails, State Corrections, youth detention/rehabilitation centers, emergency departments, and substance use treatment centers.			
Barriers and Challenges:					
<ul style="list-style-type: none"> • Difficulty successfully engaging healthcare providers to perform routine opt-out testing. 					
Strategy B: Expand efforts to prevent HIV infection using a combination of effective evidence-based approaches.					
Activity #	Timeframe	Activity	Target Population	Responsible Parties	Data Indicators
4	By the end of 2021	Collaborate and integrate efforts with HIV and STD surveillance to ensure that clients are offered partner services, linked to care, and/or re-engaged in care if necessary.	PLWH	Surveillance unit Department of Health	Number of newly diagnosed Proportion of newly diagnosed linked to medical care Proportion of newly diagnosed linked to partner services Proportion of PLWH re-engaged to care
5	Ongoing	Use the revised Interim Policy Guidance for High Impact Prevention Activities to implement evidence-based prevention interventions for HIV-positive individuals and high-risk negatives.	PLWH MSM PWID	CDC and state funded providers	Number of interventions funded Types of interventions funded

6	Ongoing	Incorporate condom distribution into all evidence-based HIV prevention interventions and strategies.	PLWH, MSM, PWID, High risk heterosexuals, general population	Department of Health CDC and state funded prevention providers	Number of condoms distributed
7	By 2021	Implement/replicate innovative HIV prevention interventions in targeted geographic areas that, in addition to HIV/STD testing, address a broad range of services such as behavioral health and other supportive services (e.g. housing, education, employment) which contribute to a reduction in HIV/STD incidence.	MSM and transgender women of color ages 15-24	Pennsylvania Department of Health HPCP	Number of interventions funded Number of individuals served
<p>Barriers and Challenges:</p> <ul style="list-style-type: none"> Lack of integrated data systems presents challenges in tracking clients through the continuum of care. 					
<p>Strategy C: Educate Pennsylvanians with easily accessible, scientifically accurate information about HIV risks, prevention, and transmission.</p>					
Activity #	Timeframe	Activity	Target Population	Responsible Parties	Data Indicators
8	Ongoing	Continue to support online outreach to build sexual health knowledge, refer to HIV testing and link to care where appropriate.	PLWH, MSM, PWID, High risk heterosexuals, partners, general population	Department of Health HPCP	Number of web contacts Number of online referrals Number of web outreach events (e.g. blog posts, ads)
9	By July 31, 2018	Provide training and technical assistance to 15 priority school districts across Pennsylvania for School-Based HIV/STD Prevention	Youth (of school age) in select priority districts	Pennsylvania Department of Education Pennsylvania Department of Health	Number of targeted school districts implementing exemplary sexual health education; and

		through the provision of education, resources, and specific risk reduction activities in conjunction with the Pennsylvania Department of Education's CDC grant from the Division of Adolescent School Health (DASH).			school-based health services or referral.
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Barriers and Challenges: N/A

2017-2021 State Objective 2: Reduce the HIV transmission rate by 20 percent.

Strategy D: Intensify HIV prevention efforts in the communities where HIV is most heavily concentrated.

Activity #	Timeframe	Activity	Target Population	Responsible Parties	Data Indicators
10	Ongoing	Monitor the performance of individual testing sites; and in particular fee-for-service, non-healthcare testing sites to emphasize testing of high-risk populations.	MSM PWID	Department of Health	Number of tests Proportion of high-risk individuals tested HIV positivity rate
11	By the end of 2021	Identify and collaborate with regional PrEP clinics to enhance uptake and referrals.	MSM, IDU, High risk HIV negative individuals, including partners of PLWH	CDC and State funded and prevention providers Department of Health	Number of clients referred to PrEP Number of clients receiving PrEP, (subject to data availability)

Barriers and Challenges: N/A

Strategy E: Expand access to effective HIV prevention services, including pre-exposure prophylaxis (PrEP) and post-exposure prophylaxis (PEP)

Activity #	Timeframe	Activity	Target Population	Responsible Parties	Data Indicators
12	By the end of 2021	Develop and implement a statewide coordinated plan to identify and expand resources, and	MSM, PWID, High risk HIV negative individuals, including partners of PLWH	Department of Health	Number of clients referred to PrEP Number of clients receiving

		promote increased use of PrEP			PrEP, (subject to data availability)
13	By the end of 2021	Leverage state funds to implement a Department supported PrEP program.	MSM, IDU, High risk HIV negative individuals	Department of Health	Number of providers funded Number of clients served
13.a.	By the end of 2021	Mandate PrEP education and PrEP referral and linkage for PPAs.	HIV Testing providers	Department of Health	Demonstration of mandating language/mechanism

Barriers and Challenges:

- Implementation of program dependent upon availability of state funding.

Strategy F: Expand efforts to prevent HIV infection using a combination of effective evidence-based approaches.

Activity #	Timeframe	Activity	Target Population	Responsible Parties	Data Indicators
14	By the end of 2021	Expand efforts to identify acute HIV infections through the use of the most advanced testing technology available, including rapid tests.	High risk individuals Individuals unaware of their status	Department of Health CDC and state funded testing providers	Number of tests performed Number of engaged providers conducting routine testing Acceptance rates
15	Ongoing	Utilize case-specific monitoring processes to ensure that newly diagnosed HIV-positive individuals and previously diagnosed HIV positive individuals with a new STD are being linked to Partner Services and medical care in a timely manner.	PLWH	Department of Health	Ongoing

Barriers and Challenges: N/A

Strategy G: Educate Pennsylvanians with easily accessible, scientifically accurate information about HIV risks, prevention, and transmission.

Activity #	Timeframe	Activity	Target Population	Responsible Parties	Data Indicators
16	By the end of 2021	Develop and update HIV related written materials.	PLWH, MSM, PWID, High risk heterosexuals, general population Healthcare and other (e.g. HIV testing) providers	Department of Health HPCP MAAETC	Number of materials developed/updated Number of individuals/providers reached
xvii.	Ongoing	Make current, scientifically accurate information available on Department of Health website, stophiv.com, AETC websites, and via statewide health alerts	PLWH, MSM, PWID, High risk heterosexuals, general population. Healthcare and other (e.g. HIV testing) providers	Department of Health HPCP	Number of health alerts Number of individuals/providers reached

2015-2020 NHAS Goal: Increasing Access to Care and Improving Health Outcomes for PLWH

2017-2021 State Objective 3: Increase the proportion of newly diagnosed patients linked to clinical care within three months of their HIV diagnosis by 20 percent

Strategy H: Establish rapid linkage people to care, and support retention in care.

Activity #	Timeframe	Activity	Target Population	Responsible Parties	Data Indicators
18	Ongoing	Enhance collaboration and coordination across providers and across the continuum of care	PLWH	RW Part B providers RW Part C & D providers MAAETC Department of Health CMHDs (County/Municipal Health Dept.) HIV testing and prevention providers	Proportion of PLWH linked to care Proportion of PLWH retained in care Proportion of PLWH re-engaged to care
19	By the end of 2021	Work with the Pennsylvania Department of Aging and its vendor to institute changes necessary to provide the SPBP program with the ability to extract claims data and enrollment data.	PLWH	Department of Aging Department of Health	ART prescription VL suppression
<p>Barriers and Challenges:</p> <ul style="list-style-type: none"> • Coordination of the multiple funded providers and the ability to refer clients based on current confidentiality laws in Pennsylvania. • Lack of integrated data systems presents challenges in tracking clients through the continuum of care. 					
<p>Strategy I: Increase the capacity of systems as well as the number and diversity of available providers of clinical care and related services for PLWH.</p>					

Activity #	Timeframe	Activity	Target Population	Responsible Parties	Data Indicators
20	By the end of 2021	Encourage and fund co-location of testing, HIV care and nonmedical services to facilitate timely linkage to care, especially in rural Pennsylvania.	PLWH	RW Part B; Department of Health	Late HIV diagnosis Linkage to care
21	Ongoing	Collaborate with capacity building providers to improve the capacity of public health disease field staff ARTAS staff, HIV navigators to link and re-engage PLWH in care	DIS	Department of Health	Number of trainings provided
22	By the end of 2021	Collaborate with the Mid-Atlantic AIDS Education and Training Center (MAAETC) to expand HIV curricula for health care providers to strengthen current HIV provider workforce capacity to ensure access to and quality care, including statewide trauma-informed care training, U=U education, and PrEP.	Health care providers HIV providers	Department of Health MA AETC RW Part C & D providers	Number of newly developed curricula Number of trainings provided

Barriers and Challenges:

- Educating CBOs on new service opportunities that enhance services to clients.

Strategy J: Support comprehensive, coordinated, patient-centered care for PLWH.

Activity #	Timeframe	Activity	Target Population	Responsible Parties	Data Indicators
23	Ongoing	Enhance collaboration and coordination across providers and across the continuum of care by co-locating RWHAP Part B and C services.	PLWH	RW Part B providers RW Part C providers Department of Health	Retention in care

24	Ongoing	Support activities that partner RW providers with local social service agencies.	PLWH	RW Part B providers RW Part C providers Department of Health	Retention in care
25	Ongoing	Coordinate with providers to assure access to housing, other basic needs, and other supportive services for persons living with HIV.	PLWH	RW Part B providers RW Part C providers Department of Health	Retention in care

Barriers and Challenges:

- Educate political and administrative structures to support system changes that enhance client service delivery.

2017-2021 State Objective 4: Increase the proportion of RWHAP clients who are in continuous care by 5 percent.

Strategy K: Establish seamless systems to link people to care immediately after diagnosis, and support retention in care.

Activity #	Timeframe	Activity	Target Population	Responsible Parties	Data Indicators
26	Ongoing	Utilize case-specific monitoring processes to ensure that newly diagnosed HIV-positive individuals are being linked to Partner Services and linked to medical care in a timely manner.	Newly diagnosed	Department of Health	Linkage to care
27	By the end of 2021	Implement a data sharing agreement between the Part C and D providers and the Department to enable enhanced identification and development of strategies to re-engage individuals who are out of care.	PLWH who are lost to care	RW Part C & D providers and MAAETC Department of Health	Retention in care

Barriers and Challenges: Developing data sharing agreements and systems to ensure linkage to services.

Strategy L: Increase the capacity of systems as well as the number and diversity of available providers of clinical care and related services for PLWH.

Activity #	Timeframe	Activity	Target Population	Responsible Parties	Data Indicators
28	Ongoing	Promote partner services to private providers, including behavioral health providers, through the development of educational materials.	Healthcare providers	Department of Health	Proportion of individuals diagnosed in private providers who are linked to partner services. HIV positivity rate
29	By the end of 2021	Operationalize an expanded insurance program to assist clients with payments for insurance premiums for plans purchased through the marketplace.	PLWH	Department of Health	ART Retention in care

Barriers and challenges: Potential limitations in working within the confines of the current agreement to access the vendor services necessary to support this activity.

Strategy M: Support comprehensive, coordinated, patient-centered care for PLWH.

Activity #	Timeframe	Activity	Target Population	Responsible Parties	Data Indicators
30	By the end of 2021	Encourage and fund co-location of testing, HIV care and nonmedical services to facilitate timely linkage to care, especially in rural Pennsylvania.	PLWH, MSM, PWID, High risk heterosexuals, general population.	RW Part B RW Part C Department of Health	Late HIV diagnosis Linkage to care
31	By the end of 2021	Introduce a health literacy program to give clients the ability to engage with health care providers in meaningful discussion, self-advocate in an effective manner and appreciate the importance of adhering to individual treatment plans.	PLWH	Department of Health	VL suppression

Barriers challenges:

- Educate political and administrative structures to support system changes that enhance client service delivery.

2015-2020 NHAS Goal: Reducing HIV-related Disparities and Health Inequalities

2017-2021 State Objective 5: Increase the proportion of HIV diagnosed MSM (inclusive of MSM/PWID) with undetectable viral load by 20 percent.

Strategy N: Adopt structural approaches to improve health outcomes in disproportionately affected high-risk communities.

Activity #	Timeframe	Activity	Target Population	Responsible Parties	Data Indicators
32	By the end of 2021	Advocate for the revision of the Substance, Drug, Device and Cosmetic (DDC) Act, Act of 1972, P.L. 233, No. 64 to decriminalize syringe access.	MSM/PWID	Department of Health HIV Planning Group Stakeholders	
33	By the end of 2021	Advocate for revisions to Pennsylvania’s reporting regulations for the inclusion of requirements to report all CD4 and Viral Load tests in order to accurately assess viral load suppression.		Department of Health HIV Planning Group Stakeholders	

Barriers and challenges:

- Dependent upon the political and legislative climate.

Strategy O: Reduce stigma and eliminate discrimination associated with HIV status

Activity #	Timeframe	Activity	Target Population	Responsible Parties	Data Indicators
34	By the end of 2021	Utilize social media marketing and other media platforms to reduce HIV stigma and reach high risk MSM.	MSM	HPCP	Linkage to care
35	By the end of 2021	Include in site visits of funded providers: compliance with relevant provisions of HIPAA and provide technical assistance to providers with regard to requirements to care for PLWH, in compliance		Department of Health	

		with Federal nondiscrimination laws.			
35.a.	By the end of 2021	Collaborate with capacity building providers and MAAETC to assist field staff and providers in talking with stakeholders/consumers about stigma-related concerns, particularly around testing	Health care providers HIV providers	Department of Health HPCP MAAETC	Number of newly developed curricula Number of trainings provided
Barriers and challenges: N/A					
Strategy P: Reduce HIV-related disparities in communities at high risk for HIV infection					
Activity #	Timeframe	Activity	Target Population	Responsible Parties	Data Indicators
36	By the end of 2021	Collaborate with partners such as CDC, MAAETC, and HPCP to enhance cultural competency training and technical assistance.	MSM PWID	Department of Health	HIV positivity rate
Barriers and challenges: N/A					
2017-2021 State Objective 6: Increase the proportion of HIV diagnosed black individual with undetectable viral load by 20 percent.					
Strategy Q: Adopt structural approaches to reduce HIV infections and improve health outcomes in high-risk communities					
Activity #	Timeframe	Activity	Target Population	Responsible Parties	Data Indicators
37		Coordinate discharge of incarcerated individuals between corrections facilities and medical providers and SPBP to ensure access, linkage to care and adherence to medications.	Newly released PLWH	County corrections Department of Health	Retention in care ART prescription
38	By the end of 2021	Advocate for revisions to Pennsylvania's reporting regulations for the inclusion of requirements to report all CD4 and Viral Load		Department of Health HIV Planning Group	VL suppression

		tests in order to accurately assess viral load suppression.			
Barriers and challenges:					
<ul style="list-style-type: none"> Educating all 68 county jails to ensure standardized discharge policies and procedures. 					
Strategy R: Reduce stigma and eliminate discrimination associated with HIV status					
Activity #	Timeframe	Activity	Target Population	Responsible Parties	Data Indicators
39	Ongoing	Utilize social media marketing to reduce stigma and reach Blacks at high risk or those lost to care.	BMSM	HPCP	Linkage to care
40		Replicate Project Silk in applicable geographic areas.	YB-MSM and TG	HPCP	
Barriers and challenges: Implementation of program dependent upon availability of state funding.					
Strategy S: Reduce HIV-related disparities in communities at high risk for HIV infection					
Activity #	Timeframe	Activity	Target Population	Responsible Parties	Data Indicators
41	By the end of 2021	Convene roundtable discussions to highlight the relevance of the intersecting issues of HIV and the Black community.	BMSM	HPCP	
42	By the end of 2021	Expand the number of participating providers conducting MAI activities.	Minorities living with HIV	Department of Health	Linkage to care Retention in care
Barriers and challenges: N/A					

2. Integrated HIV Prevention and Care Plan Logic Model

At the request of the HPG, a succinct IHPCP Logic Model is also included below as a visual schematic representation both of these goals and of the overall statewide planning process.

IHPCP Logic Model

INPUTS	OUTPUTS (Activities)	OUTPUTS (Participation)	OUTCOMES (Short)	OUTCOMES (Medium)	OUTCOMES (Long)
Planning group members	Hold regular planning meetings	People living with HIV	Identify goals, objectives, and activities for implementation through 2021.	Reduce the number of new HIV infections by 10 percent	Reduce new HIV infections
Division Support Staff	Assess needs	Unaffiliated consumers	Submit IHPCP to CDC and HRSA on or before Sept 30, 2016	Increase the proportion of newly diagnosed patients linked to clinical care within three months of their HIV diagnosis by 20 percent	Increase access to care among people living with HIV
University of Pittsburgh Support Staff	Conduct town halls	At-risk negatives			Reduce HIV related health disparities and health inequities
CDC Funding	Update epi data	Prevention providers			
HRSA Funding	Set annual priorities	RW Parts A-F			
Technology	Identify resources	ADAP/SPBP			
Meeting Space	Submit plan for stakeholder review	STI, HCV, Epi experts			Achieve a more coordinated response to the HIV epidemic in Pennsylvania
Technical Support		AETCs		Increase the proportion of RWHAP clients who are in continuous care by 5 percent	
Software		Stakeholders			
Office supplies		MH/DA			
		Correctional facility representatives			
		State Education		Increase the proportion of HIV diagnosed	

		representatives and experts		MSM (inclusive of MSM/IDU) with undetectable viral load by 20 percent Increase percentage of HIV diagnosed Blacks with undetectable viral load by 20 percent	
<p><u>Assumptions:</u></p> <p>Funding will be adequate</p> <p>Stakeholders will be receptive to engagement</p> <p>Epi data will be available to drive the process</p>				<p><u>External Factors:</u></p> <p>Legislative barriers could influence types of activities and implementation</p> <p>Disjointed data systems</p> <p>Stigma</p> <p>Social determinants of health that influence HIV prevention and care</p>	

B. Collaborations, Partnerships, and Stakeholder Involvement

1. Stakeholder Involvement in Planning

This section describes two of the primary ways in which stakeholders are involved in the planning process. This is accomplished through the function and activities of the HPG as the

official planning advisory body to the division of HIV disease, and through directly reviewing and providing feedback for this planning document as it was developed. The HPG serves as the primary point of involvement for stakeholders throughout Pennsylvania, whether through the group itself, through the outreach activities they have conducted, or through the wide-reaching protocols they have established. Given the importance and impact of the IHPCP, direct stakeholder feedback and input was also sought (in collaboration with the HPG) for all the IHPCP state goals listed above. The following section highlights both these efforts to illustrate the efficacy of the HPG's operations and stakeholder involvement, as well as stakeholder involvement in reviewing and contributing to this IHPCP specifically.

HPG development and stakeholder involvement

At the conclusion of 2012, the former Community Planning Group (CPG) and Integrated Work Group (IWG), representing Prevention and Care planning, respectively, concluded the first year-long period of integration to form the state's HPG. That 16-person group was composed of stakeholders representing both of the former groups, supported by division staff and state contracted public health professionals from the HIV Prevention and Care Project. Between 2012 and 2016, the HPG and its support staff have:

- Established an integrated prevention and care HPG structure and bylaws that revolve around the National HIV/AIDS Strategy (NHAS) goals and the Continuum of Care.
- Developed subcommittees who would look to reduce disparities, examine incidence, and improve access to care. It also developed Ad Hoc committees for membership recruitment and HPG bylaws, and workgroups for stakeholder engagement, needs assessment, and priority setting and resource allocation.
- Expanded voting membership from 16 to 33 members based on inclusion, parity, and representativeness for stakeholders and PLWH throughout Pennsylvania. The HPG has also fostered an additional pool of non-voting affiliates who regularly attend meetings and contribute to planning activities.
- Developed comprehensive, multi-year plans for continually developing stakeholder engagement and needs assessment.
- Developed templates for and executed PSRA activities.

- Utilized state and University of Pittsburgh staff as well as consultants from the CDC and HRSA to plan and execute the integration of HIV prevention and care planning on a statewide level properly and fully.
- Established a secure, cloud-based electronic storage and planning resource for members and staff (the Box) as well as conference calls and virtual WebEx meeting capacity.
- Established a statewide planning website at www.stopHIV.org where all meeting minutes and relevant planning documents are made publicly available by HPCP.

As a specific example, the HPG's work and recommendations in each of the 2015 subcommittees – access, disparities, and incidence – contributed not only to the development of this plan but to the inclusion of stakeholders from all across the commonwealth as well. Specifically, the access subcommittee is examining potential peer navigator models, Disparities is examining HIV-related issues and barriers affecting transgender Pennsylvanians, and incidence is studying factors affecting rates of new HIV diagnoses among African American youth. As also described in Section 1, B, 3: planning, these processes entail a great deal of stakeholder involvement. The access subcommittee has conducted a literature review of peer navigation models and organized presentations from successful practitioners in the field. Disparities also conducted a literature review around transgender access to testing and care, conducted a statewide survey of over 300 providers and staffs' experiences working with transgender clients, received a report on social barriers around violence based on in-depth interviews of transgender (MtF) African American and Native American women in Pittsburgh, Pennsylvania, and arranged a panel presentation for the full HPG for transgender activists to speak about their experiences. Finally, incidence heard a report from the staff and community leaders who developed Project Silk, a successful recreation-based public health intervention for black MSM and bi-identified youth in Pittsburgh. All three of these subcommittees developed specific recommendations for the division regarding these topics based on the data and input from these stakeholders. This template for a well-functioning and effective HPG process will form the basis of all HPG planning activities in 2017-2021.

Specific Stakeholder Input and Feedback for the IHPCP

In addition to regular updates, feedback reports, and reviews by the 2015 and 2016 HPG members, direct feedback was sought from stakeholders statewide regarding their thoughts on the draft IHPCP goals and whether or not they supported them. At the division's direction, the HPCP at the University of Pittsburgh developed a survey mechanism to simply present the plan's goals in plain language, collect free-response feedback, and gauge basic levels of support (or not) for each plan goal. In addition to a brief set of demographic questions based on HRSA and CDC reporting criteria, a survey section was created for each of the three state goal categories (reducing HIV infections, improving access and improving outcomes, and reducing disparities). Each individual goal listed in Section II above was translated into a simply worded statement on a 5-point Likert scale for respondents to rate their level of agreement with the proposed goal.

This survey was distributed electronically via state, HPCP, and HPG email distribution lists. A discrete invitation to complete the survey was also mailed to all SPBP mail recipients, and palm cards advertising the survey were mailed to HPCP community contacts. The survey was available in both English and Spanish, and links were provided that allowed stakeholders to view the full draft version of the Planning Goals on www.stophiv.org if they wanted to review them in their entirety. All printed survey materials included instructions for requesting the print version of the survey and a postage-paid return envelope (both in English and Spanish) in order to further accommodate the needs of all stakeholders, particularly those with limited or no access to the internet.

Both the response rate and recorded responses for this survey were overwhelmingly positive. HPCP recorded 723 completed surveys and 223 free-response comments. Twice as many comments were rated for positive affect than for negative affect regarding the planning goals and/or the survey. Relevant to this discussion, 100 percent of the goals were rated positively (by the combined responses of 'somewhat agree' or 'strongly agree') – by no less than 83 percent of respondents per goal and as high as 98 percent of all respondents per goal. The positive response rate follows a normal bell curve with 75 percent of responses falling between 87 percent and 96 percent agreement, with a median 91 percent agreement rate. Agreement outliers include:

Percentage of respondents that strongly or somewhat agree	
	Lowest agreement rates
86%	1. Distribute funding to geographic areas based on HIV infection rates.
84%	23. Support providers in coordinating their services by locating Ryan White Part B and C services together.
83%	29. Work with providers to ensure providers reflect the diversity of the populations they serve.
83%	33. Support advocacy efforts to change laws to increase access to clean syringes.
85%	43. Bring people together to talk about issues related to HIV and the Black community.
	highest agreement rates
97%	3. Work with settings like STD clinics and community health centers to help make HIV testing a routine part of healthcare.
97%	22. Promote and support expanded HIV training for health care providers.
97%	26. Use good processes to link newly diagnosed HIV-positive people to Partner Services and medical care quickly.
97%	32. Expand benefits to assist clients to access health insurance through the Special Pharmaceutical Benefits Program (SPBP).
97%	37. Work with medical providers to ensure quality healthcare that does not discriminate against people living with HIV.
98%	39. Support efforts with the prisons to make sure HIV-positive people getting out of prison can get their medications.

Other variables that indicate the survey appropriately reflects stakeholders in the commonwealth include the findings that 55.5 percent of all respondents self-reported being HIV positive, that 50.6 percent reporting being in HIV care, and that 65 percent identified as lesbian, gay, bisexual, transgender, and queer (LGBTQ) (with 52.3 percent of respondents overall identified as being gay). The survey captured whether respondents identified with or worked among eight of the highest risk categories for HIV infection or those in need of HIV care services: persons living with HIV (PLWH); individuals at risk through unsafe injection drug use (PWID); people who are experiencing or have experienced homelessness; people involved in HIV prevention and/or care in minority communities; people with disabilities (including age-related); individuals at risk through unsafe sex (including sex work); people experiencing or who have experienced incarceration; men who have sex with men. Responses to this question were distributed robustly among all groups; out of 722 responses to the question, all categories fell between the range of ‘individuals at risk through unsafe injection drug use’ at 7 percent and ‘PLWH’ at 23.5 percent.

Areas that the survey identified for further outreach and support include young people (only 20 percent of respondents were under the age of 40, and only 6.5 percent of respondents were under the age of 30); Latinx (5 percent); Black/African American communities (17 percent),

particularly women of color; transgender and genderqueer individuals (1.4 percent of respondents). The full survey report and analysis can be found in Appendix E.

A second example of specific stakeholder input and feedback is exemplified in the work the Pennsylvania Department of Education (PDE), as a partner with the division of HIV disease, conducted from roughly 2014-2018. PDE worked on revisions to the state academic standards for Health and Physical Education, and the HPG provided feedback to the proposed learning outcomes in spring 2019.

The finalized (2019) academic standards are:

§ 4.29. HIV/AIDS and other life-threatening and communicable diseases.

(a) Instruction regarding prevention of human immunodeficiency virus (HIV) infection/acquired immunodeficiency syndrome (AIDS) and other life-threatening and communicable diseases shall be given for primary, intermediate, middle school and high school education and shall follow the requirements of subsections (b) and (c).

(b) Educational materials and instruction shall be determined by the local school district and be appropriate to the age group being taught. The program of instruction must include information about the nature of the diseases, treatments and cures, methods of transmission LGBTQ+ experience and how infection can be prevented. The school district may omit instruction in the elementary grades on transmission of disease through sexual activity. Programs discussing transmission through sexual activity must stress that abstinence from sexual activity is the only completely reliable means of preventing sexual transmission. Programs must stress that avoidance of illegal drug use is the only completely reliable means of preventing transmission of disease through shared drug paraphernalia.

(c) A school entity shall excuse a pupil from HIV/AIDS instruction when the instruction conflicts with the religious beliefs or principles of the pupil or parent or guardian of the pupil and when excusal is requested in writing. Prior to the commencement of instruction, a school district shall publicize that detailed curriculum outlines and curricular materials

used in conjunction with the instruction are available to parents and guardians during normal school hours or at teacher-parent conferences. Curricular materials, if practical, shall be made available by the school entity for home instructional use by a parent or guardian if the student has been excused from the school entity's HIV/AIDS instruction.

2. Missing Stakeholders

The stakeholder engagement plan of the HPG includes an evaluation process to monitor groups of stakeholders being accessed for their input into the plan, and to better understand which stakeholders are missing from their planning process. To accomplish this, the HPG convenes yearly an ad-hoc membership and stakeholder engagement committee to identify gaps in representation among key populations. Voting and non-voting members attending HPG meetings are among the stakeholders who are constantly influencing the planning process and identifying the disparities in our engagement process. Stakeholders who have been identified to improve the HPG's planning process in 2016 include: youth between the ages of 13-29, especially African Americans and Latinx; transgender individuals; current or former injection drug users, people with disabilities; former prisoners who are HIV positive; individuals who identify with RWHAP; ethnic/racial minorities with HIV or at high-risk for acquiring HIV, including native peoples.

3. Letter of Concurrence

Please see Appendix D for the signed Letter of Concurrence from the HPG Co-Chair.

C. People Living with HIV and Community Engagement

1. Methods of Engagement

Stakeholder involvement in planning HIV prevention and care services had been a major goal of both the previous CDC funded CPG and the HRSA funded Integrated Planning Council (IPC). This goal has reflected the deep commitment of the members of those groups and of the Pennsylvania Department of Health staff to the inclusion and empowerment of people affected by HIV. In the earliest meetings of the members of the two groups to develop the current HIV Planning Group, everyone agreed that consumer and stakeholder involvement was essential to the success of HIV planning in Pennsylvania. It was further agreed that the process for involvement needed to be designed so that the views of HIV-affected people not in care, the most

highly marginalized groups of affected communities, and field level staff of HIV agencies and organizations all be effectively engaged in the process. The integration planning group concluded that the input needed for future plans had to be clearly communicated to these populations and that multiple methods of communication were needed to ensure a communication network that was as inclusive as possible. It was further concluded that developing this network would take a number of years and would need constant monitoring and revision.

The IPG Membership and Stakeholder Committee began a process to identify all of the relevant communities or constituencies who have a stake in HIV planning in 2013. To build consensus and take nothing for granted they first asked, “who are stakeholders?” In order to determine this answer, they consulted documents issued by the Centers for Disease Control and Prevention (CDC) and by Health Resources and Services Administration. The definitions are:

- “A person or representative who has personal or professional experience, skills or expertise in HIV.” (CDC)
- “Stakeholders are consumers and providers and funders.” And the Stakeholder process is to “...provide perspective into the adequacy of the planning process. RWHAP recipients (Parts A-F which include the AIDS Education and Training Centers (AETCs) are requested to participate in the development of the ACSN and facilitated by the RWSPA Part B recipient. (HRSA)

After discussion within the Committee and with input from other members of the IPG, the Committee identified 29 different primary groups of stakeholders. This list included groups such as staff at STI clinics and HIV Case Management staff. In early 2014, the committee prioritized the groups using the stages in the HIV Service Model, namely: Prevention, Test, Link, Treat, and Retain. Many stakeholders, such as Department of Health field staff, appear in each stage or in many stages, while other stakeholders are linked with only one or two stages such as HIV testing sites. This process led to a prioritized and consolidated listing of consumers and of providers. The final list is:

HIV-Positive and HIV-High Risk Negative Consumers

- Consumers on Community Advisory Boards of HIV related clinics and programs
- Consumers receiving HIV services at publicly funded sites and ADAP

- Consumers who have access to the internet
- Unaffiliated consumers but may be reachable through non-HIV services or providers such as homeless shelters

Agency Stakeholders

- a. Department of Health disease field staff
- b. HIV Agency staff supported by federal and state funders
- c. STI program staff
- d. Drug and Alcohol program staff
- e. Public and private mental health providers
- f. Correctional staff at adult and juvenile facilities
- g. Community organizations and services for HIV negative high-risk individuals such as needle exchange programs, gay softball leagues and LGBTQ youth groups
- h. Faith-based organizations serving at-risk populations (esp. African Americans, Latinx, faith organizations serving homeless or PWID populations)
- i. Aging and disability organizations

Access to Stakeholders

Every year since 2014 the HPG and University staff have worked to identify where members of the prioritized Stakeholders are present online or in person. Statewide conferences of Department of Health staff, HIV provider agencies, Disability Services providers, state or federally sponsored HIV staff trainings, Healing Weekends for consumers, food pantries for HIV consumers, gay minority and other LGBTQ youth functions, and certain online chatrooms have all been identified.

The HPG recognizes that true participation requires parity. Consumers and providers need to be informed about the HIV planning process and the issues that require consultation with diverse groups. In order to provide resources for planning, the HPG members are a vital link with local communities by providing information about the planning process as well as gathering information to bring back to the HPG. The HPG is publishing a newsletter for wide distribution through the Web and email lists providing basic information about the planning process and providing links to the HPG Cloud where relevant documents are available. These include minutes

of meetings in both Spanish and English; copies of videos and/or slideshows presented at HPG meetings; epidemiological reports; relevant documents from HRSA and the CDC; and a link to the HPG website at www.stophiv.com with planning materials. Promotional campaigns will be used to circulate information about these resources and to enlist interest in the stakeholder process.

The HPG has identified various methods that could be used to gather input from the consumers and providers into the HIV plan. They include developing a reasonable number of questions related to the plan (or yearly planning needs) in areas where stakeholder input would be most valuable. These questions would then be circulated in the following ways and data gathered for analysis by the HPG:

- a. Regularly soliciting consumers and providers, including RWHAP Part A-F staff, to apply for membership on the HPG.
- b. Updating stakeholders about the plan and seeking input at local, regional, and statewide meetings of HIV positive and negative consumers and providers.
- c. Developing a network of the 40+ HIV Community Advisory Boards who will connect via the Web or conference calls periodically to learn about and to provide input into the HIV plan
- d. Developing email lists of consumers and providers to provide links to HIV planning documents and to surveys eliciting feedback into the plan
- e. Developing online and paper surveys related to HIV planning and distributed to all consumer and provider groups in the state such as HIV clinics and case management programs and advertised in small media serving HIV professionals and consumers
- f. Distributing surveys at professional and consumer regional and state-wide meetings such as the Trans Health Conference in Philadelphia, the biannual disability conference in Lancaster, and meetings of Ryan White Grantees/Providers
- g. Town Meetings widely publicized to HIV agency staff members and consumers
- h. Developing short and simple questions for staff at syringe exchange programs to ask their clients
- i. Develop and administer a survey sent to all participants in the State Pharmaceutical Benefits Program.

2. Engagement Reflectiveness

Reflectiveness of the overall HPG membership is valued and included among Pennsylvania's HPG Protocols to ensure that representation is reflective of the epidemic in Pennsylvania. The current composition of our membership includes: affiliated and non-affiliated consumers of Ryan White services and the state run SPBP; program staff of Ryan White A, B, C, D, and F funded agencies; HIV testing and prevention providers; regional grantees; human service providers from Mental Health, Drug and Alcohol, and Housing/HOPWA; faith-based organizations; federally qualified and community health center staff and doctors; program staff from Early Intervention Services, the MAI, Medicare/Medicaid, hospitals, state and local health departments, and the medical teaching community. Through the Membership and Stakeholder Engagement Ad-Hoc Committee, the HPG makes all attempts to recruit and retain HPG members that are reflective of the current epidemic in Pennsylvania.

Epidemiological information regarding HIV rates in Pennsylvania indicates that minority communities (particularly African Americans) as well as MSM are disproportionately affected by HIV in the Commonwealth. In 2015, 35 percent of voting HPG members self-identify as MSM, 35 percent as African American, and 4 percent Latinx.

3. PLWH Contributions

The HPG membership – which is itself comprised of stakeholders and a number of PLWH from across the state – recognized that some stakeholders would have a wider breadth of experience with HIV than others and that some stakeholders' ability to access, read, and understand all of the documents related to the development of the Pennsylvania HIV Plan may vary greatly. In order to maximize participation from all stakeholders, the HPG has taken several steps towards accessibility. With the University of Pittsburgh staff, a box file sharing system has been created which contains all the data gathered by the HPG such as needs assessments and relevant reports that were used in generating the plan. Please see Section II, B, 1 for the details of the HPG's success using that system. Relevant epidemiological data, minutes, videos, and power point presentations at all HPG meetings are accessible there, both for review and editing/project development. All finished documents and presentations are made available on www.stophiv.org. All stakeholders are given the link to that planning website and are free to read and study any of these documents as they wish.

Another component of the HPG's planning included the development of a five-year Stakeholder Engagement Plan. This includes varied methods to reach diverse audiences and communities, and most of these methods have been described and modeled throughout this IHPCP document. For example, the HPG plans to collect input and feedback regarding updates to the IHPCP and other HIV-related community issues through face-to-face meetings, online presentations, and extended in-person or virtual discussions. These include conference call meetings with already identified HIV-related Community Advisory Boards, meetings with HRSA Parts A-F, and town meetings. Other methods using online, or paper surveys will include a link to surveys on stophiv.org (linking to Qualtrics Assessment software) and will feature questions that are being offered to stakeholders through needs assessments or meeting discussions and that are particularly relevant to the current plan. This method, for example, has been described in this document regarding the HPG Incidence Committee's identification of the need to increase HIV testing among MSM male youth, particularly among African Americans and Latinos. Needs Assessments, as also described above, have identified barriers faced by these young men. The engagement plan approved by the HPG dictates that all stakeholders be asked to prioritize these barriers and offer their own suggestions or barriers based on their own experiences and knowledge.

Data gathered using these various methods will also include responses to surveys and interviews, group interviews, and focus group data. The data shall be compiled and analyzed by University of Pittsburgh HPCP staff and presented to the division, the HPG, and made publicly available on www.stophiv.org (as appropriate). The success of this approach is demonstrated by the results of the IHPCP Stakeholder Survey, for example, wherein 55.5 percent (401) respondents identifying as HIV-positive.

4. Impacted Community Contributions

Successful iterations of the process described above – identifying, gathering, analyzing, and reporting consumer and PLWH input by and for the HPG – have already been conducted on multiple occasions and are included throughout this plan in detail. Examples include the consumer input gathered in 2014 for the HPG's Priority Setting Process, where over one hundred PLWH contributed their voices and input into this planning process to help the HPG. In 2015, the access subcommittee's presentations around peer navigation models were led by successful practitioners in the field. The disparities subcommittee, investigating transgender access to

testing and care, conducted a statewide survey of over 300 providers and staffs' experiences working with transgender clients, received a report on social barriers around violence based on in-depth small group interviews with transgender (MtF) African American and Native American women in Pittsburgh, Pennsylvania, and arranged a panel presentation for the full HPG where transgender activists spoke about their experiences. Finally, the incidence subcommittee received a report from the professional staff who developed Project Silk, a successful recreation-based public health intervention for black MSM and bi-identified youth in Pittsburgh. All these contributions, reflected in multiple levels of this plan and reflective of the process that will be used by the HPG for years to come, came directly from stakeholders all across Pennsylvania and from all stages of the continuum. The efficacy potential of such efforts is reflected in the IHPCP stakeholder survey results, which showed robust and balanced responses among people identifying with or working in eight communities involved in HIV care or at high-risk for contracting HIV: people living with HIV; individuals at risk through unsafe injection drug use (PWID); people experiencing or who have experienced homelessness; persons with disabilities (including age-related); men who have sex with men; individuals at risk through unsafe sex (including sex work); people experiencing or who have experienced incarceration; people working with HIV prevention and/or care in minority communities. [Please see Appendix E for complete results.]

In addition to these larger processes, the HPG Steering Committee and the Division take very seriously the feedback offered by stakeholders on their processes and monthly planning meetings. Comments offered publicly during HPG meetings are recorded for inclusion in the planning process, and the group has an optional feedback survey available at every meeting since 2014 to actively capture and respond (as appropriate) to suggestions and feedback.

The optional evaluation was created in January 2014 to address concerns expressed at that time by members regarding meeting presentations. This evaluation was developed to include a series of questions addressing multiple aspects of the meeting, including participation within the meetings, staff support, and resources made available at the meetings, the accommodations, and the comfort of HPG members within the meeting space, and the meeting presentations. The evaluation form has been available at every meeting since March 2014 to allow the HPG leadership and the division to actively receive and respond (as appropriate) to suggestions and feedback as they are submitted. Thirty-one evaluations were collected in 2014.

Within the first year of utilizing the evaluation and following up on the concerns they identified, the feedback concerning the presentations had greatly improved, as did other comments regarding the accommodations and comfort of attending HPG members. The HPG now receives fewer meeting evaluations (nine in 2015), and in contrast now receives significantly more positive feedback on the meetings.

Thus, the ongoing process of reflection and growth listening to HPG stakeholders and guests has served the HPG and the overall process well. Analysis of the surveys from the end of 2014 and into 2015 has shown significant increases in both member and guest stakeholder satisfaction with the processes, work, and presentations by and for the HPG.

Section III: Monitoring and Improvement

A. Progress Updates

The HPG developed a five-year timeline for the Stakeholder Process which includes an HPG-wide annual review and evaluation of the program. Disease Intervention Specialist (DIS) staff and consumers were reached via the state pharmaceutical program, with agency staff of federal and state HIV programs being the groups being prioritized for involvement in the planning process. Currently the HPG plans to add providers of STI and Drug and Alcohol programs serving HIV high risk negative and positive populations in year two. Best methods to reach them will be identified by DOH agency staff and staff of relevant professional associations. Appropriate methods will be implemented to collect and analyze the data. Each year, the members of the HPG will monitor and evaluate their success in including stakeholders and reaching new populations and will modify the Stakeholder Plan as needed. All planning progress, meeting and presentation videos, and documentation will be publicly available on stophiv.org along with mechanisms for consumer feedback as well.

Additionally, many of the methods developed by the HPG and HPCP staff are also appropriate for use for gathering yearly planning input. As described in Section II, C, 1, this includes developing a reasonable number of questions related to current planning needs in areas where stakeholder input would be most valuable. These questions would then be circulated in the following ways and data gathered for analysis by the HPG. The division will inform this timeline for the HPG and the HPCP biennially as it deems appropriate:

- Regularly soliciting consumers and providers, including RWHAP Part A-F staff, to apply for membership on the HPG.
- Updating stakeholders about the plan and seeking input at local, regional, and statewide meetings of HIV positive and negative consumers and providers.
- Developing a network of the 40+ HIV Community Advisory Boards who will connect via the web or conference calls periodically to learn about and to provide input into the HIV plan
- Develop email lists of consumers and providers to provide links to HIV planning documents and to surveys eliciting feedback into the plan

- Developing online and paper surveys related to HIV planning and distributed to all consumer and provider groups in the state such as HIV clinics and case management programs and advertised in small media serving HIV professionals and consumers
- Distributing surveys at professional and consumer regional and state-wide meetings such as the Trans Health Conference in Philadelphia, the biannual disability conference in Lancaster, and meetings of Ryan White Grantees/Providers
- Town meetings widely publicized to HIV agency staff members and consumers
- Developing short and simple questions for staff at needle exchange programs to ask their clients
- Develop and administer a survey sent to all participants in the State Pharmaceutical Benefits Program.

B. Monitoring and Evaluation

The division of HIV disease will monitor the delivery of all activities indicated in the previous goal and objective charts in section II. A. Staff in all three of the sections within the Division will generate reports and evaluate the delivery of services to meet the identified activities and services, utilizing the various data systems, as described in Section II. E (1) above. Ongoing assessment of the reduction or increases indicated will be performed. Quarterly data collection and assessment will assist in the determination of the effectiveness of the activities implemented to meet the identified goals and strategies.

C. Surveillance Strategy

The division of HIV disease will utilize surveillance and program data to assess and improve health outcomes along the HIV Care Continuum. Data collected by all sources will be used to drive decisions to impact the quality of the HIV service delivery system, including strategic long-range planning.

The department employs a data driven approach wherein epidemiologic and surveillance information is utilized as a foundation for our prevention program planning and implementation of activities. In addition to utilizing Pennsylvania's Integrated Epidemiologic Profile of

HIV/AIDS in Pennsylvania (Epi Profile), we have increased collaboration with the HIV surveillance staff to utilize real-time surveillance data to monitor and evaluate activities related to linkage to care and partner services more effectively. Enhancements have been made to internal processes to allow for more efficient monitoring and evaluation of these activities to allow more immediate and routine feedback to the field. This increased collaboration not only improves data collection regarding risk, linkage to PS and linkage to care, which is a mutual benefit for the Department's HIV Prevention and HIV Surveillance program areas; but also demonstrates a true use of surveillance information to impact the quality of the HIV service delivery system, and in turn assess and improve health outcomes along the continuum.

Appendices

Appendix A1: Epidemiological Profile Citations

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A2: Priority Setting Results and Data

Priority Rankings for Ryan White services, as approved by the HPG November 2014

1	AIDS Drug Assistance Program (ADAP) (also known as SPBP)	11	Substance Abuse Services – Outpatient
2	Outpatient/Ambulatory Medical Care	12	Food Bank/Home Delivered Meals
3	Medical Case Management	13	Health Education/Risk Reduction
4	Housing Services	14	Medical Nutrition Therapy
5	Oral (Dental) Health Care	15	Treatment Adherence Counseling
6	Early Intervention Services	16	Psychosocial Support Services
7	Medical Transportation Services	17	Outreach Services
8	Mental Health Services	18	Substance Abuse Services - Residential
9	Emergency Financial Assistance	19	Home Health Care
10	Health Insurance Prem & Cost Sh. Asst	20	Non-Medical Case Management

21	AIDS Pharmaceutical Asst (local)
22	Legal Services
23	Home & Cmty-Based Health Services
24	Linguistic Services
25	Referral for Health Care/Supp Services
26	Rehabilitation Services
27	Child Care Services
28	Hospice Services
29	Respite Care

Resource Allocation Recommendations, approved by the HPG November 2014

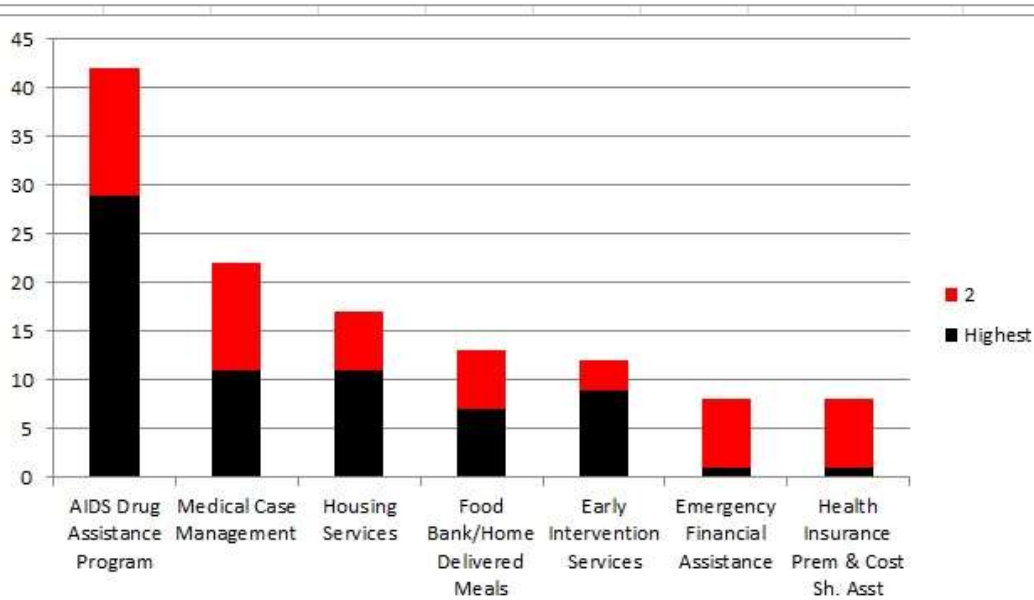
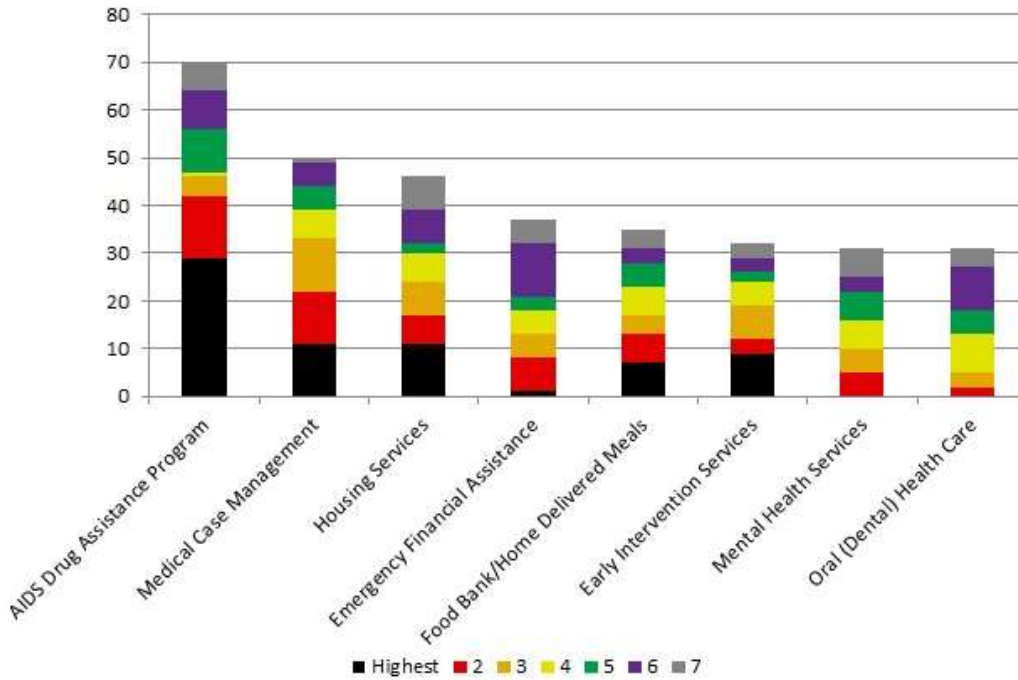
Service Category in Priority Order	Priority Ranking	Previous Years' % of Funding	Allocation - % of Funding
ADAP/SPBP	1		
Outpatient/Ambulatory Care	2	11.58	11.58
Medical Case Management	3	50.92	50.92
Housing Services	4	2.82	2.82
Oral Health Care	5	3.81	6.87
Early Intervention Services	6	0	0
Medical Transportation Services	7	2.9	2.9
Mental Health Services	8	0.89	1.19
Emergency Financial Assistance	9	5.6	5.6
Health Insurance Prems & Cost Sharing Assistance	10	2.18	2.18
Substance Abuse – Outpatient	11	0.64	0.94
Food Bank/Home Delivered Meals	12	6.24	6.24
Health Education/Risk Reduction	13	6.18	3.18
Medical Nutritional Therapy	14	0.35	0.35
Treatment Adherence Counseling	15	0.6	0
Psychosocial Support Services	16	1.25	1.25
Outreach Services	17	0.41	0.41
Substance Abuse – Residential	18	0	0
Home Health Care	19	0.97	0.97
Non-Medical Case Management	20	0.06	0
AIDS Pharm. Assistance (local)	21	0	
Legal Services	24	1.05	
Home & Community-Based Health Services	19	0.03	
Linguistic Services	27	0.5	
Referral for Health Care/Supportive Services	25	0	2.6 (TBD by DOH for the section)
Rehabilitation Services	20	0	
Child Care Services	26	0	
Hospice Services	28	0.58	
Respite Care	29	0.44	

Key: Black Text = Core Services; Yellow text = Support Services

Green figures highlight an increase in funding over previous year; red indicates the inverse.

All HPG deliberations and voting related to the PRSA Process is publicly available on www.stophiv.org in the November 2014 meeting minutes.

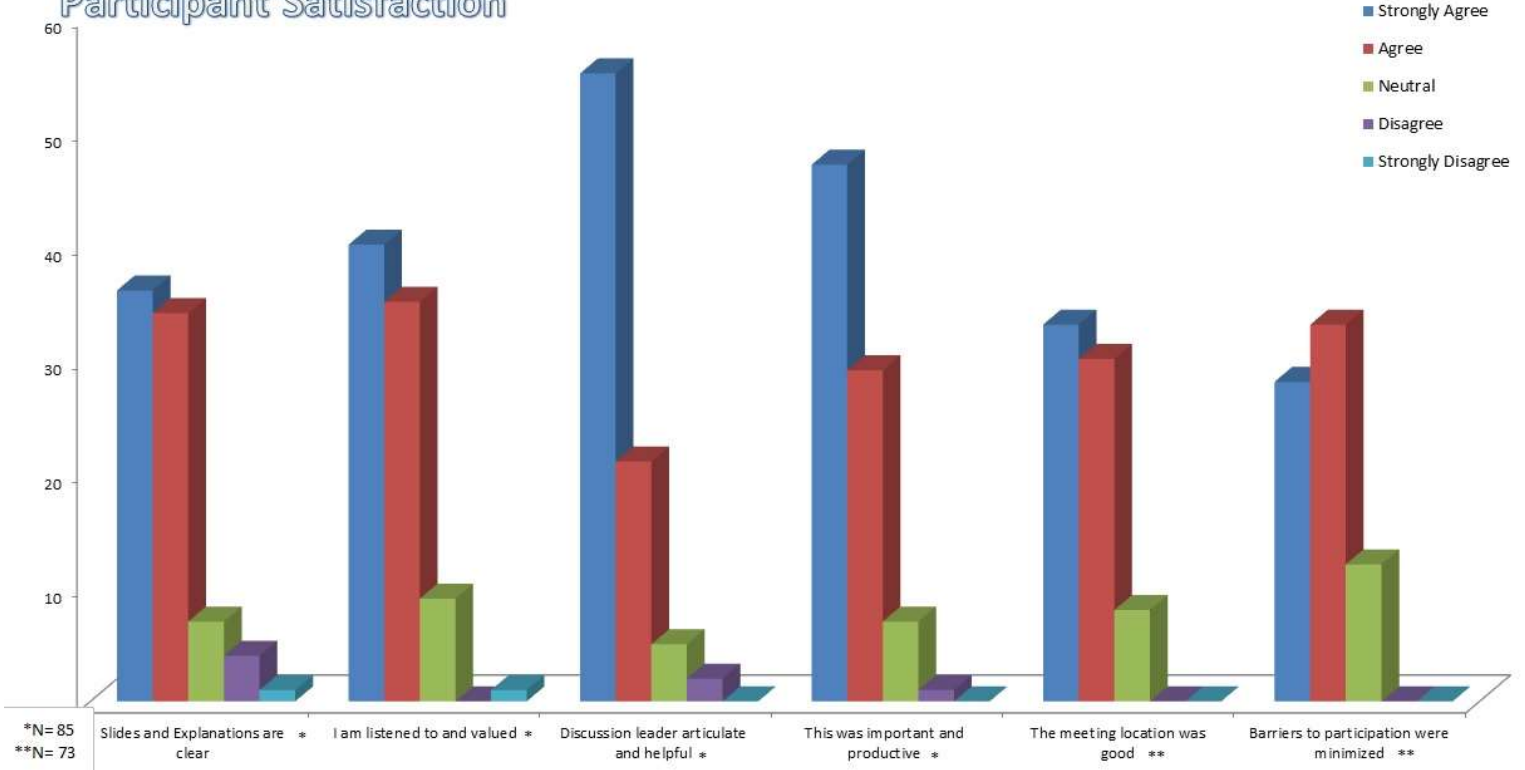
Consumer PSRA Results (Top 7 – the top 1/3 of all options)



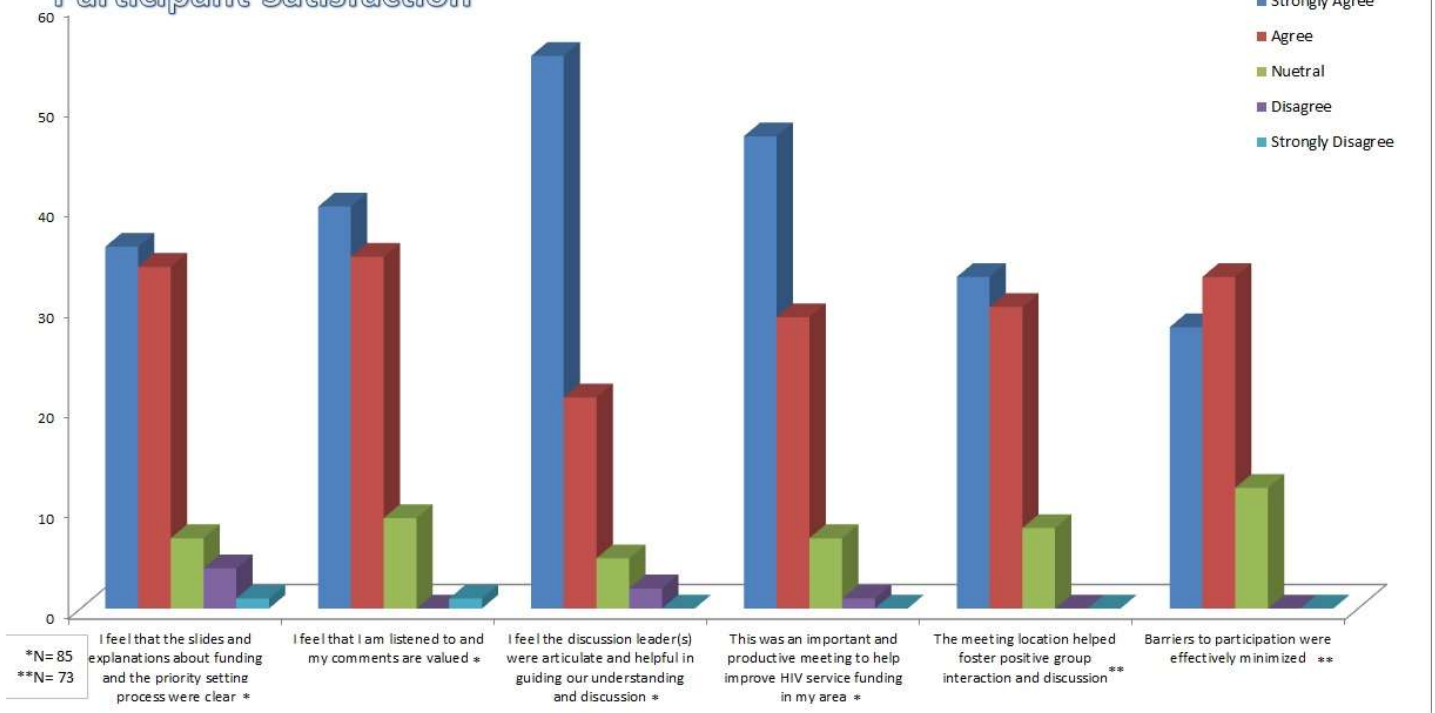
(N=98)

Consumers' Satisfaction with the PSRA Process

Participant Satisfaction



Participant Satisfaction





Appendix B: MAAETC Workforce Needs Assessment



Workforce Needs Assessment MidAtlantic AIDS Education and Training Center University of Pittsburgh, Graduate School of Public Health Pennsylvania Sub-Report

I. BACKGROUND

The MidAtlantic AIDS Education & Training Center (MAAETC), and its predecessor entities, has provided HIV education and training to more than 250,000 health care professionals since 1999. The University of Pittsburgh, Graduate School of Public Health (GSPH), Department of Infectious Diseases, leads the project providing oversight of programs, budgets, evaluation, planning, and performance monitoring. Regional partners include: University of Maryland, Johns Hopkins University, Howard University, Virginia Commonwealth University, West Virginia University, Health Federation/Drexel University, Inova Healthcare, and Christiana Care. The Principal Investigator, Dr. Linda Frank has successfully directed and managed the program since initial funding in 1988, and is characterized by a dynamic, productive consortium with high quality training, documented outcomes, state/local government contracts and financial support, linkages with clinical experts, researchers, Ryan White programs, minority organizations, community health centers, and other federal and state programs serving people living with HIV/AIDS (PLWH).

Targeted Audience: Physicians, dentists, nurses, nurse practitioners, advanced practice nurses, physician assistants, pharmacists, social workers, case managers, allied health professionals and other care team in USPHS Region III (Pa., Md., Va., Wv., De., DC) are target audiences for MAAETC intervention. Targeted practice sites include community and migrant health centers, Ryan White Part A, B, C and D programs and providers, hospitals, outpatient primary care settings, community-based organizations, prisons and jails, women's health services, LGBT service providers, adolescent services, homeless programs, health departments, behavioral health services, and medically underserved and rural areas.

II. INTRODUCTION

This report is a "sub-report" of the overall need's assessment conducted for Region III of the USPHS by the MidAtlantic AETC and submitted to HRSA, HIV/AIDS Bureau, Office of Domestic & Global, HIV Training & Capacity Development Programs on June 30, 2016. The information contained in this report has been provided by health professionals through USPHS Region III who participated in an electronically delivered needs assessment, provided educational needs post training, and provided data through follow-up evaluation conducted by the MidAtlantic AETC. In addition, collaborative national evaluation was conducted by the MidAtlantic AETC and the AETC National Evaluation Center and is also included in this report.

The MidAtlantic AETC was required to participate in the AETC Needs Assessment Workgroup (NAWG) which was ongoing from November 2015 through June 2016. This group included



representatives from all the regional AETCs, the National Evaluation Center (NEC), the National Coordinating and Resource Center (NCRC), the National Clinician Consultation Center (NCCC), and leadership of the HRSA, Office of Training and Capacity Development. This group was led by the NCRC consultant and the results of this collaborative provided direction for the information contained in the overall MidAtlantic regional needs assessment that was submitted to HRSA and contained in this report.

A. Summary of Pennsylvania

The state of Pennsylvania is geographically and demographically diverse. Its total population (2015) is 12,802,503 spreading over an area of 44,817 square miles and 67 counties. About one-quarter of the population lives in the state's 48 rural counties.² Philadelphia is its largest city with over 1,500,000 residents (significantly more than the next nine cities combined).



Figure 1: Pennsylvania

The AETC has been an active participant in Pennsylvania's response to changes in the HIV-related landscape. The consortium is an established, respected and coordinated team of Regional Partners (RPs) and their clinical experts, clinicians, trainers, and staff who work together to avoid duplication of effort, collaborate on innovative programming, and share regional resources, materials, faculty, and talent.

² The Center for Rural Pennsylvania, <http://www.rural.palegislature.us/about.html>, accessed 07/20/16.

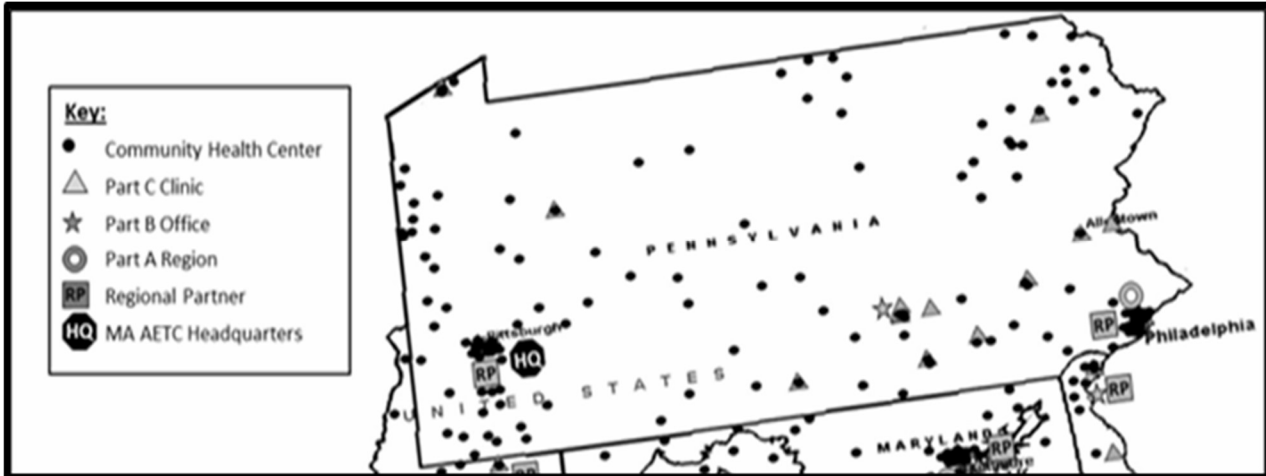


Figure 2: MAAETC Region and regional partners

Figure 2 provides information on the geographic areas in Pennsylvania served by the MA AETC and shows the locations of the Eligible Metropolitan Area (EMA), Community Health Centers (CHCs), regional partners (RPs) and project headquarters within Pennsylvania. The AETC has been key in the development of a more responsive health care system through our consistent, organized, expert training, consultation, and technical assistance as well as collaborative relationships to identify training needs, reach targeted audiences, and develop programs that enhance the HIV continuum of care.

B. SUMMARY OF CLINICAL CARE RESOURCES

Pennsylvania has areas of incomparable quality and plentiful medical and health care resources. Some areas of the state are in desperate need of assistance. Although Pennsylvania has a significant number of medical facilities, including some of the best facilities in the world, they are primarily located in urban areas, and there are many underserved areas that include small towns and large rural areas with limited or no services in some subspecialties.

Tables 1 and 2 reflect a snapshot of medical resources for the state (Pennsylvania):

Table 1: Hospitals, Clinics, Medicare, and Medicaid Beneficiaries (2012/2013)³	
	Pennsylvania
Total Hospitals	240
Total Hospital Beds	45,062
Short-Term General Hospitals	157
Short-Term General Hospital Beds	36,257
Community Health Centers	214
Federally Qualified Health Centers	209
Medicare Beneficiaries	2,453,686
Medicare Beneficiaries % of population	19.2

³ <http://ahrf.hrsa.gov/arfdashboard/HRCTstate.aspx> accessed June 3, 2016. Data sources listed at [http://ahrf.hrsa.gov/arfdashboard/HRCT%20Data%20Sources%20\(2015\).pdf](http://ahrf.hrsa.gov/arfdashboard/HRCT%20Data%20Sources%20(2015).pdf)



Medicaid Beneficiaries	2,224,698
Medicaid Beneficiaries % of population	17.5

Many of these underserved areas are characterized by high rates of poverty, poor transportation, inadequate internet and communications, health professions shortages, particularly, HIV clinicians, psychiatrists, and specialists including obstetricians, hepatologists, and oncologists. In addition, there are high rates of alcohol and substance use and psychiatric illness in the population but limited access to outpatient and inpatient drug and alcohol treatment facilities and psychiatric care. For adolescents with substance use and psychiatric disorders there are very limited services in these areas. Travel to metropolitan areas or a large city is required to access child and adolescent psychiatric services. Travel is also required to obtain services for other clinical specialties as listed above. HRSA designated MUAs, MUPs, and HPSAs often overlap and can be found in just about every county. The mitigation of these barriers to health care is a major goal of the national health endeavors, state and local initiatives and a long-standing priority for the MidAtlantic AETC.

Table 2: 2014 HRSA designated MUAs; MUPs; HPSAs⁴			
Location	Medically Underserved Area	Medically Underserved Populations	Health Professions Shortage Areas
Pennsylvania	142	12	445
MUAs may be a whole county or a group of contiguous counties, a group of county or civil divisions or a group of urban census tracts in which residents have a shortage of personal health services. MUPs may include groups of persons who face economic, cultural, linguistic barriers to care. HPSAs may be designated as having a shortage of primary medical care, dental or mental health providers. They may be urban or rural areas, population groups or medical or other public facilities.			

The Pennsylvania Medicare enrollment rate is higher than the national average of 16.3 percent (19.2 percent, 2,453,686 of the residents) and Medicaid/Medical Assistance enrollment rate is a little less than the national average of 20.2 percent (17.5 percent, 2,224,698 of the residents) for persons on Medicaid.⁵ This is consistent with our generally older population (median age of 40.3 years versus national median age of 37.3) and our slightly lower poverty rate of 13.6 percent compared to the national average of 15 percent.⁶ Basic distribution of health care professionals in Pennsylvania is demonstrated in *Tables 3 and 4*.

Table 3: Physicians in Pennsylvania (2012/2013)⁷		
Occupation:	In Pa.	Pa. %
Primary Care Physician	10,480	35.5%
General/Family Practice	4,363	14.8%
Internal Medicine	4,136	14.0%

⁴ HRSA Data Warehouse, <https://datawarehouse.hrsa.gov/topics/shortageareas.aspx>

⁵ <http://ahrf.hrsa.gov/arfdashboard/HRCTstate.aspx> accessed June 3, 2016. Data sources listed at [http://ahrf.hrsa.gov/arfdashboard/HRCT%20Data%20Sources%20\(2015\).pdf](http://ahrf.hrsa.gov/arfdashboard/HRCT%20Data%20Sources%20(2015).pdf)

⁶ Poverty USA, <http://www.povertyusa.org/the-state-of-poverty/poverty-map-state/> accessed 07/20/16

⁷ <http://ahrf.hrsa.gov/arfdashboard/HRCTstate.aspx> accessed June 3, 2016. Data sources listed at [http://ahrf.hrsa.gov/arfdashboard/HRCT%20Data%20Sources%20\(2015\).pdf](http://ahrf.hrsa.gov/arfdashboard/HRCT%20Data%20Sources%20(2015).pdf)



OB/GYN	1,347	4.6%
Dentist	7,701	26.1%
Psychiatrist	1,458	4.9%

**Table 4:
 Nurses and Nurse Practitioners in Pennsylvania (May 2015)⁸**

Occupation	
RN	136,090
Nurse Practitioner (% of RNs)	4,380 (3.1%)
Physician Assistants	5,610

Nurses and advanced practice nurses comprise the largest audience for AETC training programs in the state. Historically and currently, Pennsylvania has a significantly larger number of nursing programs at the associate, baccalaureate, and graduate level than other states. Unfortunately, the health care system and infrastructures have not taken advantage of the expertise and contribution that nurses can make to improve testing, treatment, prevention, and maintenance in care. In Pennsylvania, nurse practitioners and advanced practice nurses are prevented from functioning to the full extent of their education and practice. Addressing this barrier has been opposed by traditional physician led organizations to expand the scope of practice for advanced practice nurses. Similar barriers have existed for physician assistants but less so since they are physician dependent. Nurse practitioners and physician assistants can serve to improve the HIV care continuum for HIV patients and those at risk in both urban and rural settings if there are efforts to increase their utilization as prescribers through legislation change, and increasing use of inter-professional models of care and permitting nurse practitioners, advanced practice nurses, and physician assistants to expand their roles.

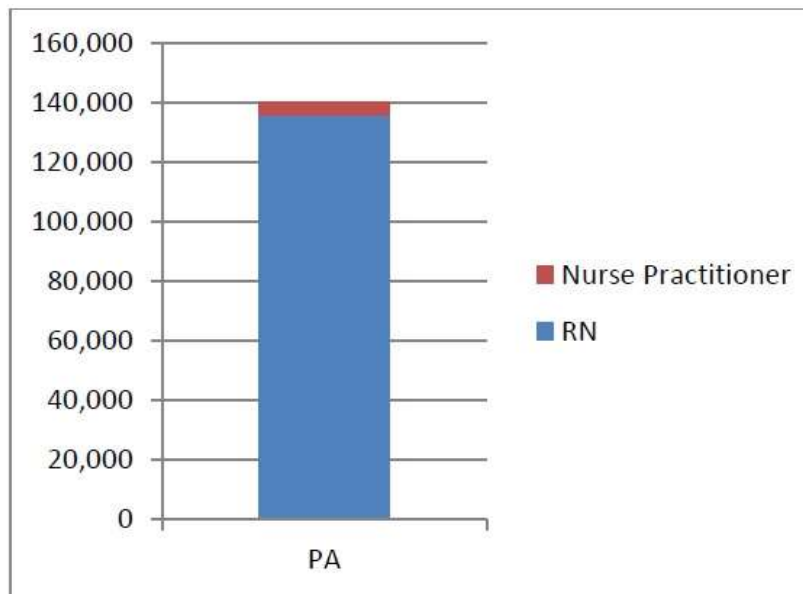


Figure 3: Nurses, NPs, and Advanced Practice Nurses in Pennsylvania

⁸ US Department of Labor, Bureau of Labor Statistics, Occupational Employment Statistics Query System. Accessed at <http://data.bls.gov/oes/> on June 3, 2016



The MAAETC has always focused on training nurses, NPs and PAs within the region and will continue to prioritize these health professionals and address systemic barriers to their utilization including laws, reduction of professional tensions, and reimbursement issues.⁹ Over the past 25 years, the MAAETC partners have been instrumental in building capacity by assisting clinics and programs to apply for Ryan White funding as well as providing ongoing training, consultation, and technical assistance. *Tables 5, 6 and 7* demonstrate Ryan White Program grantees and types in Pennsylvania.

	Part A	Part B	Part C	Part D	SPNS	Oral Health
PA	(54)	1 (53)	23 (28)	7 (17)	1 (1)	3 (n/a)

	Hospitals	C	CBOs	Health Dept.	Other	Totals
PA	25	11	46	2	13	97

The MAAETC is closely networked with Ryan White programs throughout the state and has been instrumental in building capacity in state and local health department, hospitals, and community-based organizations.

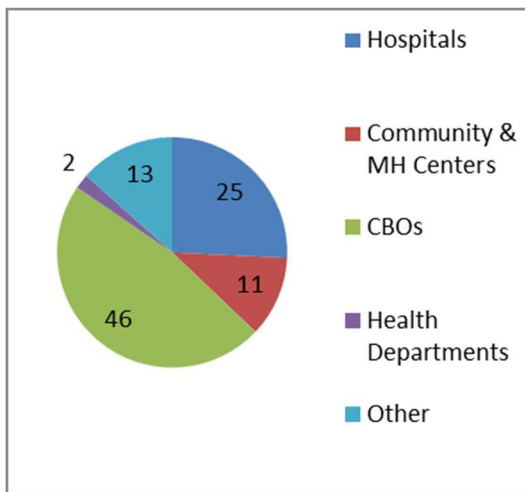


Figure 4: Pennsylvania Ryan White Grantees by Type

Although Ryan White Program funded programs are crucial to the delivery of HIV care, the financial burden, historically, has primarily been on Medicaid/Medical Assistance. Through the Affordable Care Act (ACA), many HIV positive individuals were enrolled in insurance, including Medicaid/Medical Assistance; this helps mitigate the caseloads of the RWP.¹² The MidAtlantic AETC has conducted both in-person and distance based education on ACA.

⁹ Naylor, D. and Kurtzman, E. The Role of Nurse Practitioners in Reinventing Primary Care. *Health Affairs*, May 2010, vol. 29, no. 5

¹⁰ Compiled from Ryan White State Profiles, 2013.

¹¹ Ibid

¹² Kaiser Family Foundation. Medicaid and HIV/AIDS. 2013 at <http://kff.org/hiv/aids/fact-sheet/medicaid-and-hiv/aids/>



III. METHODS AND LIMITATIONS

A. METHODOLOGY

The AETC Needs Assessment Workgroup (NAWG) was established to support a collaborative process for regional needs assessments and reports in accordance with the Guidance for the Development of a Regional AETC Needs Assessment, dated 11-13-2016. The NAWG was facilitated by the AETC National Coordinating Resource Center (NCRC) through conference calls with members from all Regional AETCs, the AETC National Evaluation Center (NEC), and the HRSA HIV/AIDS Bureau. Biweekly NAWG conference calls 12/4/2015 – 4/1/2016, followed by conference calls every 4 weeks, and supplemented by additional calls of subgroups for specific tasks. The final NAWG call was held 5/27/2016.

The NAWG defined the purpose, questions, methodology, and data sources for the needs assessment. There was strong group consensus to focus on the use of existing data rather than collecting new data to address the needs assessment questions. This decision, made by the NAWG in collaboration with HRSA/HAB, was based on numerous considerations, including the value and strengths of existing data sources, including AETC data and needs assessments completed for recent competitive applications.

The regional AETCs have extensive knowledge and experience about training and technical assistance (TA) needs for the provision, initiation, expansion, and improvement of HIV care that comes from their experiences working with healthcare providers and healthcare organizations. They also have extensive experience with the challenges and limitations of needs assessment surveys, particularly for clinics and organizations that are subject to multiple survey requests from various organizations, funders, and government agencies. Outreach to a representative of the NACHC by the NCRC and the NEC supported the NAWG decision to utilize existing available data rather than sending out an additional need's assessment survey.

Additionally, the MAAETC reviewed its own needs assessment result particular Pennsylvania needs assessment data including (1) ACRE-IP data for the 2015 FY, (2) Individual Needs Assessment for the 2015 FY, and (3) the 2014-2015 Federal Training Center Collaborative (FTCC) Needs Assessment conducted by the MAAETC in collaboration with the STD/HIV Training Center at Johns Hopkins University and the Addictions Technology Transfer Center (ATTC) in the region.

B. CHALLENGES AND LIMITATIONS

Challenges and limitations regarding use of existing data sources often emerged over time. For example, although Participant Information Form (PIF) and Event Record (ER) data tables were created for the new AETC regions, the data were not available at the state level within regions. The 2014 RSR data were limited to a single report at the state level and did not include clinic level information. Moreover, the 2014 RSR report did not include the additional indicators available online for the 2012 data, although these indicators were recently posted for 2013 RSR data. UDS data was provided at the BPHC grantee level, rather than for each of the clinical sites.

The primary use of existing data limits the ability to define selected needs according to provider patient volume and experience of HIV care as well as details about minority and minority serving healthcare professionals. Some of these limitations are addressed through analysis of existing AETC data and by inferences from multiple data sources. In addition, not all data are for the same period. The



most recent available data for the various states and programs differ. Thus, the data can vary from 2011 to 2015. Similarly, the certain professions and disciplines (e.g. Advance Practice Nurse, Physician Assistant, and Nurse Practitioner) may be confusing since their respective practices and authorities may differ geographically (i.e. whether they are “prescribers”).

IV. FINDINGS AND ANALYSIS

A. OVERVIEW OF FINDINGS

The importance of training primary care providers, especially for screening, testing and co-management of HIV patients with experts cannot be over-emphasized. National estimates show that approximately 14 percent of PLWH are unaware of their infection.¹³ HRSA and CDC emphasize the need for increased testing to reduce individuals with unknown status and the AETC has made it a priority to increase case finding and linkage to prevention and treatment. Given prevention and treatment complexity, health professionals must be updated continually, especially clinicians with less HIV treatment experience, to assure the current standard of care, support, referrals and /or co-management with experts. The AETC’s current mission emphasizes working with low volume HIV providers to increase their capacity and retain patients in care. Patients who received treatment from providers with more HIV experience are likely to have reduced mortality and increased longevity of life,¹⁴ maximize ART effectiveness, quality of life¹⁵ and reduce viral resistance.

B. FINDINGS AND ANALYSIS BY FOCUS AREA

1. Core training and technical assistance in Pennsylvania

The MAAETC is the primary teaching arm of the Ryan White Program for the region as well as other targeted settings including community health centers, FQHCs, hospitals, and other facilities and programs providing services that impact the HIV care continuum. During the 2014-2015 fiscal year, the MAAETC trained over 3,880 Pennsylvania health care professionals (not unduplicated). The discrepancy between the number of trainees of the Pennsylvania Regional Partners and the number of Pennsylvania trainees is primarily due to the webinars and archived webinars hosted by the Pittsburgh Regional Partner which attracts both a regional and national audience. Consistent with the HIV epidemiology and the location and concentration of health professionals in the workforce, most of the trainees who provided the geographic description (86.3 percent) worked in urban/suburban areas (*Table 8*).

AETC Participant Information Data

Tables 8 through 12 provide data from Participant Information Forms (PIF) of trainees who completed them

Table 8: Location of Pennsylvania trainee workplace FY 14-15		
		% respondents
Total Count of Trainees (not unduplicated)	3,884	
Rural Providers	525	13.7%
Suburban/Urban Providers	3,314	86.3%

¹³ CDC, Revised Recommendations for HIV Testing of Adults, Adolescents and Pregnant Women in Health-care Settings. MMWR, September 22, 2006, 55 (RR14); 1-17

¹⁴ Kitahata, M, et al. (2003) Primary care delivery associated with greater physician experience and improved survival among persons with AIDS, Journal of Internal Medicine, 18(2), 95-103.

¹⁵ Mellors, J, Rinaldo, C, et al. Prognosis of HIV-1 infection predicted by quality of virus in plasma. *Science*. 1996:2-12; 1167-70



The distribution of the different regional health care professional trainees was very similar to the national findings, with nurses (including Advance Practice Nurses) comprising more than half of trainees, and physicians comprising about a quarter (*Table 9*). HRSA designates certain healthcare professionals (i.e. dentists, other dental professionals, physicians, nurses, pharmacists, advance practice nurses and physician assistants) as “providers.” Within the set of providers there is a sub- set of “prescribers” who are distinguished by their authority to prescribe medications. *Tables 9 and 10* show the number of providers and prescribers who attended MAAETC training program during the FY 14-15.

Table 9: Pennsylvania MAAETC Providers FY 14-15			
	N	% of trainees	% of “Providers” (n=1476)
Profession	3,884		
Dentist	21	0.5%	1.4%
Physician	427	11.0%	28.9%
Physician Assistant	26	0.7%	1.8%
Advanced Practice Nurse	156	4.0%	10.6%
Nurse	747	19.2%	50.6%
Other dental	16	0.4%	1.1%
Pharmacist	83	2.1%	5.6%
Providers Who Treat Patients		% of “Providers”	
Yes	1,207	82%	
No	268	18%	
Service to HIV Positive Patients		% of “Providers”	% of “Providers” who see patients
Yes	948	64.2%	78.5%
No	259	17.5%	21.5%

Table 10: Pennsylvania MAAETC Prescribers FY 14-15		
	N	% of Subtotal
Profession		
Dentist	21	3.3%
Physician	427	67.8%
Physician Assistant	26	4.1%
Advanced Practice Nurse	156	24.8%
Subtotal	630	
Direct Patient Care for those above		
Yes	562	89.2%
No (or no answer)	68	10.8%
Subtotal	630	
Direct Patient Care to HIV Patients for above		
Yes	462	82.2%
No (or no answer)	100	17.8%



Subtotal	562	
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The majority of providers are intermediate and high-volume HIV care providers. Over 40 percent provide care for 10 to 49 HIV patients per month. About 29 percent see at least 50 HIV patients per month. Compared to the national data, Pennsylvania providers are generally more experienced and see a greater volume of HIV + patients (*Table 11*).

Table 11: Pennsylvania MAAETC Direct Care Providers by Volume of HIV+ Patients and Years of Experience with HIV+ Patients FY 14-15				
	Pennsylvania		National AETCs	
	N	% of Subtotal	N	% of Subtotal
Providers by Volume of HIV patients who see HIV + Patients	948			
Low volume providers	278	30.9%	11,446	54%
Intermediate volume providers	367	40.7%	6,065	29%
High volume providers	256	28.4%	3,657	17%
Subtotal	901	100%	21,168	100%
Providers by Years' Experience with HIV pts				
Early career providers	302	33.5%	24,072	67%
Intermediate experienced providers	171	18.9%	2,552	7%
Experienced providers	430	47.6%	9,479	26%
Subtotal	903	100%	36,103	100%
Cross-Tabulation of Volume and Experience				
Early career providers				
Low volume early career	119	39.9%	5,573	60%
Intermediate volume early career	138	46.3%	2,390	26%
High volume early career	41	13.8%	1,290	14%
Subtotal	298	100%	9,253	100%
Intermediate Experienced providers				
Low volume Intermediate Experienced	23	33.3%	1,228	48%
Intermediate Volume Intermediate Experienced	18	26.1%	785	31%
High volume Intermediate Experienced	28	40.6%	521	21%
Subtotal	69	100%	2,534	100%
Experienced Providers				
Low volume Experienced	113	27.0%	4,644	49%
Intermediate Volume Experienced	167	39.8%	2,891	31%
High volume Experienced	139	33.2%	1,846	20%
Subtotal	419	100%	9,381	100%
Note: "Low volume" is <10; "Intermediate volume" is 10-49; and "High volume" is 50 or more. "Early career" is <5 years of HIV care; "Intermediate experienced" is 6-9 years; and "Experienced" is 10 or more years)				



Just as with provider trainees in general, Pennsylvania prescribers tend to have more experience with HIV patients and see a higher number of HIV patients than the averages across the AETC program as depicted in *Table 12*.

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**Table 12:
 Pennsylvania Direct Care Prescribers by Volume of HIV+ Patients and Years
 of Experience with HIV+ Patients FY 14-15**

	Mid-Atlantic		National AETCs	
	N	% of Subtotal	N	% of Subtotal
Total count of trainees who can prescribe	630		22,959	100%
Prescribers by Volume of HIV pts				
Low volume	155	36.0%	7,948	55%
Intermediate Volume	156	36.2%	4,136	29%
High Volume	120	27.8%	2,392	17%
Subtotal	431	100%	14,476	100%
By Years' Experience with HIV Patients				
Early Career	113	27.7%	7,563	48%
Intermediate Experience	33	8.1%	1,597	10%
Experienced	262	64.2%	6,496	41%
Subtotal	408	100%	15,656	100%

“Low volume”=<10; “Intermediate volume” =10-49; “High volume”= 50+; “Early career”= <5 years of HIV care; “Intermediate experienced”= 6-9 years; “Experienced” = 10+years) “Prescribers: physicians, dentists, PAs, NPs, advance practice nurses

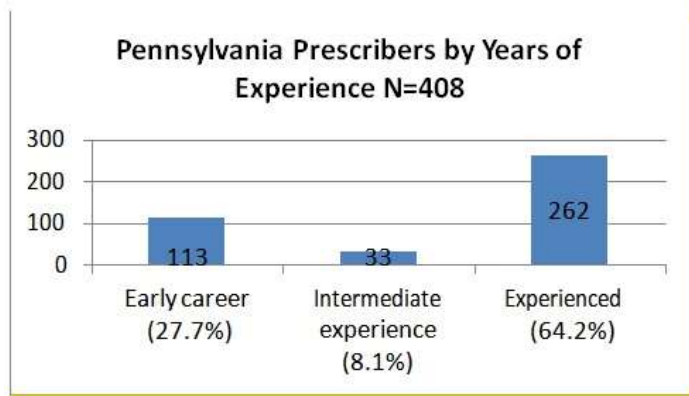


Figure 5: PA HIV Care Prescriber by Experience

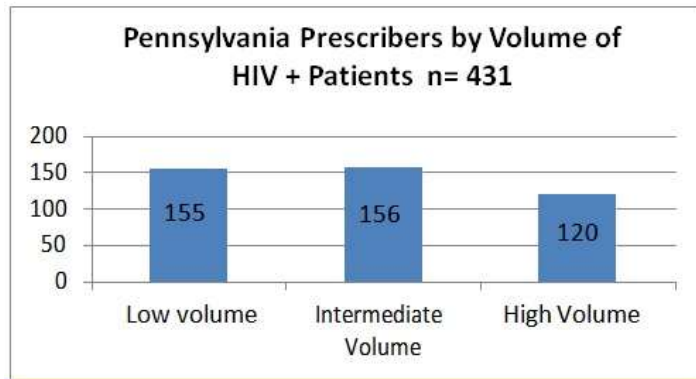


Figure 6: PA HIV Prescribers by Volume of Patients



National AETC Cross Evaluation FOLLOW-UP DATA

Tables 13 through 15 provide data from national ACRE follow-up data by trainees who completed the survey.

All regional AETCs participate in ACRE process. Trainees attending Level I, Level II and Level III programs are asked to participate in both the immediate post-training ACRE evaluation (ACRE-IP), and the ACRE-Follow-Up Evaluation (ACRE-FUP). The ACRE-IP utilized by the MAAETC consists of the cross-regional questions developed by the NEC as well as a series of specific questions unique to the MAAETC.

Table 13: ACRE-IP Evaluation Data from PA Trainees- Immediate Post Training FY 2014-2015			
	Questions 1a through 11 are on a scale of 1 to 5, 1 low - 5 high. Question 12 is on a scale of 1 to 10, 1 low - 10 high.		n= 1,869
Question	Question Text	Average	n
1a	How would you rate your level of knowledge about this content? (before training)	3.1	1,789
1b	How would you rate your level of knowledge about this content? (after training)	4.0	1,743
2	How would you rate the overall quality of the program?	4.5	1,758
3	I can apply the information learned in my practice/setting.	4.4	1,764
4	Training program or service met the stated objectives.	4.6	1,772
5	Training program or service met my expectations.	4.5	1,760
6	Training has changed the way I intend to manage HIV patients.	4.1	1,709
7	Training encourages me to seek additional support from HIV experts and tertiary care centers in managing my patients.	4.3	1,711
8	Training will help me maintain more HIV patients in my clinical practice.	4.0	1,660
9	Training increased confidence to provide HIV patients with current care standard	4.2	1,702
10	I intend to participate in AETC trainings in the future.	4.5	1,752
11	I intend to recommend AETC training to colleagues.	4.5	1,756
12	Overall importance of the consultation/training as a resource for the provision of state-of-the-art clinical management to HIV patients? (1-10 scale)	8.9	1,726

Immediately following the training, trainees reported that the training was helpful and pertinent to their needs. Data indicate that the training increased trainee’s confidence to provide the current standard of care. The ACRE-FUP is sent by email to all trainees who provide an email address (Levels 1-3) approximately 90 days after training through the NEC’s portal. *Table 14* reflects the types of services provided by Pennsylvanian providers who completed the ACRE-FUP. The table provides information on the HIV practices of these trainees.

Table 14: ACRE-FUP of Pennsylvania Clinicians FY 14-15 (PIF3 1 to PIF3 7, inclusive) N = 334		
Type of service provided	Service Provided	% of Clinician
I provide primary care for HIV-infected patients	98	29.34%
I monitor HIV-specific lab tests	131	39.22%
I initiate antiretroviral therapy	41	12.28%
I conduct adherence counseling and monitor adherence	154	46.11%
I provide prophylaxis and treatment for opportunistic infections	63	18.86%
I manage treatment when drug resistance is present	41	12.28%
I initiate care to prevent and treat co-morbid conditions	92	27.54%



I provide clinical consultation to other clinicians regarding HIV care	78	23.35%
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Table 15 below shows the practices of the doctors, dentists and other dental professionals, nurses, pharmacists, and advanced practice nurses pertaining to HIV care. It should be noted that some of these practitioners do not have within their scope of practice to serve as the primary treating clinician for the HIV patients that would include prescribing, monitoring, treating opportunistic infections.

Situation	#	%
I refer patients for ALL HIV-related care and treatment after diagnosis	112	33.53%
I refer when I think the patient needs to start on antiretroviral therapy	2	0.60%
I refer when antiretroviral treatment fails	8	2.40%
I refer patients with co-infections/co-morbidities	22	6.59%
I do not refer, but I do consult with HIV care specialists when I have questions	98	29.34%
I do not refer; I am an HIV care specialist	41	12.28%
I do not know where to refer HIV-infected patients	55	16.47%

*physicians, dentists, other dental professionals, nurses, NP, PA, pharmacists

Less than 13 percent of the clinical providers identify themselves as “HIV care specialists.” with remaining respondents providing some HIV care with the assistance of consultations with experts or refer the HIV patients when a problem arises or beyond the scope of their licensure or practice.

FEDERAL TRAINING CENTERS DATA

The MidAtlantic AETC in collaboration with other Federal Training Center Collaborative (FTCC) organizations in the MidAtlantic region distributed an online needs assessment to over 15,000 trainees in late 2014-2015. The FTCC instrument¹⁶ utilized for this survey was developed by the Principal Investigator of the MAAETC. Input on specific items was obtained from the representatives from other federal training centers in the region and agreed to distribute a link to the survey to health professionals on their mailing lists. Of the more than 1,500 health professionals, 400 were from Pennsylvania. The survey was reviewed by the University of Pittsburgh IRB and was deemed exempt from review (IRB# PRO14030407). Data were received by the University of Pittsburgh electronically from health professionals, summarized and presented in this report. The results of identified need are consistent with other sources from state health departments and regional coalitions and consortia. The respondents provided a broad diversity of health care disciplines and services (Tables 16-19).

Answer	#	%
20+ years	165	37.8%
11-20 years	102	23.4%
6-10 years	76	17.4%
0-5 years	93	21.3%

¹⁶ Frank, L. et al. FTTC Regional Needs Assessment Instrument, University of Pittsburgh, 2014



**Table 17:
Principal practice location
2014-2015 FTCC Needs Assessment**

Answer	#	%
Urban	280	63.8%
Suburban	85	19.4%
Rural	74	16.9%

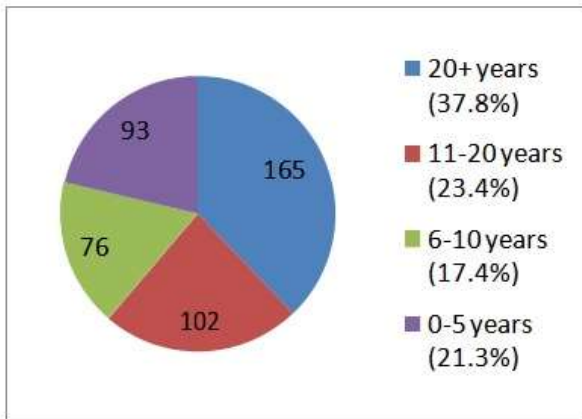


Figure 7: FTCC Data: Years in Profession

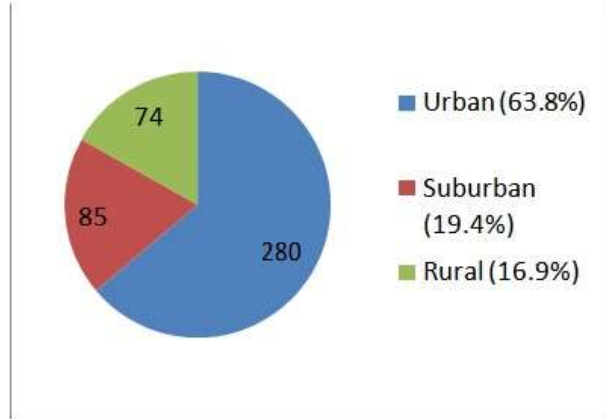


Figure 8: FTCC Principal Office Location

**Table 18:
Ranked Professions Pennsylvania FTCC
Respondents (N= 439)**

Ranked Professions	N	%
Nurse	81	18
Other	61	13
Social Worker	55	12
Case Manager	42	9
Addictions Professional	40	9
Public Health Professional	39	8
Physician	25	5
Health Educator	22	5
Nurse Practitioner	17	3
Mental Health Professional	16	3
Disease Intervention Specialist (DIS)	8	1
Advance Practice Nurse	7	1
Psychologist	6	1

**Table 18- Continued
Ranked Professions**

Ranked Professions	N	%
Family Planning Professional	3	<1
Patient Care Assistant/Aide	3	<1
Pharmacist	3	<1
Physician Assistant	3	<1
Nurse Clinical Specialist	3	<1
Home Care Assistant	2	<1
Psychiatrist	2	<1
Dentist	1	<1



**Table 19:
 Ranked Employment Settings Pennsylvania FTCC
 Respondents**

	N	%
Community-Based Organization	80	18.2
Other	70	15.9
HIV Clinic	44	10.0
Addictions Treatment Center	40	9.1
Community Health Center	37	8.4
Hospital	37	8.4
Health Department (State or Local)	30	6.8
Academic Health Center	20	4.6
Primary Care	18	4.1
College/University	12	2.7
STD Clinic/Program	11	2.5
Private Practice	9	2.1
Jail	8	1.8
Family Planning Clinic/Program	5	1.1

**Table 19- Continued
 Ranked Employment Settings**

	N	%
Prison	5	1.1
HMO/Managed Care Organization	4	0.9
Emergency Department	3	0.7
Veterans Hospital/Clinic	3	0.7
School, secondary	2	0.5
School, elementary	1	0.2
Migrant Health Center	0	0.0
College University Student Health	0	0.0
Pre-hospital Care (EMT, Paramedic, etc.)	0	0.0



Table 20 Ranked need for training, consultation, TA in HIV clinical management: Pennsylvania FTCC Respondents (choose 5)	
Topic	N
Treatment of Substance Abuse and HIV	156
Treatment of Psychiatric Disorders and HIV	140
HIV/Hepatitis Co-Infection	124
Women and HIV	96
Hepatitis Treatment	83
Pain Management	73
Drug-Drug Interaction	69
Medication Adherence	68
Opportunistic Infections	64
HIV/STI Co-Infection	60
Post Exposure Prophylaxis	52
Primary HIV infection	51
Antiretroviral Treatment	47
STI Testing	46
HIV Epidemiology	45
Cardiovascular Complications	44
Hepatitis Testing	43
Metabolic Complications	42
HIV/TB Co-Infection	41
HIV Rapid Antibody Tests	41
Immunizations and HIV	39
Treatment-experienced patients	37
Dental Care	35
Clinical Manifestations	32
Treatment-naive patients	30
Perinatal Prophylaxis	26
Viral resistance testing	25
Palliative Care	23
Treatment/Non-ART Medications	20
Other (please specify)	20
Pathogenesis	8



The needs for training and assistance in HIV clinical care are extensive as reflected in Table 21. Substance abuse and psychiatric disorders are consistently ranked as the highest clinical management concerns of health care providers. Beyond clinical management, respondents expressed needs for training and assistance with several supports, logistical and systemic issues (see Table 21). The relative novelty of the ACA, and its potentially vast ramifications for HIV care (including reimbursement for testing and care provisions), as expected, ranked highest, followed by addictions treatment.

Table 21:
Pennsylvania FTCC Ranked Priorities in HIV, STI, or substance use as it relates to healthcare organizations and delivery: (choose 3)

Topic	N
ACA (the Affordable Care Act)	149
Addictions Treatment	138
Legal Issues	85
CDC Updates on Routine HIV testing	83
Medical Ethics	76
Quality Assurance/Continuous Quality Improvement	72
Workplace Issues	64
CDC Updates on Hepatitis Testing	60
Long Term Care	57
Confidentiality in Health Care	52
Health Information Technology	47
Reimbursement for Testing	42
Organizational Development	40
Health Care Finance	39
Other (please specify)	4

Similarly, many respondents indicated a need for assistance and training on “special populations” with substance users and mentally ill topping the list (*See Table 22*)

Table 22:
Pennsylvania FTCC Ranked Priorities HIV Special Populations (choose 3)

Topic	N
Substance Users	140
Severely/Persistently Mentally Ill	108
Adolescent	96
Racial/Ethnic Minorities	93
Incarcerated Individuals/Parolees	89
Older Adults	86
Women with HIV	80



Gay/Bisexual/Men who have sex with Men	77
Transgender	74
Rural Populations	73
Children with HIV	44
Lesbian/Bisexual/Women who have sex with Women	25
Other	14

Respondents were also asked to provide information about challenges and limits to their ability to participate in training and educational programs (*Table 23*).

Topic	N
Funds to pay for travel	175
Inconvenient training location	159
Inconvenient training dates/times	156
Time away from practice	147
Do not know where to get training	74
Not Applicable	55
Lack of interest in topic	43
Lack of support from administration	42
Other (please specify)	33
Lack of support from supervisor	21
Do not need training	14
Lack of computer or internet access	11

Similarly, the survey sought input as to preferred modalities for learning (*Table 24*) and current practice on information acquisition (*Table 25*). Distance based training was the preferred modality. This is in keeping with the difficulty providers have with obtaining release, and funding for travel.

Topic	N
Interactive computer/web-based training	216
Full day educational program by expert speaker(s)	205
Half day educational program by expert speaker(s)	204
Self-Training (books, videotape, or other materials)	122
Clinical Practicum (1-3 days; 1-2 weeks)	68
Print/CD-ROMs manuals	63
Telephone Consultation with an Expert	30
Long Term Preceptorship (1 month; 6 months)	12
Other (please specify)	10



**Table 25:
 Pennsylvania FTCC Ranked
 Sources of Information typically
 used (choose 2)**

Topic	N
Internet searches	43
Professional conferences	33
Colleagues	22
Online webinars	19
Local workshops	17
Self-study materials	14
Journals	12
Grand rounds	7
Other (please specify)	3

For sources of information, providers are using and accessing internet resources.

Some comparisons were made among the workforce (*Table 26*).

**Table 26: Comparison
 between disciplines
 2014-2015 FTCC Needs Assessment: Pennsylvania
 Respondents**

Question	Physician N=25	Nurse (RN) N= 81
Practice location- urban	20	41
Practice location- suburban	4	22
Practice location- rural	1	18
Years in practice: 0-5	4	14
Years in practice: 6-10	3	10
Years in practice: 11-20	8	13
Years in practice: 20+	10	44

**NATIONAL CLINICIAN CONSULTATION
 CENTER DATA**

The NCCC at the University of California at San Francisco has provided telephone consultations with clinicians on preventing and managing HIV/AIDS for more than twenty years.¹⁷ The NCCC provides data to regional AETCs reflecting the number and nature of clinical consultation calls arising from Pennsylvania. The following table provides some representative data on health professional calls from Pennsylvania.

¹⁷ <http://nccc.ucsf.edu/>



Pennsylvania Needs Assessment, August 16, 2016
Linda Rose Frank, PhD, MSN, FAAN, Principal Investigator, MidAtlantic AETC
© 2016, University of Pittsburgh

Table 27: 2015 Calendar Year Utilization of National Clinician Consultation Center Calls from Pennsylvania health professionals					
nPEP	Warmline	PEPline	Perinatal	PrEPline	
Pennsylvania	169	41	949	18	11



The ACA was passed by Congress and then signed into law by the President on March 23, 2010. The Affordable Care Enrollment TA Center conducted a 2015 national needs assessment¹⁸ specifically targeted to HIV care providers. Successful navigation and acquisition of medical insurance is a major determinant in a person’s health.¹⁹ The results reflect what our trainees and FTCC Needs Assessment respondents advised us:

(1) Grantee staff, particularly, case managers and other program staff, need TA and training on ACA basics, culturally competent ways to support clients through enrollment and re-enrollment, and then utilization of their enrollment. (2) External ACA enrollment assistance organizations are probably less efficacious for PLWH due to a lack of a prior relationship by the client, and clients’ concerns about HIV disclosure/stigma. (3) Grantee sites need TA and training on what assistance they are able to provide for “coverage completion services” such as medical case management, transportation, housing assistance and food security.

In addition, training and TA for grantees about the ACA are most needed on: (1) affordability of drugs and the interplay of ACA and ADAP, (2) changes in eligibility for insurance, (3) determining Medicaid vs. insurance eligibility for specific client needs, (4) tracking of eligibility/coverage, and (5) protocols for clients without eligibility or enrollment for various reasons. As noted by Hogan²⁰ the provision of coverage is beneficial to the consumer, but probably increases the demands for health care services. Thus, preparing the workforce for the influx of patients is imperative.

Part C of the Ryan White HIV/AIDS Program provides grant funding to support outpatient HIV early intervention services and ambulatory care through Early Intervention Services (EIS) program grants. Organizations eligible for such funding include: Federally Qualified Health Centers, family planning grantees, rural health clinics, health facilities operated by or pursuant to a contract with the Indian Health Service, community-based organizations, clinics, hospitals, and other health facilities that provide early intervention services to people living with HIV/AIDS.

RYAN WHITE PART C PROGRAM DATA

Part C clinics performances are reflected in Tables 28- 31.

Table 28: PA Profiles by HRSA (2013)- Patient Populations					
	# of Patients served	ADAP clients	AA clients (%)	Hispanic (%)	White, non-Hispanic- (%)
PA	26,605	10,587	54.7	13.5	27.4

Table 29: RWP State Profiles by HRSA (2013)- Care Delivered				
	#Outpatient care pts	Outpatient % of all pts	Total visits outpatient	Median Outpatient client
PA	17,699	66.5	79,781	4

¹⁸ ACE TA Center, 2015 Needs Assessment Report, March 2016. Retrieved from: https://careacttarget.org/sites/default/files/supporting-files/ACE%20Needs%20Assessment_Mar2016.pdf on April 18, 2016

¹⁹ Hogan, D., Estimating The Potential Impact Of Insurance Expansion On Undiagnosed And Uncontrolled Chronic Conditions. Health Affairs, September 2015 vol. 34 no. 9 1554-1562

²⁰ Ibid



Table 30: RWP State Profiles by HRSA (2013)- Core Performance Indicators							
	HIV Positive tests %	Late HIV Diagnosis %	Linkage to care %	Retention in care %	ART%	VL suppression %	Unstable Housing status %
PA	1.0	n/a	n/a	n/a	n/a	81.0	3.0

The importance of Ryan White funded Part C and D clinics cannot be overstated. Over 75 percent of Part C clinic patients who remain in care achieve viral suppression. This is consistent with national data that demonstrates markedly improved viral suppression for patients receiving regular Part C clinic care.²¹

FEDERALLY QUALIFIED HEALTH CENTERS DATA

Unlike Part C Clinics, community health centers and FQHCs are not dedicated to HIV care but provide a vital service to the medically underserved and financially challenged. Health centers provide high quality preventive and primary health care to patients regardless of their ability to pay. Approximately 1 in 14 people in the U.S. relies on a HRSA-funded health center for medical care.

Within Pennsylvania there are 48 FQHCs and “Look-Alike” Centers with most of them having multiple physical clinic locations (in excess of 200 sites). However, increased HIV testing of all patients as recommended by the CDC is inconsistent across the region. The MAAETC has prioritized training and TA to enhance HIV testing in our region since the CDC testing guidelines were released in 2006.

Table 31: UDS 2014 Pennsylvania CHCs								
Location (# grantees)	Total pts	Rural Grantees	Grantees with RWP Part C Funding	Grantees with EHR at all sites	PCMH Grantees	Grantees with HIV+ pts	Grantees that test for HIV	Best served other language %
PA (42)	696,721	14	7	38	21	36	32	10.66

Table 32: UDS 2014 Patient Demographics (numbers)								
Location	Asian	Hawaiian/Pacific Islander	Black	AI/AN	White	Multiple	Hispanic/Latino	Best served other language
PA	24,118	3,593	210,537	1,322	352,234	24,025	104,813	74,246

Table 33: UDS 2014 HIV Care Measures								
Location	# HIV pts	# HIV visits/yr.	# HIV+ pregnant.	# HIV test pts	# HIV test visit	# New HIV	# Linked to care in 90 days	% Linked to care in 90 days
PA	4,584	20,264	32	41,524	47,011	176	120	68.2

CHC healthcare workers comprise a significant number of MAAETC trainees. Although relatively few provide advanced HIV care, the CHCs are important primary care providers for many millions of at-risk people.

²¹ CDC, HIV Care Saves Lives, at <http://www.cdc.gov/vitalsigns/hiv-aids-medical-care/>. Accessed on June 20, 2016



	N
Providers Working in a CHC	
Dentist	11
Physician	57
Physician Assistant	10
Advanced Practice Nurse	47
Nurse	116
Other dental	10
Pharmacist	14
Direct clinical service providers CHCs	513
Minority-Serving Trainees at CHCs (>24%)	
Minority-serving trainees at CHCs	471
Providers to PLWH at CHCs by Volume	
Low volume providers (<10/month)	65
Intermediate volume providers (10-19/month)	41
High volume providers (≥ 20/month)	74
Providers at CHCs by Experience with HIV patients	
Early career providers (<5 years)	84
Intermediate experienced (5-10 years)	42
Experienced providers (>10 years)	42
Prescribers at CHCs	
Dentist	11
Physician	57
Physician Assistant	10

Regional CHCs and FQHCs are the backbone of care for many of the Commonwealth's residents. In some locations there are significant percentages of patients for whom English is not their primary language. Cultural competency and language support are important parts of support in those communities. Not all CHCs in the region provide HIV testing. This is a serious gap in services. With the relative ease and low expense of testing, efforts to expand HIV testing sites within the CHCs should be a primary goal.



PENNSYLVANIA 2012 STATEWIDE COORDINATED STATEMENT OF NEED

SCSN was also reviewed, and summarized in the following table

Table 35: Data from HRSA Statewide Coordinated Statement of Need Training Needs and Service Gaps				
State	Provider Expertise Gaps	System Gaps/Needs	Barriers to Care	Emerging Issues
Pennsylvania SCSN, 2012	HIV clinical expertise rural gaps, stigma, collaboration, cultural competency	Primary care clinicians, HIV specialists, oral health, rural, housing, transportation, poverty, racial/ethnic disparities	Language, health literacy, stigma, undocumented, mental health and substance abuse, insurance	Older adolescents, transgendered, IDU, homeless, aging, non-English speaking individuals, undocumented

1. Practice Transformation

The MAAETC Practice Transformation Project (PTP) seeks to enhance the capacity and readiness of clinics in making structural changes to their workforce systems to improve the provision of quality care to people living with HIV (PLWH). The intervention assists organizations, clinics, and agencies to respond better to the changing healthcare landscape, marked by shortages of HIV primary care physicians and increasing demand for access to quality HIV services. Evaluation of our PTP will identify best practices and methods to support other organizations to adapt and re-align their workforces, as well as factors that increase the potential for successful integration of HIV care into primary care and community healthcare settings serving vulnerable populations.

Structural workforce changes that will be employed by our PTP include physician extension or task shifting (i.e. transferring specific tasks from the physician-level to mid-level providers or other health workers); restructuring staff to meet the standards of Patient-Centered Medical Home; integration of community health workers and patient navigators into the medical team; and inter-professional team-based practice coordination or co-management (such as a generalist physician overseeing HIV care while in regular consultation with an HIV expert).

There are two Practice Transformation Clinics in Pennsylvania. The program focuses on those providing HIV care in medically underserved areas, and in programs and facilities serving the poor, disenfranchised and hard-to-reach populations.²² The targeted site for the PTP must meet the criteria of serving of population comprised of at least 30 percent minority.

Table 36: MidAtlantic AETC Targeted Practice Transformation Sites			
Partner	Non-RW FQHC	RW Part A, B	PCMH
Pennsylvania, Health Federation of Philadelphia	√		Level 2

²² Delivering HIV Services to Vulnerable Populations. HRSA, HIV/AIDS Bureau, Outcome Evaluation TA Guide, Oct 2000



Pennsylvania, Health Federation of Philadelphia	√		Level 2
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2. Interprofessional Education

The MAAETC Interprofessional Education Project (IPE) targeted intervention is at the University of Maryland. During Years 3 and 4, best practices will be disseminated through the USPHS Region III through regional partners.

3. Minority AIDS Initiative

The disparity in the prevalence and incidence of HIV based on race and ethnicity is clear. The disproportionate impact of the epidemic upon persons of color is well documented. Similarly, disparities of minority health professionals are significant. Minorities (Black and Hispanic/Latino) comprise over 25 percent of the general population, yet less than 6 percent of physicians²³, about 16 percent of nurses²⁴ and about 7 percent of dentists²⁵. This negatively impacts the availability of services to minority patients as minority providers are more likely to be providers of services to minority patients.²⁶ Numerous studies have shown the disparate care and impact on minority populations across the continuum. Interventions need to be culturally and population sensitive: from prevention efforts, to testing²⁷, to linkage to care, to retention in care²⁸, to adherence,²⁹ and to viral suppression.

The MAAETC has historically targeted trainees who serve minority communities and/or are minorities themselves (*Tables 37-39*).

Table 37: Estimated Numbers of HIV Diagnoses, Adults and Adolescents, by Race/Ethnicity - 2014 ³⁰								
Location	AI/AN	Asian	Black	Hispanic	Hawaiian/Pacific	White	Multiple	Summary
PA	4	25	690	197	0	383	23	1,322

Table 38: Estimated Numbers of Adults and Adolescents Living with an HIV Diagnosis, by Race/Ethnicity - 2013 ³¹								
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²³ AAMC, Diversity in the Physician Workforce: Facts and Figures, 2006

²⁴ The US Nursing Workforce: Trends in Supply and Education, HRSA, BHP, National Center for Health Workplace Analysis, April 2013

²⁵ ADA, 2008

²⁶ Missing Persons: Minorities in the Health Professions. Sullivan Report

²⁷ Schnall, R. (2014, August 22). Understanding HIV Testing Behaviors of Minority Adolescents: A Health Behavior Model Analysis

²⁸ Magnus, M. (2010, April 1). Characteristics Associated With Retention Among African Americans: JAIDS Journal of AIDS

²⁹ Bogart, L. M., Wagner, G., Galvan, F. H., & Banks, D. (2010). Conspiracy Beliefs about HIV Are Related to Antiretroviral Treatment Nonadherence among African American Men with HIV. *Journal of Acquired Immune Deficiency Syndromes* (1999), 53(5), 648–655

³⁰ Centers for Disease Control and Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention

³¹ Centers for Disease Control and Prevention, HIV Surveillance Report, Vol. 26; published November 2015



Location	AI/A	Asian	Black	Hispanic	Hawaiian/Pacific	White	Multiple	Summary
PA	33	208	15,863	5,019	23	9,964	1,436	32,547

Table 39:
Estimated Percentages of Adults and Adolescents Living with an HIV Diagnosis, by Race/Ethnicity - 2013³²

Location	AI/AN	Asian	Black	Hispanic	Hawaiian/Pacific	White	Multiple	Summary
PA	0.1%	0.6%	48.7%	15.4%	0.1%	30.6%	4.4%	100.0%

For Pennsylvania, consistent with the national trend, the prevalence and incidence of HIV are very much higher within our Black and Hispanic/Latino communities as reflected in *Tables 38 and 39*. Table 40 provides data on Pennsylvania providers serving minorities.

Table 40:
PA Trainees Direct Care Providers Providing Services to Minorities (FY 2015)

	N	% of Subtotal
Trainees Who See Patients		
Yes	2,961	76.3%
No	921	23.7%
Subtotal	3,882	
Minority Serving Trainees		
Minority serving at least 25%	2,567	86.7% of those who see patients
Serving PLWH	2,264	76.4 % of those who see patients
Serving minority PLWH at least 25%	2,033	89.8% of those serving PLWH
Minority Serving Prescribers (PLWH, at least 25% of patients)		
Dentists	11	57.9% of all dentist trainees
Physician	243	65.0% of all physician trainees
Physician Assistant	16	16.8% of all physician assistant trainees
Advanced Practice Nurse	119	79.9% of all advance practice nurses
Minority Serving Providers by Volume (PLWH, at least 25% of patients)		
Low volume providers (<10 patients/month)	447	22.0% of providers with at least 25% of minority pts LWHIV
Intermediate volume providers (10-19 patients/month)	357	17.6% of providers with at least 25% of minority pts LWHIV
High volume providers (≥20 patients/month)	1,255	61.7% of providers with at least 25% of minority pts LWHIV
Minority Serving Providers of PLWHIV by Experience		
Early career providers (<5 years working with PLWHIV)	966	47.5% of providers with at least 25% of minority pts LWHIV



Intermediate experienced providers (5- <10 years working with PLWHIV)	266	13.1% of providers with at least 25% of minority pts LWHIV
Experienced providers (10 years or more working with PLWHIV)	640	31.5% of providers with at least 25% of minority pts LWHIV
Some respondents failed to answer years of experience question.		

Of those Pennsylvania trainees that provide direct services to patients, over 79 percent of them have minority patient populations of more than 25 percent. The AETC draws a disproportionate number of providers who are themselves minorities (*Table 41*). The distribution of providers based on years of practice is similar to that of the overall trainees with slightly less being experienced providers with ten or more years of experience.

Table 41: Pennsylvania MAAETC Practitioner Trainees who identify as Black/African American			
	#	# of the profession trained	Minority % of the profession trained
Dentist	8	21	38.1%
Other Dental Professional	6	16	37.5%
Advanced Practice Nurse	42	156	26.9%
Nurse	141	747	18.9%
Pharmacist	15	83	18.1%
Physician	77	427	18.0%
Physician Assistant	7	26	26.9%

The Black AIDS Institute published a national “report card” on HIV care in 2015³³ to assess the level of HIV science and treatment literacy in the HIV/AIDS workforce. The Black AIDS Institute collaborated with the CDC, the Latino Commission on AIDS, the National Alliance of State and Territorial AIDS Directors, Johns Hopkins Bloomberg School of Public Health, and Janssen Therapeutics to conduct the survey. More than 3,600 HIV/AIDS respondents from 48 states, the DC and U.S. territories completed a 62-question web-based survey. Men accounted for 54 percent of respondents, while people of color represented 57 percent of survey participants.

Nationally, the survey indicated a need for a better educated about HIV health workforce. It should be noted that the “workforce” for the study primarily consisted of community health workers and educators, the majority of whom were in Black-serving community organizations.

The national average score on treatment-related questions was 56 percent and was less than 50 percent for biomedical interventions such as Pre-Exposure Prophylaxis (PrEP) and Treatment as Prevention (TasP). Although Pennsylvania’s scores were better than the national average, the study indicates that education is needed for the healthcare workforce beyond physicians, clinicians, and other healthcare professionals. The training focus needs to be increased for community health workers and HIV educators who are playing a greater role in the healthcare system under the ACA. It should be emphasized that the sample size for

³³ Black AIDS Institute, When We Know Better, We Do Better (2015)



Pennsylvania was small (total of 133) and overwhelmingly were not medical providers, but rather social service workers.

DESCRIPTION OF REGIONAL WORKPLACE NEEDS AND GAPS

As documented in needs assessments, the data show continued need for expert clinical training, mentoring, and consultation as new providers enter the care system and existing providers require updating. The AETC has identified and utilized HIV experts as faculty and HIV consultants shown to be effective in changing practice.³⁴ Our regional partner sites have clinicians and directors who are directly involved in HIV care, clinical trials, treatment and prevention research and we are committed to assuring that other community clinicians have access to their expertise. Our website and a toll-free HIV clinical consultation line provide a link to these experts as well as inquiries made directly to our experts from community clinicians. We also work closely with the NCCC at UCSF by marketing their services and linking health professionals to their phone services.

V. MAPPING

A. Statewide HIV data

2014 HIV Diagnosis= 1,322 cases; 12.2/100,000 rate

2013 PLWHIV= 32,547 cases; 299.6/100,000 rate

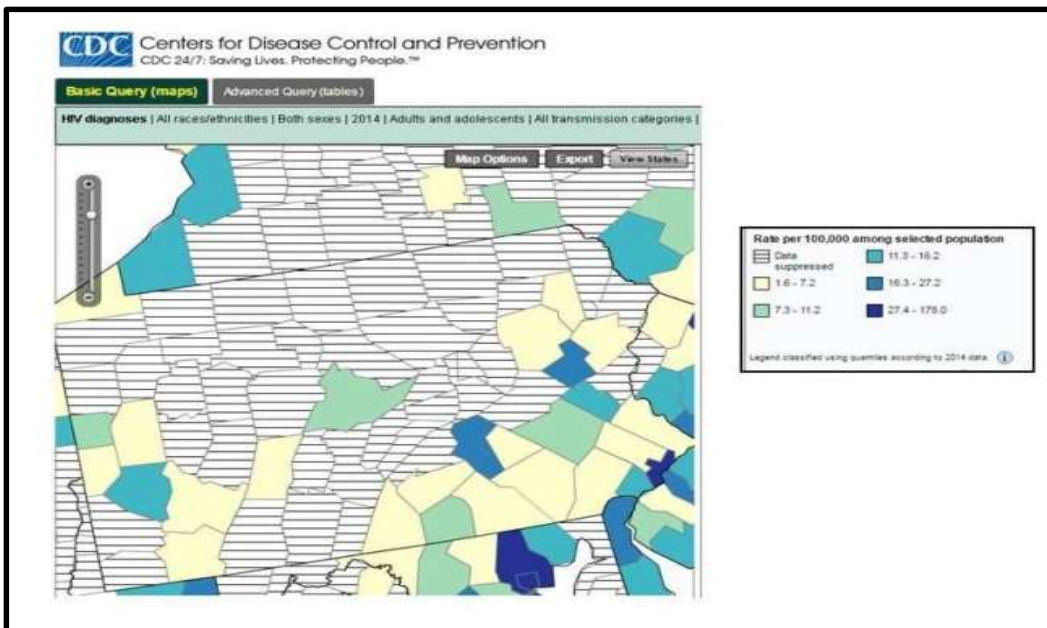


Figure 9: Rate of HIV Diagnosis in Pennsylvania, 2014

³⁴ Ostini, R, Hegney, D., et al. (2009). Systematic review of interventions to improve prescribing. *Annals of Pharmacotherapy*, 43(3), 502-13

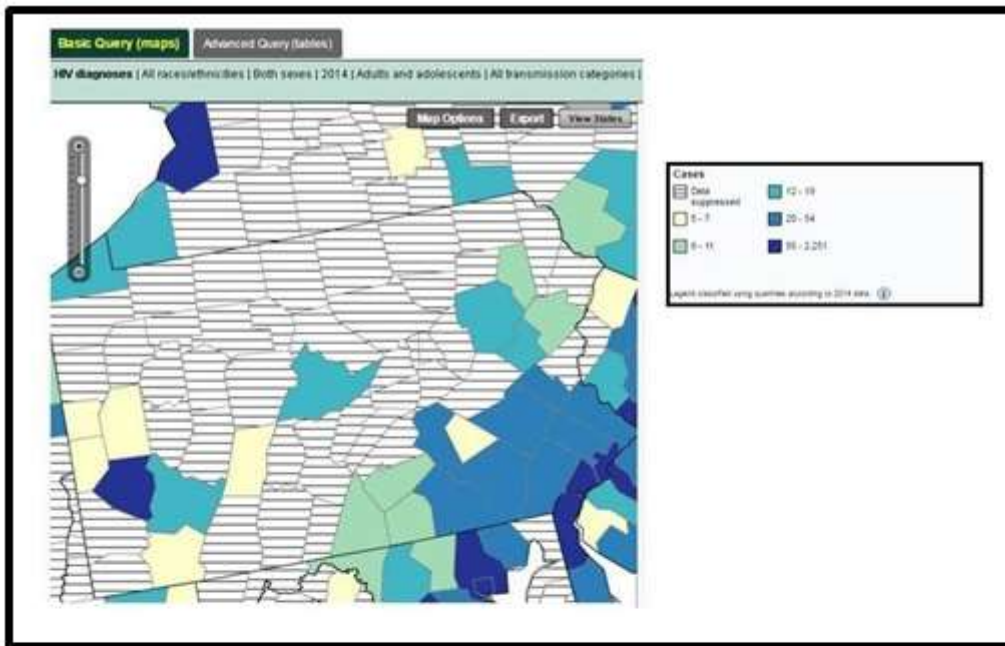


Figure 10: HIV diagnosis in Pennsylvania-cases, 2014

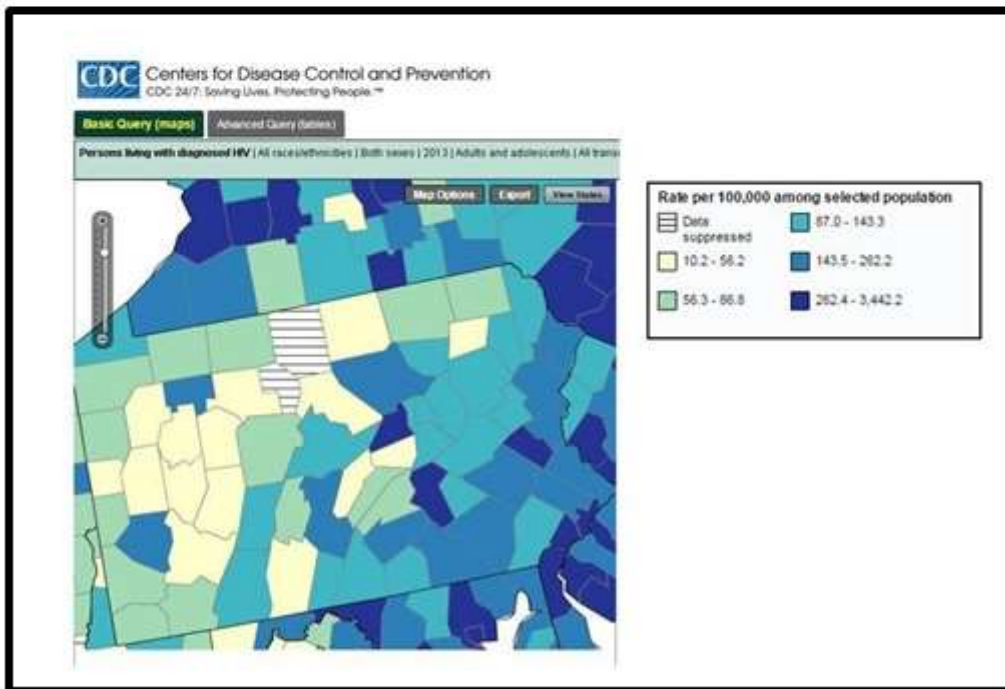


Figure 11: Persons diagnosed with HIV in Pennsylvania (rate), 2013

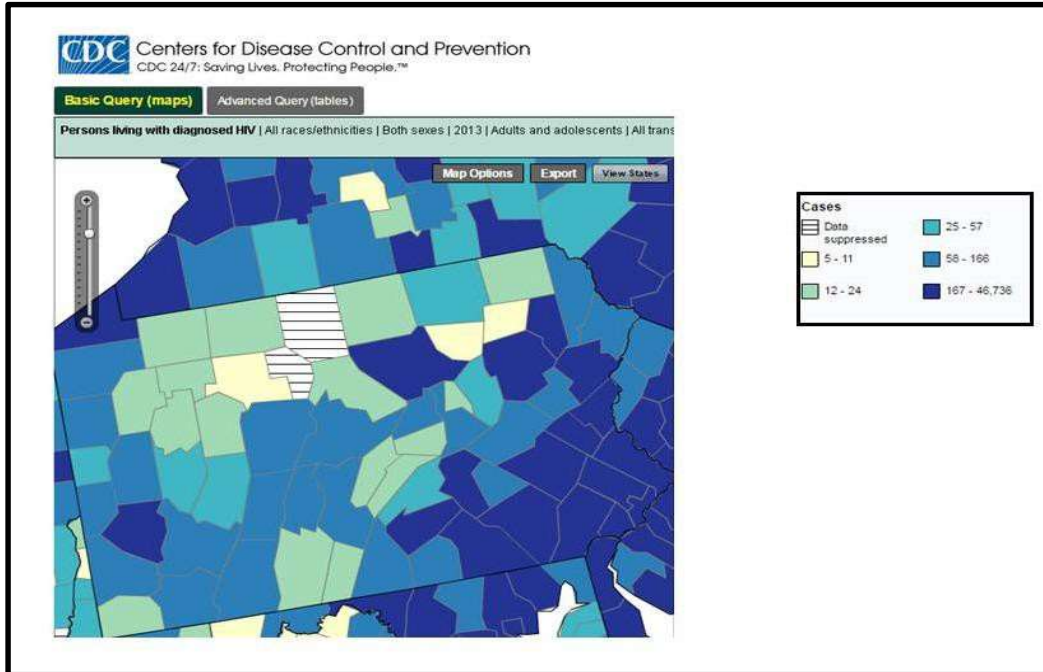


Figure 12: Persons living with HIV in Pennsylvania (cases), 2013



Figure 13: Location of CHC Service Sites




Figure 14: Part C clinic locations (many clinics have satellite service sites)

III. COLLABORATIONS, PARTNERSHIPS AND STAKEHOLDER INVOLVEMENT

The AETC has extensive linkages with institutions and organizations regionally to be served as seen in *Table 42*. The collaboration includes: 1) co-sponsoring programs; 2) serving as training faculty; 3) needs assessment and evaluation projects; 4) co-convening workgroups and forums; 5) serving on planning committees; 6) participating in special projects; 7) identifying trainees; and 8) identifying service and quality gaps. We also collaborate with faith-based organizations and networks. The RPs partner with other agencies (RW, CHCs, CBOs) to obtain additional resources, HIV consumer input, trainee recruitment, logistic support, follow-up evaluation, and debriefing. Our collaborators are routinely encouraged to provide us with information about their respective needs and assist us in the development of our needs assessments and strategic planning.

In addition to the above, the MAAETC is part of the USPHS Region III collaborative that includes representatives from the regional office in Philadelphia and members of all federal training centers and programs within the region. A representative of each MAAETC regional partner site participates in this collaborative through bi-monthly conference calls and a yearly in-person meeting. This collaborative provides another avenue for continuous input regarding regional training needs. It also provides a forum for conversations and collaborations for joint training, technical assistance, and capacity building with our regional training centers. This increases opportunities for capacity building and workforce development within agencies, programs, and other service providers throughout the region.



Table 42: Collaborations and Linkages			
1. Conduct Needs Assessments			3. Conduct Follow-Up on Impact and Outcomes
2. Collaborate on Training Programs	4. Provide All Modalities of Training Needed		
<u>STATE AGENCIES</u> Depts. of Health Depts. of Public Welfare Depts. of Corrections Bureau of Probation/Parole AIDS Drug Assistance Program <u>RESEARCH NETWORK</u> MAC S ACT G NIH CDC NIDA SAMHS A NIAID <u>NATIONAL PROGRAMS</u> NCRC, NCCC, NEC, NQC IDSA, AAHIVMA, ANA,	<u>FEDERAL AND STATE FUNDED AGENCIES</u> Healthcare for Homeless Ryan White Part B Ryan White Part A Ryan White Part D HIV Planning Councils STD Prevention Centers Maternal/Child Health Services Tribal/Indian Health Services Mental Health Clinics Family Planning Centers Public Health Training Center TB Training Centers <u>VOLUNTARY AGENCIES</u> Health Professional Associations, Local Collaboratives, Getting to Zero Projects, State Hospital Associations, Faith Based Organizations, CBOs, Health Insurance Plans, Substance Abuse Treatment Centers, Hospitals, Outpatient Clinics, Community Mental Health Centers, Urgent Care, Emergency Departments, State Associations of CHCs, Telehealth Networks		Community & Migrant Health Centers Ryan White Part C EIPs Prevention Projects USPHS Regional Office Addiction Technology Transfer Centers Reproductive Training Centers Historically Black Colleges/Univ. Area Health Education Centers Veterans Administration CDC Prevention Planning Committee Hepatitis Training Networks SPNS, Bureau of Primary Health Care

IV. CONCLUSIONS AND IMPLICATIONS

The AETC has been an active participant in the Commonwealth’s response to changes in the HIV-related landscape. The consortium is an established, respected and coordinated team of Regional Partners (RPs) and their clinical experts, clinicians, trainers, and staff who work together to avoid duplication of effort, collaborate on innovative programming, and share regional resource materials, faculty, and talent.

Figure 15 below depicts the components of a revised HIV care continuum that integrates both prevention and treatment. Both of these areas of focus must be included in any response that attempts to end the HIV epidemic. The MAAETC regional partners have been working to improve knowledge and skills of health professionals in both prevention and treatment for decades. We have consistently assisted the state and local health departments in responding to current and emerging needs disseminated information to health care providers, convened forums to discuss issues and are in the forefront to provide local regional and distance-based training.

The current climate of lack of funding for health professionals to attend trainings, provide input to state initiatives and practices, demands and demonstrates the use of distance-based platforms for reaching providers for updates, communication of current care standards, and best practices.

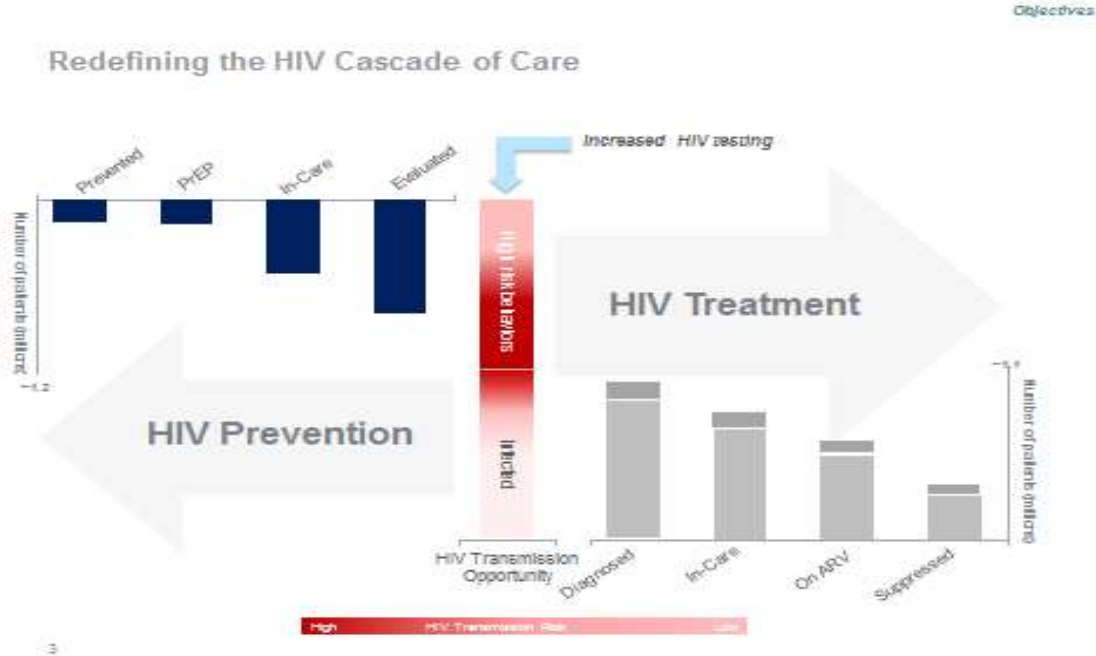


Figure 15: Prevention and Treatment Care Continuum

HIGH-LEVEL/REGIONAL CONCLUSIONS

Summary of Needs Assessment Findings

Based upon needs assessment data sources, the following summarizes our needs assessment findings.

A. HIV Prevention

1. Clinician/Treater: There is a need for further integration of HIV testing and linkage to care in rural and medically underserved areas. Focus needs to be on community health centers and FQHCs to increase testing and integrate this clinical activity into their ongoing practice and infrastructure.
2. Primary Care Team: Continued training is needed for skill development for appropriate and timely assessment of all patients at risk and integration of routine HIV testing into sustainable policies and protocols.
3. Clinical Decision Support: Continued need for availability of consultation from the MAAETC on the development of usable models for integration of HIV testing into primary care and other clinical settings through distance based and on-site coaching, mentoring, and consultation.
4. Geographic Targeting: The MAAETC region is facing significant issues with addictions in rural and other medically underserved areas where there are fewer experienced providers and where HIV testing has been limited and uneven. Furthermore, injection drug use and opioid addiction is epidemic in rural Pennsylvania requiring intensive intervention to prevent outbreaks of HIV and hepatitis among networks of syringe sharing drug users.
5. Stigma: Continued efforts are needed to provide interactive and case-based education with health professionals and other providers to reduce stigma associated with HIV, hepatitis, substance use, and mental illness in both rural and urban areas within the region.
6. Behavioral Integration: Continued educational and consultative intervention needs to continue to provide health professionals with access to substance use and mental health clinical and community



interventions to prevent increases in HIV, hepatitis, and STI rates. Increasing psychiatrists, psychiatric nurse clinical specialists, and psychiatric nurse practitioners to the prevention treatment team are needed. Work with health profession schools will be a target for the MAAETC.

7. Treatment as Prevention: Continued efforts to develop forums for the discussion and planning for PrEP initiatives throughout the region in both rural and urban settings.
8. Systems Issues: Significant barriers remain that limit access to prevention, substance use, and mental health services due to geography, poverty, limited specialist care, coordination, and transportation. The MAAETC will continue to work with state, local health departments and others to address these system barriers.
9. Prevention Team: Increased focus must be placed on interprofessional practice to improve linkage to prevention services, improved coordination, and access. Furthermore, interprofessional education can enhance the utilization of advanced practice clinicians and others to initiate testing, PrEP, and linkage to behavioral services.

B. HIV Treatment

1. Clinicians/Treaters: Continued need for HIV treatment training for clinicians in clinics and community settings.
2. Minorities, women and hard to reach populations: All available data point to the need to train providers who serve these groups within clinical and community care settings.
3. Ryan White, CHCs: Data suggests that training of providers from these settings is a continuing need to ensure testing, linkage to care, maintenance in care, treatment, and suppression of viral load for patients.
4. Treatment as Prevention: Continued efforts to develop forums for the discussion and planning for PrEP initiatives throughout the region in both rural and urban settings.
5. Clinical Comorbidities: Clinicians throughout the region continue to need training and consultation related to hepatitis, STI and other clinical issues co-occurring with HIV infection. Treatment complexities, drug interactions, and payment for treatment are issues that must be addressed.
6. Psychosocial Comorbidities: Based on data, the co-morbidities of substance use and psychiatric illness continue to be rated for the highest need of training across all disciplines and settings. This is not new as we have gleaned this from needs assessment over the past 10 years. The opioid death rates are now bringing this in focus. Inclusion of medication-assisted treatment (MAT) for drug use disorders as components of HIV treatment and care is needed.
7. Clinical Decision Support and CQI: Data suggest that there is ongoing need for training and consultation to non-experts on ART readiness, prescribing, and monitoring.
8. Expansion of Workforce: The data suggest that there are enough numbers of health professionals in urban areas. However, this is the opposite for rural areas and some medically underserved urban areas. The expansion of the use of advanced practice health professionals is needed to meet this access to treatment and prevention gap. Continued work with health professions schools is a priority. Geographic Targeting: Based on CDC and HRSA data, specific areas need enhanced outreach and intervention due to HIV and Hep C cases, substance use and distance to training sites resulting in the need for both in-person and distance-based interventions.
9. Geographic Targeting: Based on CDC and HRSA data, specific areas need enhanced outreach and intervention due to HIV and Hep C cases, substance use and distance to training sites resulting in the need for both in-person and distance-based interventions.
10. Behavioral Integration: Adherence to ART, biomedical prevention, harm reduction and other



interventions are needed in both HIV clinical and primary care clinical settings to improve clinical outcomes. The addition of advanced practice nurses, psychiatrists and other behavioral health specialists to primary care and HIV settings must be a priority.

11. Systems of Care: Data suggest that coordination and/or integration of care systems is needed to avoid missed opportunities for engagement and treatment of patients, and service expansion and adaptation to the HIV continuum of care.
12. Clinical Capacity Building: Development of new Ryan White primary care sites and enhancement of community health centers and FQHCs to provide HIV care is a priority based on HRSA's HIV performance measures.
13. Clinical Team: A competent and coordinated care interprofessional team leads to better care requiring a focus on physicians, nurses, advanced practice nurses, physician assistants, dentists, and pharmacists, as well as allied health professionals, case managers, navigators, and others comprising the current treatment team in the context of ACA.
14. Clinical Support Team: Social workers, substance abuse, mental health, outreach workers, and community workers are essential for the continuum of care for engagement, prevention, support, adherence and sustaining clients in treatment for the delivery of "seamless" HIV care.

C. FOCUS AREA/COMPONENT-SPECIFIC CONCLUSIONS

1. Core Training and Technical Assistance

- a. Educational interventions that focus on individual as well as community-based prevention are needed to address and target adult men or women at risk for HIV through high-risk sexual behaviors, drug or alcohol use, or pre-existing mental health disorders.
- b. Continued technical assistance and training on biomedical HIV prevention, harm reduction, adherence, and prevention strategies
- c. Continued focus on interactive training to reduce stigma and thus improve access to and maintenance in care.
- d. Training related to "Seek, Test, Treat, and Retain" to improve the HIV care continuum outcomes regionally.
- e. Continue providing training to address HIV and co-morbidities across the lifespan with particular focus on young adults, MSM, women, and aging.
- f. Focus on training on biomarkers to assess adherence to treatment, and other HIV outcomes.
- g. Continued leadership in uptake for the use of PrEP among health professionals, clinics, and programs, including identification of potential candidates for PrEP, interaction of co-morbidities, and contextual factors for retention.
- h. TA related to system and structural approaches to improve care quality and implementation of CQI in HIV and primary care settings.
- i. Training on approaches to predict and prevent disengagement from care, interventions to address comorbid mental health issues, and tests of innovative models for care to enhance retention in care.
- j. Training and TA on strategies to facilitate linkage to medical care after HIV-testing and to promote treatment initiation and adherence, retention in HIV care and transmission risk reduction.
- k. Discussion and related training and TA on implementation barriers (behavioral, structural, and other) to treat and prevent HIV and its comorbidities while addressing health disparities.
- l. Collaboration with other federal training centers to increase opportunities for training and



targeting health professions, reducing cost, and improving outcomes.

- m. Continued work with Ryan White and other state and local planning bodies for input, collaboration, and dissemination including convening of forums for emerging and continuing issues related to the HIV care continuum.

2. Practice Transformation

- a. Continued development of MAAETC model for practice transformation based upon 10 years of experience with “expansion of medical services sites”.
- b. Continued development of policies, procedures, and best practices for engaging and maintaining practice transformation clinics.
- c. Continued development and maintenance of clinic “community of practice” for each clinic targeted and for the network of regional clinics targeted through:
 - i. Shared best practices
 - ii. Access to the MAAETC “LEAPP” platform
 - iii. Use of webinars developed for the MAAETC PT clinic network
 - iv. Training programs
 - v. Web-based resources
- d. Mentoring and development of practice transformation coaches.
- e. Identification of other clinics where practice transformation is needed based on epidemiology of HIV, hepatitis, substance use, mental illness.
- f. Development of approaches to address new or recurring clinical barriers and related issues within populations served by clinics, such as stigma and clinical and psychosocial comorbidities.
- g. Collaboration with other federal training centers to increase opportunities for specific training content needed at practice transformation clinics.
- h. Continued input with federal, state, and local planning bodies for input, collaboration, and dissemination regarding geographic areas of unmet need and service gaps for improving the care continuum and future intervention.

3. Interprofessional Education

- a. Continued development and implementation of the IPE project.
- b. Development of methods for dissemination of lessons learned and best practices for IPE as it relates to the HIV Care Continuum.
- c. Outreach and collaboration with existing IPE initiatives with the MAAETC partner sites.
- d. Continued integration of IPE into existing MAAETC training programs including clinical training and interactive training.
- e. Collaboration with other federal training centers to increase opportunities for training and targeting health professions, reducing cost, and improving outcomes.
- f. Continued work with health professions schools, state, and national associations, as well as convening of forums for discussion of integration of HIV into curricula.

4. Minority AIDS Initiative

- a. Continue to increase training for health professionals related to approaches and strategies for minority populations for engagement, assessment, intervention, and maintenance in care across the HIV care continuum.



- b. Continued training related to reducing barriers to care for minorities.
- c. Continued training on stigma across all service settings and disciplines.
- d. Focused targeting and intervention with providers serving minority transgender women and MSM.
- e. Development of strategies for partnering with other organization and programs focusing on young MSM for prevention and treatment.
- f. Training related to prevention, treatment, and care for the undocumented and immigrant populations regionally.
- g. Continued recruitment of minority health professionals to training programs and recruitment of minorities to health professions schools.
- h. Collaboration with other federal training centers to increase opportunities for training, targeting health professions, reducing cost, and improving outcomes.
- i. Continued work with Ryan White and federal, state, and local planning bodies for input, collaboration, and dissemination including convening of forums for emerging and continuing issues related to the HIV care continuum for minorities.

Table 43 Referenced Documents		
Type	Title	File name
Evaluation instrument form	MAAETC Immediate Post ACRE	ACRE-IP.pdf
Evaluation instrument form	FTCC Needs Assessment (2014-2015)	FTCC_Needs_Assessment.pdf
Evaluation instrument form	MAAETC Individual Needs Assessment	Ind_needs_assessment.pdf
2014 Health Center Profiles *	2014 Health Center Profile-Pa.	CHCs_PA.pdf
SCSN, Related Reports by state	Pennsylvania 2012 DOH Comprehensive HIV Care Service Plan 2012	PA_2012_Combined_Comprehensive_Plan_and_SCSN_06-12-12.pdf
Ryan White State Profiles by state**	Pennsylvania — State Overview	PA_2013_state_profile.pdf
* = Individual public grantee information available at: http://bphc.hrsa.gov/uds/datacenter.aspx?q=d ** = Interactive public state-wide level information available at: http://hab.hrsa.gov/stateprofiles/Default.aspx *** = other cited, online, resources in narrative not attached		

Appendix C: Epidemiological Supplementary Input Mechanism

Mechanism for Input to Epidemiologic Profile Development/ Updates by Community and Departmental Planning Partners

[The form appended below provides guidance for departmental planning partners' recommendations for supplemental analyses (or use of other relevant data sources) for updates the Integrated Epidemiologic Profile. Requests/recommendations for special analyses in support of comprehensive prevention/care plan development are to be submitted through the relevant section of the Department of Health [or sub-committee of the HPG, if data requested is for purposes of supporting the HPG in its advisory role in support of the Department of Health.]

Guidance for Written Recommendation for Supplemental Local, Regional or Statewide Data Sources/Analyses for Use in Comprehensive Prevention/Care Plan Development (or Advisory Committee processes) of the Integrated HIV/AIDS Epidemiologic Profile for Prevention and Care. (Proposed data sources/analyses abstract/summary should be no more than 1 page in length and typed in >=10-point font).

1. Provide a brief description of the data requested for the supplement/presentation including the statewide or specialized planning objectives or questions that you seek to answer with the additional data source and/or supplemental study/analyses proposed;
2. Provide information below to briefly clarify how the proposed additional data source or supplemental study/analyses proposed addresses the planning objectives or questions outlined in item #1 above.
 - a. Summarize the study objectives or purpose of the data source from which the proposed supplemental study/analyses are to be performed.
 - b. Describe the study population, selection thereof, and setting (if proposing analyses of existing data from population-scale surveillance projects or special studies for utilization in the comprehensive program plan or advisory process thereto). If proposed data sources were conducted by others/contractors and not by the Department of Health, please include methods descriptions of such studies from the investigators including selection criteria, sample size to address representativeness of the study/data source, generalizability of anticipated findings from the proposed study/analyses to the population that the plan will impact, and applicability of findings of the proposed study/analyses to the public health/planning objectives.
 - c. Describe the study methods and procedures (incl. data collection), if proposing analyses of data from special studies conducted by others for utilization in the comprehensive program plan or advisory process thereto, please include descriptions of methods and procedures used by such studies from the investigators including data collection forms used to collect the data to be analyzed where applicable).
 - d. Describe the Public Health applicability/recommendations possible/anticipated or already established from study findings.

3. Please summarize how you envision the use of public health recommendations from the findings of studies/analyses proposed towards fulfilling planning objectives/questions you seek to answer in Pennsylvania.

Submitted by: Name: _____ E-mail: _____ Tel: _____

[PLEASE NOTE: The Department of Health requests that suggested input be made in an abstract formatted according to the above guidelines. If studies/data sources recommended are from researchers/investigators (or contractors) outside the Department of Health, abstracts describing such studies/data sources to provide the above-referenced information should be provided for all additional data sources/analyses that are recommended to be performed by the Department of Health. Most scientific studies and many formal data collection processes that are likely to be useful in support of program planning (or the advisory process thereto) already have abstracts/summaries of project descriptions formatted in the adapted standardized HHS/NIH format described above under items # 1 & 2.]

Appendix D: Letter of Concurrence

To whom it may concern:

The HIV Planning Group (HPG) **concurs** with the following submission by the Commonwealth of Pennsylvania Department of Health, Division of HIV Disease in response to the guidance set forth for health departments and HIV planning groups funded by the CDC's Division of HIV/AIDS Prevention (DHAP) and HRSA's HIV/AIDS Bureau (HAB) for the development of an Integrated HIV Prevention and Care Plan.

The planning body, e.g., planning council, advisory council, HIV planning group, planning body, has reviewed the Integrated HIV Prevention and Care Plan submission to the CDC and HRSA to verify that it describes how programmatic activities and resources are being allocated to the most disproportionately affected populations and geographical areas that bear the greatest burden of HIV disease. The planning body **concurs** that the Integrated HIV Prevention and Care Plan submission fulfills the requirements put forth by the Funding Opportunity Announcement PS12-1201 and the Ryan White HIV/AIDS Program legislation and program guidance.

The HPG continues to experience success executing long-term and yearly protocols for the state's integrated planning process, as outlined in Section II, B, 1. It stands ready to continue its successful service record advising the Division of HIV Disease and planning and enhancing integrated prevention and care efforts across the Commonwealth.

The HPG further recognizes the work of the Pennsylvania Department of Health's Division of HIV Disease and the City of Philadelphia's Department of Public Health and Office of HIV Planning for their ongoing and constructive efforts coordinating resources, expertise, and information for the greater benefit of all Pennsylvanians in high risk groups and those who are living with HIV.

The signatures below confirm the concurrence of the planning body with the Integrated HIV Prevention and Care Plan.

Signature:



Richard C. Smith, MSW
Planning Body Community Co-Chair

Signature:



Lana R. Adams
PA Department of Health Co-Chair

Date: September 29th, 2016

Date: September 29th, 2016

Appendix E: IHPCP Stakeholder Survey and Feedback Report

The following data report summarizes the IHPCP Stakeholder survey completed by the HPCP in 2016 for gathering feedback, measuring support, and improving and informing future efforts related to the Plan.

All response numbers for the following data are located the bottom right corner of each chart or table.

Demographic response data

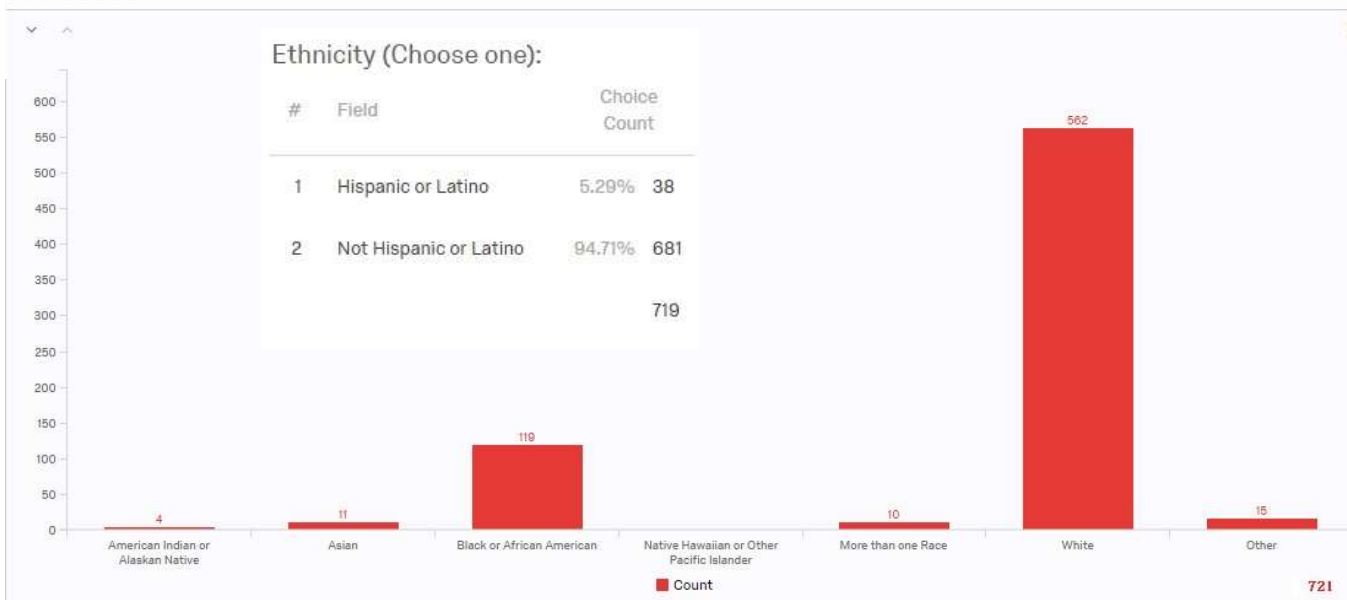
Current Gender (choose one):

#	Field	Choice	Count
1	Female	29.54%	213
2	Male	69.07%	498
3	Transgender (FTM)	0.55%	4
4	Transgender(MTF)	0.14%	1
5	Other (specify):	0.69%	5
			721

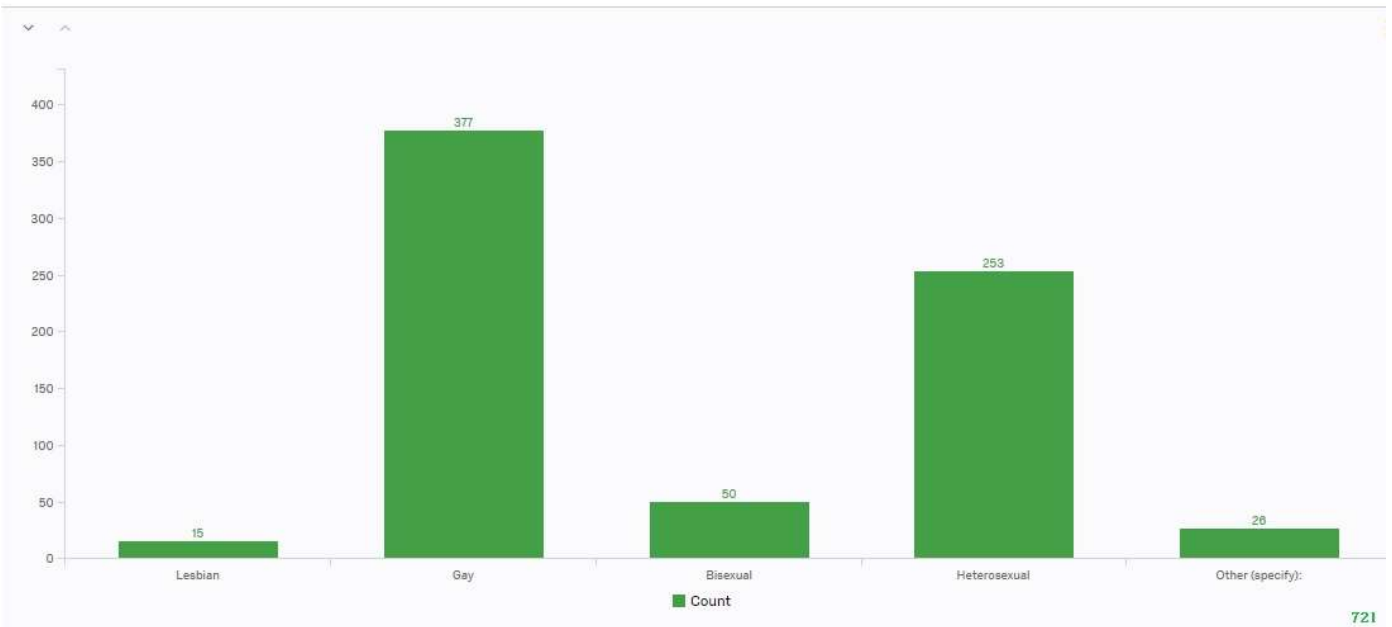
Age (choose one):

#	Field	Choice	Count
1	<= 13	0.28%	2
2	14-19	0.14%	1
3	20-29	6.24%	45
4	30-39	13.45%	97
5	40-49	13.59%	98
6	50-59	38.42%	277
7	60+	27.88%	201

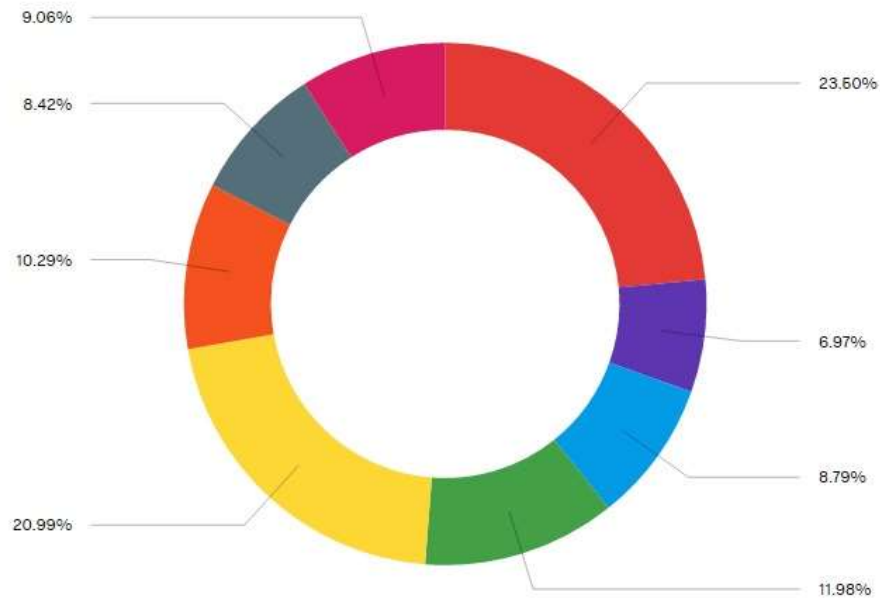
Race (Choose one):



Sexual Orientation (Choose one):

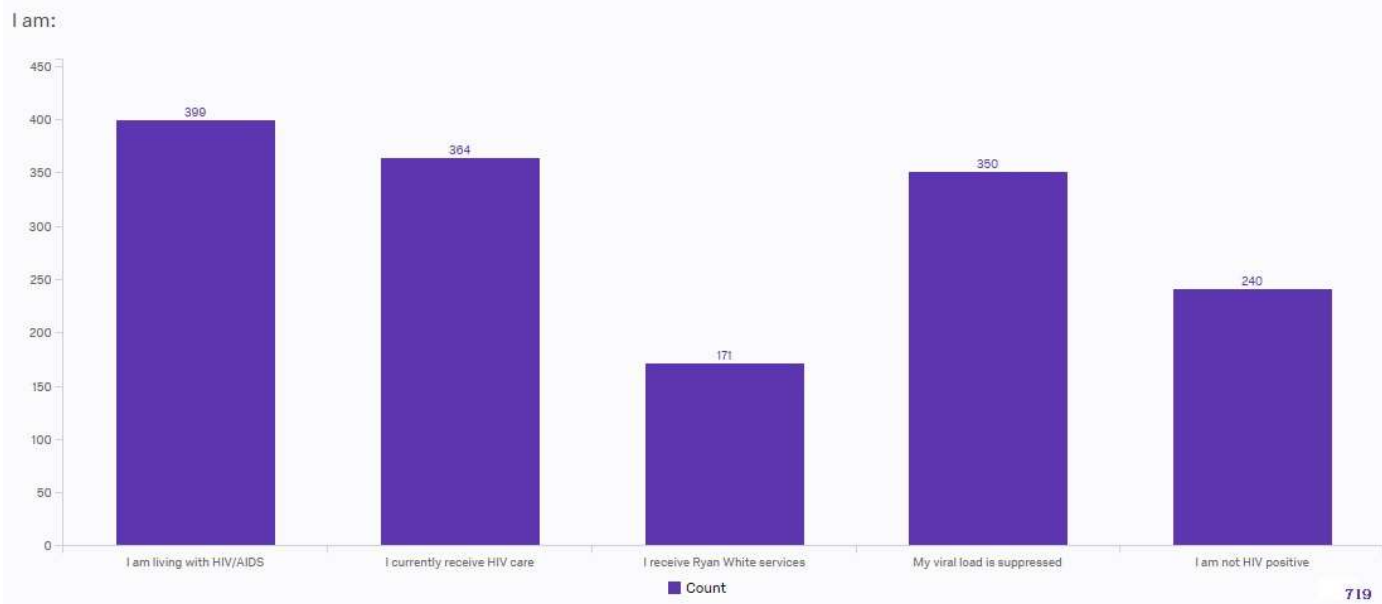


If you identify as, or work with, any of the following groups, please check all that apply:

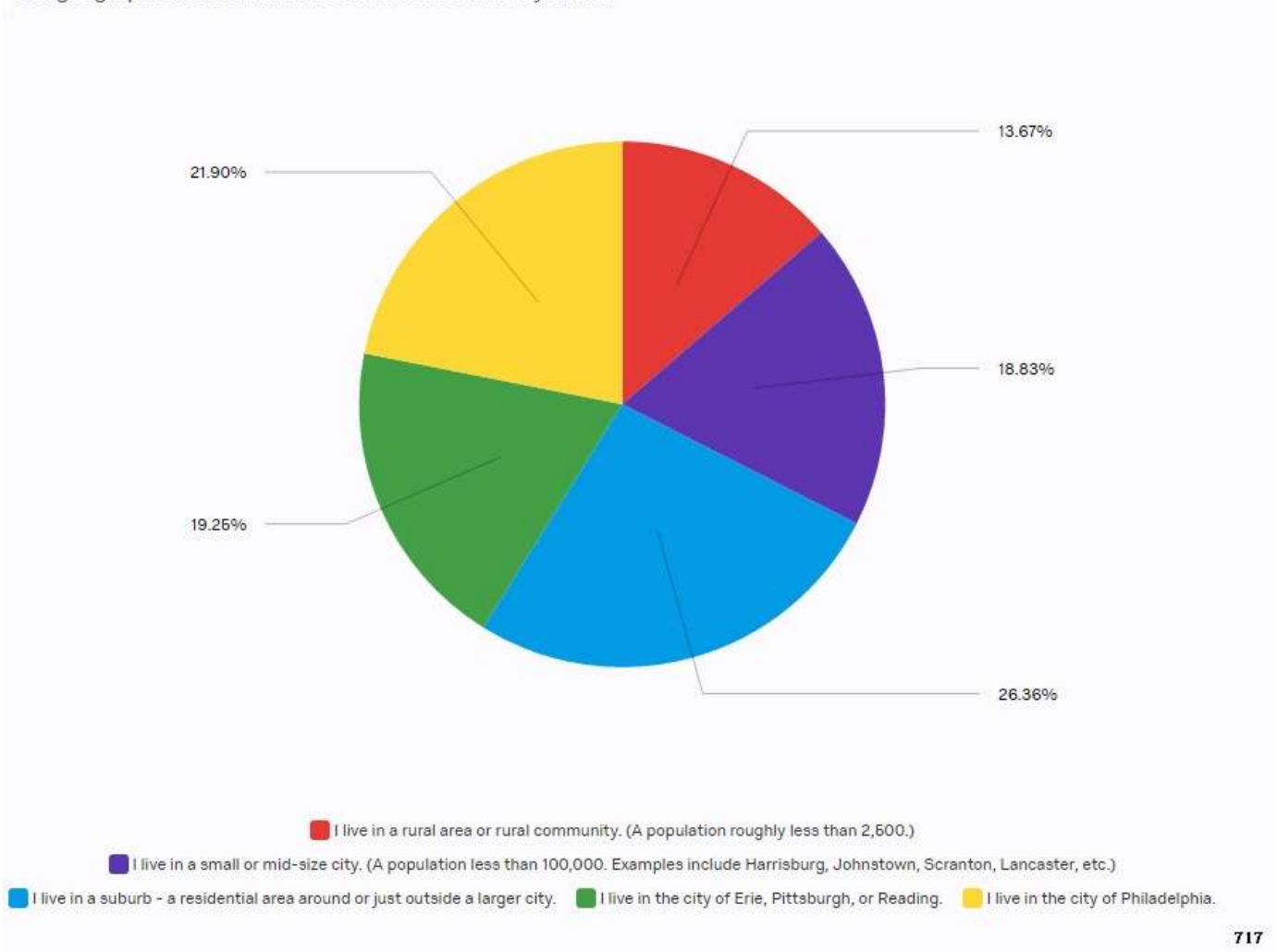


- Persons living with HIV
- Individuals at risk through unsafe injection drug use (IDU)
- People experiencing or who have experienced homelessness
- Persons with disabilities (age related, mental, communicative, physical, etc.)
- Men who have sex with men (MSM)
- Individuals at risk through unsafe sex (including at-risk heterosexuals, sex workers, etc.)
- People experiencing or who have experienced incarceration
- HIV Prevention and/or Care in minority communities

722



The geographic location that best describes where you live:



Most and Least supported IHPCP Goals

The survey gauged support for all 42 listed goals in Section II of the IHPCP using a 5-point Likert Scale (Strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, strongly disagree). Respondents were not required to submit a rating for all 42 goals.

All other Plan goals not listed here registered between 87 percent and 96 percent agreement (aggregated as a “strongly agree” or “somewhat agree” Likert Scale response).

Survey language/ Corresponding IHPCP Goal Language	Percentage of respondents that strongly or somewhat agree	Highest agreement rates
Survey	97%	3. Work with settings like STD clinics and community health centers to help make HIV testing a routine part of healthcare.
Goal	-	"Refine Enhanced Health Promotion and Screening (EHPS) protocols which seek to expand HIV screening, including early detection of HIV in healthcare settings through routinizing opt-out testing at STD clinics, Community Health Centers, County Jails, State Corrections, youth detention/rehabilitation centers, emergency departments, and substance use treatment centers."
Survey	97%	22. Promote and support expanded HIV training for health care providers.
Goal	-	"Collaborate with the Mid-Atlantic AIDS Education and Training Center (MAAETC) to expand HIV curricula for health care providers to strengthen current HIV provider workforce capacity to ensure access to and quality care."
Survey	97%	26. Use good processes to link newly diagnosed HIV-positive people to Partner Services and medical care quickly.
Goal	-	"Utilize case-specific monitoring processes to ensure that newly diagnosed HIV-positive individuals are being linked to Partner Services and linked to medical care in a timely manner."
Survey	97%	32. Expand benefits to assist clients to access health insurance through the Special Pharmaceutical Benefits Program (SPBP).
Goal	-	"Operationalize an expanded insurance program to assist clients with payments for insurance premiums for plans purchased through the marketplace."
Survey	97%	37. Work with medical providers to ensure quality healthcare that does not discriminate against people living with HIV.
Goal	-	"Include in site visits of funded providers: compliance with relevant provisions of HIPAA, and provide technical assistance to providers with regard to requirements to care for PLWH, in compliance with Federal nondiscrimination laws."
Survey	98%	39. Support efforts with the prisons to make sure HIV-positive people getting out of prison can get their medications.
Goal	-	"Coordinate discharge of incarcerated individuals between corrections facilities and the SPBP to ensure access and adherence to medications."

Survey language/ Corresponding IHPCP Goal Language	Percentage of respondents that strongly or somewhat agree	Lowest agreement rates
Survey	86%	1. Distribute funding to geographic areas based on HIV infection rates.
Goal	-	"Allocate CDC, HRSA and state funding consistent with the geographic distribution of the epidemic."
Survey	84%	23. Support providers in coordinating their services by locating Ryan White Part B and C services together.
Goal	-	"Enhance collaboration and coordination across providers and across the continuum of care by co-locating RWHAP Part B and C services."
Survey	83%	29. Work with providers to ensure providers reflect the diversity of the populations they serve.
Goal	-	"Support activities that partner RW providers with local social service agencies."
Survey	83%	33. Support advocacy efforts to change laws to increase access to clean syringes.
Goal	-	"Advocate for the revision of the Substance, Drug, Device and Cosmetic (DDC) Act, Act of 1972, P.L. 233, No. 64 to decriminalize syringe access."
Survey	85%	43. Bring people together to talk about issues related to HIV and the Black community.
Goal	-	"Convene roundtable discussions to highlight the relevance of the intersecting issues of HIV and the Black community."

Appendix F: Supplementary Data

Supplementary content includes demonstrations, pilot/special projects, new initiatives, and other relevant projects which demonstrate the jurisdiction's ongoing efforts throughout the HIV Continuum. These projects are listed here as they may or may not yet have been adopted as primary program content and/or may have generated proof of concept or preliminary results relevant to program improvement. This supplementary section contains information on Pennsylvania's Project SILK.

F1: Project SILK

Project Silk is a structural intervention developed as a demonstration project in 2012 to provide integrative HIV prevention, HIV/STI testing, linkage to HIV/STI care, and re-engagement in HIV/STI care services. The project's target population consists of young MSM and transgender people of color aged 13-29 and their sexual partners. A partnership between the Pennsylvania Department of Health, the University of Pittsburgh, and Community Human Services, Inc., Project Silk's hallmark feature is the provision of a safe, recreation-based youth-centered space, open four nights per week, in downtown Pittsburgh. A social worker is available on site to connect youth to key ancillary services including housing/shelter, employment, and medical care. HIV testing and linkage to care is available during drop-in hours and by request and is enhanced by a modified version of the social network strategy – a community-based strategy for identifying persons with undiagnosed HIV infection. The space includes a mix of structured programming, such as civic engagement discussion groups, as well as unstructured time for youth to practice dance moves and work on presentation effects for house balls. In addition, Project Silk is designing, implementing, and evaluating a novel behavioral intervention, called Future Selves, which utilizes existing House and Ball Community event structures to help youth envision, embody and attain positive futures. In addition to condom distribution, risk assessments, sexual health discussion groups, and other standard HIV prevention activities, Project Silk is currently in discussion with medical providers about establishing a pilot program that includes PrEP/PEP delivery.

Proof of concept

Project Silk has succeeded in meeting its main objectives each year. Key per annum results include:

- a) Conducting more than 100 HIV CTR (Counseling, Testing and Referral) sessions;
- b) Achieving an HIV seropositivity rate >5 percent;
- c) Achieving an STI seropositivity rate >5 percent;
- d) Finding an HIV prevalence rate >20 percent (includes previously positive individuals out of care);
- e) Re-engaging into care/supportive services >15 previously positive and out-of-care individuals;
- f) Achieving community-level reach (>15 percent of total estimated target population utilizing Project Silk space);
- g) Developing and refining a community-level intervention with high feasibility and acceptability;
- h) Successful operational transfer of direct services to community-based organization partner (Community Human Services, Inc.) in 2015.

Dissemination activities:

As an innovative demonstration project, lessons learned from Project Silk may be useful to other community-based organizations and health departments considering similar models. Knowledge transfer activities have included:

- a) Annual oral and poster presentations since 2013 at the NAESM conference;
- b) An oral presentation at the American Public Health Association Conference in 2014;

- c) A project summary in the 2014 NASTAD (National Alliance of State and Territorial AIDS Directors) "CONCEPTS" document;
- d) Annual presentations to the Pennsylvania HIV Planning Group and subcommittees, as requested.
- e) A series of manuscripts in process on the design, implementation, and results since inception.
- f) An oral presentation to the Southwestern Pennsylvania Regional Collaborative meeting in 2015.

Diffusion activities:

As a result of project dissemination activities, Project Silk has been involved in planning for regional and national diffusion activities, wherein Project Silk components may be diffused to other locales interested in effective HIV continuum-of-care models for young MSM and transgender people of color. These activities include:

- a) Collaboration with the Pennsylvania Department of Health to identify areas within the Commonwealth for project diffusion, as indicated by epidemiological data and regional organizational capacity. This data-driven assessment of potential sites will identify communities with health staff at the local level and/or regional community-based organizations seeking to provide and enhance direct public services to parallel target populations (primarily Black and/or Latino MSM and Lesbian, Gay, Bisexual, Transgender and Questioning/Queer (LGBTQ) youth). Diffusion activities are defined broadly to include capacity-building, skills development, education for recreational and community-based health intervention models, and technical assistance and other instruction. Such assistance shall include tailored support and development of programmatic curricula that include epidemiological historical perspectives; instruction, with examples, of pertinent standard operating procedures and protocols for establishing and managing a safe cultural space targeting the specified population; technical assistance in behavioral HIV/AIDS prevention interventions relevant to the target population. The goal of diffusion activities will be to provide community providers throughout the state with education and capacity building based upon the lessons and community outcomes gleaned from this intervention in a reasonable timeframe.
- b) Collaboration with NASTAD's CEBACC program, spotlighting Project Silk as an effective model across the prevention and care continuum with this target population and development of training/technical assistance materials to encourage replication.
- c) Collaboration with HealthHIV, involving development of curricular materials to assist other organizations in establishing recreation-based models for this population in other locales.

Core components:

As an extension to dissemination and diffusion activities, Project Silk has developed a list of core components to guide other organizations in similar efforts. These core components are as follows:

a) Safe space, to be open at times convenient for target population members.

The safe space is an important core component of the recreation-based community health model that Project Silk promotes. Characteristics of the safe space include: a site that is physically accessible to members of the target population (e.g., near community-based businesses and in a transportation hub area); a site that is safe for participants to congregate **in and** near (e.g., in a well-policed and well-trafficked area); a site that in location does not compel stigma for entering participants (e.g., as part of a mixed-use block or building where participants who enter are not targeted for discrimination or victimization by passersby who are aware of the space's purpose); a site whose use is monitored by staff for adherence to ground rules developed by staff and community advisory board members, and whose staff has training and experience in conflict resolution and de-escalation; a site whose amenities and décor are chosen to promote a sense of belonging and comfort among participants (e.g., community advisory board members should help choose furnishings and audiovisual needs); a site that can contain at least three private offices (for concomitant provision of HIV/STI testing; social services provision; and mental health counseling); a site that can contain at least one open room of 100 square

feet (e.g., to allow for recreation, for example a dance space; a movie/video game area); a site that allows for monitored entry and exit and that facilitates **the discrete use of** self-administered, tablet-based service requisitions (see below).

b) Asset-based youth development in program planning, staffing, recruitment, and engagement.

This core component expresses the need for youth involvement in major programming decisions, including (but not limited to) planning, staffing, recruitment, engagement, and ongoing needs assessment in order to optimize the relevance and effectiveness of these activities. Recognizing that development opportunities not only increase youth involvement but likely can increase self-efficacy, public health knowledge, and valuable civic engagement, Project Silk models recommend that development opportunities be structurally infused. These opportunities can include volunteer roles; staffing opportunities; peer education and navigation; leadership positions on a youth advisory board; outreach; collaborations with other youth-serving agencies in para-professional/consultancy capacities; and others.

c) Demonstrated cultural competency in all staffing and volunteer roles.

Agencies that adopt the Project Silk model must have demonstrated cultural competency across a range of populations that encounter severe marginalization and report perceptions of stigma and discrimination as barriers to service-seeking. These competencies depend on the target populations for which each project is focused but may well include youth (13-24); race/ethnicity (including Black populations and Latino populations); and LGBT (including understanding biphobia and transphobia). For certain target populations, cultural competency trainings across intersecting areas of discrimination will be necessary.

d) Strong agency buy-in and support.

Working with highly marginalized youth populations at high risk for HIV infection and/or retention in care necessitates very strong agency buy-in and support. This is chiefly due to the myriad challenges that agency staff will face when establishing and maintaining such programming. These challenges, which may include establishing late hours; working off-site; working with clients with poorly developed boundaries; and mediating verbal and physical altercations, among other difficulties. The Project Silk model of recreation-based community public health necessitates significant previous experience with target populations; administrative flexibility, e.g. to quickly react to staffing shortages or necessity of supplies (such as bus tickets); experience and/or demonstrated potential for effective academic-community-government partnerships; and significant experience in service provider/community collaborations.

e) Harm reduction philosophy.

The Project Silk model recognizes that HIV-related risks and service uptake is highly individualized and recommends working with clients to assess and promote risk reduction and service uptake strategies that are non-judgmental and attainable. Broad examples of harm reduction strategies include sexual health discussion groups and anti-stigma campaigns; specific harm reduction strategies include PrEP, sero-adaptive behaviors, safer sex work strategies (including provision of housing/shelter and employment assistance), and referrals to pharmacies or syringe exchange programs for clean needles. Condoms and lubricant should be readily available in all areas, including bathrooms.

f) Tablet-based intake with offsite options (optional).

The Project Silk model incorporates electronic-based intake for each client utilizing the safe space on each open day. The intake system allows for participants to select services that they need, and automatically sends emails to staff related to these service needs. This system also allows participants to request services discreetly and remotely, so that they need not ask for the service directly, or even access the safe space if they are uncomfortable; rather, staff can introduce themselves to participants in

a discreet and polite way and provide HIV/STI testing at satellite locations of mutual agreement to minimize perceptions of stigma associated with initiating service uptake.

g) Peer navigation to medical care and social services.

On par with the necessity of community participation in the planning process is the use of peer navigators. These individuals take on programming and HIV/STI testing responsibilities within the space as a way to increase community ownership of the project. It is of high importance that these peer navigators receive proper supervision and guidance for keeping the “personal” and “professional” spheres separate. Other functions for peer navigators include “inreach”, e.g. helping introduce participants to staff members at the space and outside the space who can help them initiate medical and/or social services uptake.

h) Social Network Strategy with social media components.

As a community-based project, Project Silk can tap into a rich social network. The CDC released guidelines for utilizing these social networks for testing individuals for HIV. Modifications of these strategies may help maximize the identification of new HIV infections and linkage/re-engagement for previously positive individuals. Incorporating social media avenues into Social Network Strategy may also help agencies reach participants who have not previously utilized the safe space or its service options.

i) Integrated HIV and STI testing and self-testing (where possible).

As the Project Silk model relies on a recreation-based safe space, a core component is that medical services are brought to community participants at this space. Onsite, private and confidential rapid HIV and syphilis testing and self-administered STI testing, with options for provision of testing/test facilitation and results by peers and non-peers, gives this model a "one-stop shop" community health foundation with myriad options to minimize barriers to access and uptake.

j) Co-located mental health and supportive services.

Mental health and substance use are highly correlated with HIV seroconversion and, for those who are HIV positive, poor viral load suppression. As the Project Silk model relies on a recreation-based safe space, a core component is that mental health and other supportive services are brought to community participants at this space. Onsite mental health care linkage and provision, coupled with onsite supportive services delivery and navigated and tracked referral across a broad range (including employment and education assistance, housing/shelter, transportation assistance, food, clothing, substance abuse, legal services) will help reduce incident HIV cases and increase viral suppression among those who are HIV positive.

F2: Needs Assessment of Linkage to HIV Care, Pennsylvania Report 2014

Report to the Pennsylvania Department of Health Division of HIV and Pennsylvania HIV Planning Group, January 2015

Prepared by: Sarah Krier, Anthony Silvestre, Mark Friedman, and Brian Adams

Introduction: This report describes a study undertaken by the Needs Assessment Committee of the Pennsylvania HIV Community Planning Group (HPG). The HIV Prevention and Care Project (HPCP) of the Graduate School of Public Health at the University of Pittsburgh collaborates with the HPG, providing research support and expertise throughout the needs assessment process. Research activities include scientific literature reviews on pertinent HIV topics, focus groups and in-depth interviews with populations of interest in Pennsylvania, as well as small-scale surveys used for descriptive statistical purposes.

Report: Linkage to Care Literature Review 2014

Brief Description: A review of the literature was implemented to identify barriers and facilitators with respect to linking HIV+ individuals to care. Search criteria included: 1) no restriction by year of publication, 2) U.S. studies, 3) peer-reviewed publications, and 4) articles focusing on linkage to care. Falk Library within the University of Pittsburgh was consulted with respect to developing the methods for this literature review. PsychInfo, Medline and Google Scholar were utilized. Search strategy began with the union of (HIV or AIDS) and (Treatment, Linkage, Linkage to Care [LTC]) producing 80,025 articles. The second search included the union of (HIV or AIDS) and (Linkage to Care) which produced 208 articles. Discounting non-relevant articles (e.g., non-U.S.; not focused on LTC) produced 58 articles plus 10 articles via a Google Scholar search, plus 17 articles retrieved as a result of reviewing reference listings within articles, produced 85 final articles for closer review.

Relevant Findings:

Definitions of linkage to care varied. Generally, clinical visit after testing positive (confirmatory results, comprehensive assessment, visit with primary care doctor most common definition). Time periods when visits had to occur varied however, most often within a 3-month period (Christopoulos, Das, & Colfax, 2011).

There may be recent improvement in linking HIV+ individuals to care. A meta-analysis using 1995 – 2005 data suggested that 31 percent do enter medical care within 4 months post-diagnosis (Marks, Gardner, Craw, & Crepaz, 2010). Similarly, a 2009 CDC report indicated that 28 percent delayed entry to care beyond 3 months. However, a CDC report in 2014 found that 20 percent delayed entry into care beyond 3 months (Gray, Cohen, Hu, et al., 2014).

With respect to demographics, 1) **adolescents** take longer and are less likely to link to care than adults; adults < age 40 less likely compared to those 40+ (Bamford et al., 2010; Castle et al., 2011; Craw, et al., 2006; Fleishman et al., 2012; Hall et al., 2012; Philbin, et al., 2013; Pollini et al., 2011), 2) findings regarding **gender** are mixed (Fleishman et al., 2012; Minniear et al., 2013; Mugavero et al., 2007; Philbin et al., 2013; Rothman et al., 2012; Stein et al., 2000; Torian et al., 2008; Tripathi et al., 2011; Zetola et al., 2009), 3) **non-whites, especially Hispanic/Latino, experienced greatest delay and non-linkage** (Bamford et al., 2010; Craw et al., 2010 (Hispanics more likely to LTC); Horvath et al., 2013; Mugavero et al., 2007; Philbin, Tanner, DuVal, Ellen, Xu et al., 2013; Tripathi et al., 2011; Turner et al., 2000), 4) findings with respect to **risk category** are mixed (Bamford et al., 2010; Fleishman et al., 2012; Philbin et al., 2013; Tripathi et al., 2011).

Only one article was found pertaining to transgender individuals (Sevelius et al., 2013) **or individuals with disabilities** (not-related to their HIV status) (Hanass-Hancock et al., 2009) and linkage. However, a variety of data indirectly suggest that these groups may experience greater problems with accessing care compared to other subgroups of HIV+ individuals.

Psycho-social factors associated with less linkage to care: 1) **lack of knowledge** (e.g., If I'm feeling well, I don't need treatment; belief that HIV medications can make you sick; go only if you need medications; misperception of risk associated with delay in LTC; among women, knowledge about risks and benefits of care was important though not sufficient part of LTC) (Beer et al., 2009; Christopoulos et al., 2013; Jenness et al., 2012; Pollini et al., 2011; Quinlivan et al., 2013; Samet, Freedberg, Savetsky, Sullivan, & Stein, 2001), 2) **depression and other MH problems** (though findings are mixed) (Bell et al., 2010; Bhatia et al., 2011; Hightow-Weidman et al., 2011; Wohl et al., 2011), 3) **substance use** (especially recent/current) (Note: strong association with delay or no LTC) (Beer, Fagan, Valverde, & Bertolli, 2009; Bell et al., 2010; Craw et al., 2010; Horvath et al., 2013; Jenness et al., 2012; Mill et al., 2008; Raveis et al., 1998; Samet et al., 1998; Wohl et al., 2011), 4) **personal reactions to finding out one is positive** such as psychological breakdown (Beer et al., 2009; Buseh et al., 2006; Hosek, et al., 2008; Jenness et al., 2012; Mill et al., 2008; Pollini et al., 2011; Quinlivan et al., 2013; Raveis, Siegel, & Gorey, 1998), 5) **stigma** (Note: strong associations with

delay or no LTC) (Beer et al., 2009; Buseh et al., 2006; Christopoulos et al., 2013; Fortenberry et al., 2012; Hosek et al., 2008; Philbin, Tanner, DuVal, Ellen, Kapogiannis, et al., 2013; Quinlivan et al., 2013; Samet et al., 2001; Sison et al., 2013; Vyavaharkar et al., 2008), 6) **more developed ethnic/racial or LGBT Identity** (associated with better LTC) (Futterman et al., 2004; Harper et al., 2014), and, 7) **conspiracy beliefs** (Bogart, et al., 2004; Bogart, et al., 2010a), 8) **denial of being infected or the significance of being infected with respect to health risks**, and 9) **loss of autonomy and sense of powerlessness especially among women** (Quinlivan et al., 2013).

Practical factors associated with less linkage to care: 1) **care-giving for others** (Raveis et al., 1998; Stein, Leibman, & Wachtel, 1991; Stein et al., 2000; Vyavaharkar et al., 2008), 2) **insurance status** (Bamford et al., 2010; Hightow-Weidman, et al., 2011; Minniear et al., 2013; Mugavero et al., 2007; Philbin et al., 2013; Pollini et al., 2011; Raveis et al., 1998; Rothman et al., 2012; Stein et al., 2000; Turner et al., 2000; Zierler et al., 2000), 3) **poverty & homelessness** (Craw et al., 2010; Cunningham et al., 1999; Minniear et al., 2013; Philbin, et al., 2013; Stein et al., 2000; Vyavaharkar et al., 2008; Wohl et al., 2011; Zierler et al., 2000), and , 4) **transportation obstacles** (Cohen et al., 2004; Cunningham et al., 1999; Hightow-Weidman, et al., 2011; Hightow-Weidman et al., 2011; Philbin, et al., 2013; Vyavaharkar et al., 2008).

Prior experiences with the health care system associated with linkage to care: 1) **utilizing PCP services before HIV testing associated with better LTC** (most youth did not have routine health-care prior to testing), 2) **anonymous testers, compared to confidential testers, more likely to delay entry into care**, 3) **negative experiences in testing and post-test counseling including a perception of racism, HIV stigma** associated with less LTC (Axelrad et al., 2013; Beer et al., 2009; Bindman et al., 1998; Buseh et al., 2006; Hosek et al., 2008; Raveis et al., 1998; Reed et al., 2009; Stone, 1997; Turner et al., 2000). For example, a large qualitative study found that 1) providers sometimes failed to provide counsel and information about care, prognosis, and treatment “and sent them away without education.” , 2) women felt significant degrees of stigma, were afraid to enter clinics, afraid of being seen, 3) strong relationships with nurses, doctors, office staff at front desk, helped some of them overcome the stigma, 4) when care for the women was effectively expressed, women were more likely to trust and utilize providers, 5) “Positive clinic attributes, such as friendliness, professionalism, warmth, and discretion were helpful, whereas lack of privacy or discretion would keep women from wanting to return to future appointments.” (Quinlivan et al., 2013)

Structural factors associated with better linkage to care: 1) **adolescents going to general clinics versus adolescent-specific clinics** (Philbin, Tanner, DuVal, Ellen, Xu, et al., 2013), 2) **availability and access to ancillary services**, (Ashman, Conviser, & Pounds, 2002; Messeri, Abramson, Aidala, Lee, & Lee, 2002; Mugavero, Norton, & Saag, 2011; Sherer et al., 2002; Sison et al., 2013), 3) **co-location of services (testing and medical providers)** (Craw et al., 2010; Fortenberry, 2012), 4) **increased confidentiality, decreased waiting time, more flexible hours of operation** (Craw et al., 2010; Fortenberry et al., 2012; Horstmann et al., 2010; Jenness et al., 2012; Minniear et al., 2013; Mugavero et al., 2007; Quinlivan et al., 2013; Tripathi et al., 2011; Vyavaharkar et al., 2008), 5) **Cultural sensitivity and skills of health care professionals** (Fortenberry et al., 2012; Horstmann, Brown, Islam, Buck, & Agins, 2010; Philbin, Tanner, DuVal, Ellen, Kapogiannis, et al., 2013), 6) **collaboration/relationships between testing sites and medical providers** (Craw et al., 2008: Craw et al., 2010; Fortenberry et al., 2012; Philbin, Tanner, DuVal, Ellen, Xu, et al., 2013), **funding and policy issues** (Justice, 2010; Mugavero et al., 2011; Mugavero, et al., 2013; Walensky et al., 2005).

Limitations: This literature review included peer-reviewed articles only. There may be other relevant data that has not been peer reviewed. The exclusive focus on the U.S. may omit other relevant information. The literature about incarcerated individuals was not included.

Recommendations:

1. The review of demographic variables above suggests that resources may need to target certain subgroups more than others.
2. Almost no data exist with respect to transgender individuals and individuals with disabilities (not directly related to HIV status). More research in these areas is needed.
3. There are a wide variety of psycho-social factors that are associated with LTC. These are often co-occurring. Program planners and those implementing LTC programs need to take these into account and develop programs that deal with co-occurring conditions; ancillary services are important.
4. Several important practical barriers (i.e., caregiving of others; transportation problems; insurance status; poverty and homeless) impact LTC and will need to be addressed to improve LTC outcomes.
5. Other structural factors described above impact linkage to care. Prior experiences with health care systems and providers are a major barrier.
6. Stigma is a major factor that prevents many individuals from linking to care.
7. Little data exist with respect to rural LTC.

Additional information:

In addition to the above recommendations the literature suggests the following with respect to services and increasing LTC:

- Strengths-based case-management program is essential (e.g., building a strong relationship with client; helping clients set their own goals and search for their own resources to overcome barriers; identifying informal sources of support; conducting case-management outside of office in the community, in addition to standard in office work) (Craw et al., 2010; Gardner et al., 2005).
- Helping individuals prepare to link to care is important by evaluating and trying to meet medical, physical, psychosocial, environmental, and financial needs (with individualized plan), and using a stages of change model to evaluate readiness to engage care.
- A “time-intensive intervention delivered by non-judgmental and culturally competent peers is very effective in engaging at-risk Latino and African-American YMSM in consistent HIV care....” Weekly contact is important during the early months, and with youth, text messages can be effective (Wohl et al., 2011).
- Formal linkages between testing and treatment sites are critical to overcome fragmentation of care and to help make various stake-holders accountable for linkage processes.
- Community membership (how clinical care sites develop strong relationships with various community organizations including LGBT) is important (e.g., helping a gay kid diagnosed with HIV get linked to a gay health professional).
- Attitudes of caregivers about adolescents and LGBT and racial minorities matter.
- Social support can help individuals overcome stigma.

- Patient education is a key component of case management of linkage (about HIV, issues related to disclosure, demands of becoming a patient).
- Case managers often have to help clients deal with a variety of barriers to care: stigma, availability of services, eligibility requirements, consent, payment, housing instability, homelessness, transportation, MH, drug use, the complex criteria and difficult application procedures, and involvement of multiple service providers. (Fortenberry et al., 2012).
- One program ensured that all their program sites helped newly identified individuals to schedule medical visit, provided transportation to it, used telephone reminder calls, and conducted case finding for clients that missed appointments. Outreach workers escorted individuals to their initial medical visit. Outreach workers coordinated services with case managers, conducted support groups, organized social and educational events, and offered peer support in initiating HIV medications. The authors state that “An important lesson of this research is that even with this level of personal support, linkage and engagement rates varied substantially among sites, suggesting that additional factors influence care engagement.” (Philbin, Tanner, DuVal, Ellen, Xu, et al., 2013)

Report: Needs Assessment on Linkage to Care in Rural Pennsylvania 2014

IRB: PRO14060027

Brief Description:

A scientific literature review of local and national data sources focusing on linkage to HIV/AIDS care (LTC) was conducted and presented to the HIV Planning Group in May 2014. Based on this review, the HPG Needs Assessment subcommittee identified a gap in knowledge regarding linkage to HIV/AIDS care for clients from rural areas of Pennsylvania. An assessment was designed with input from the HPG and implemented by the HIV Prevention and Care Project to identify the specific barriers, challenges and facilitators faced when linking people from rural areas of Pennsylvania to HIV/AIDS care.

The assessment consisted of 15 qualitative structured telephone interviews with frontline staff involved with linking HIV clients from rural areas of Pennsylvania to HIV care from every region of the state. Purposive sampling methods were used to recruit participants with a diversity of roles in the LTC process, including HIV testers, field staff/Disease Intervention Specialists and HIV care staff. Questions focused on identifying specific testing and linking processes and on specific barriers, challenges and facilitators faced when linking people from rural areas of Pennsylvania to HIV/AIDS care. Data were analyzed by two independent researchers using a grounded theory approach and presented to the HIV Planning Group in September. Qualitative analyses of interviews will use inductive (e.g. grounded theory) approaches.

Relevant Findings:

- More than half of the respondents identified these factors as facilitators to successful linkage: client-centered approach, active referrals, early intervention, and in-person LTC support at time of confirmatory results with education around HIV, disclosure and LTC resources (insurance, housing, substance abuse, food). Co-location of services, strong provider and community networks and social support were also mentioned as key facilitators.

“When you’re sitting in the room with a newly diagnosed person, okay... You’re helping, you are offering emotional support, you are offering that person hope, you are offering that person acceptance. And when I say acceptance, you know, I am not judging how you contracted the

disease. I'm here to help you so that you can have quality to your life, and a long life. I'll be real practical; making that doctor's appointment is the easy part. But helping that individual not beat themselves down, to keep them positive in their thinking, to help them in their acceptance, because let's face it; a newly diagnosed individual just sees everything negative...."

- Challenges with transportation emerged as a key barrier to LTC from rural areas in terms of distance to HIV provider clinics and a lack of confidential transport options for clients.

"Because of shortage of transport and size of territory it becomes inevitable that we have case managers who take active role in getting clients to HIV-related appointments. Biggest barriers or challenges: so costly."

"Confidentiality and transportation is a major issue – taking them to a DOH clinic. News flies so quickly in rural community."

- Structural barriers included too few field staff and providers, long waiting time for first appointment and availability and access to dental services.
- Informants also cited negative healthcare experiences in testing and post-test counseling with medical providers and the need to ensure confidentiality within contexts of extreme stigma (HIV, MSM, PWID) as a barrier to LTC from rural areas.

"I think a lot of medical providers, nurses, doctors are uncomfortable with HIV around here, uncomfortable with sexual history taking even or talking about sex let alone talking about sexuality that is different from their own. And so it just feeds into the stigma that already exists."

"I willingly give results because I don't want someone giving them who doesn't know how to talk to the client appropriately. With not only respect to who they are as a person but to their sexuality too. I've heard too many times where doctors gave results on phone or tried to make a joke, or basically not knowing how to talk to them. Making them feel uncomfortable."

- Demographically, younger gay men (<30) and older heterosexually married MSMW were reported as taking longer and less likely to link to care.
- Clients with dual diagnoses, namely depression and substance abuse, faced greater challenges in linking to care.

Recommendations:

These recommendations were compiled from HIV Planning Group Needs Assessment Subcommittee discussions, from a scientific literature review of local and national data sources focusing on linkage to

HIV/AIDS care (LTC) and from an assessment focusing on LTC from rural areas of Pennsylvania. They were presented to the HIV Planning Group in January 2015 and passed unanimously.

Policy

1. The DOH should adopt a definition for linkage to care to be used uniformly throughout the state.
2. The DOH should mandate formal linkages between testing and treatment sites when possible to overcome fragmentation of care and to help make various service providers accountable for linkage processes.
3. The DOH should, when possible, encourage and fund co-location of testing, HIV care and nonmedical services to facilitate timely linkage to care, especially in rural Pennsylvania.
4. The DOH should mandate that all funded HIV test sites provide comprehensive patient education around HIV, disclosure and LTC resources at point of confirmatory results.
5. The DOH should support HIV testing providers where possible to establish linkages and provider agreements with those who provide services related to practical barriers to LTC, including: food and housing services, insurance, benefits counseling, health-related transportation, child-care services, disability services, language translation and mental health and substance abuse services.
6. The DOH should create a mechanism to increase the number of PPA-contracted agencies so that the DOH can better track LTC.
7. The DOH should create and implement a plan to reduce stigma related to HIV (HIV, sexual practices, drug use) throughout the state.
8. To address the structural barrier in rural areas of too few field staff to meet the immediate linkage to care needs of clients, the DOH should collaborate with the Bureau of Community Health to identify mechanisms to increase field staff in underserved areas.
9. To address the structural barriers in rural areas of too few medical providers which leads to long wait times for first appointments and limited availability, the DOH should offer training to providers who are interested in working with rural consumers.
10. The DOH should create a plan to make telemedicine available around the state for HIV prevention and care services. The DOH should request technical assistance from HRSA around telemedicine to identify other states with large rural populations with effective programs for rural HIV care in order to increase the utilization of telemedicine for HIV care services in Pennsylvania.

11. The DOH should increase access to dental health services in rural areas by offering training to dentists who are interested. The DOH should also explore the feasibility of using mobile dental health units for rural medical care and facilitate linkages to dental schools.
12. The DOH should implement a cost-effective system for using certified peer specialists in supporting the linkage to care process.
13. The DOH should require a marketing plan from all providers to make sure that demographically indicated subgroups are being reached.
14. The DOH should encourage culturally competent marketing of HIV services to Spanish-speaking populations to reduce barriers to HIV services.
15. The DOH should consider ways to ensure that medical providers, including primary care providers and emergency room providers, are following the CDC recommendations for HIV testing as part of routine care.
16. The DOH should continue efforts to require mandatory lab reporting (all CD4 and viral loads) to ensure a more thorough perspective on the continuum of care in Pennsylvania.

Capacity Building

17. The DOH should require all contracted HIV testers, case managers and HIV clinic staff and providers to be trained on client-centered strength-based approaches to timely linkage to care. Such approaches include the following elements:
 - a. In-person LTC support at time of confirmatory results, particularly in rural areas
 - b. Active referrals
 - c. Early intervention
 - d. Conducting meetings in client's chosen location and time
 - e. Transportation assistance
18. The DOH should mandate that ARTAS or other similarly proven evidence-based LTC interventions be available to all HIV-related staff throughout the state.
19. The DOH should make trainings available as new evidence-based interventions are mandated before sites are required to implement them.
20. The DOH should mandate that ALL staff of all HIV prevention and treatment programs be trained in cultural competency in terms of race, gender, age, drug-use, and sexual practices to offer culturally competent and non-judgmental services.
21. The DOH should create a template that can be used to establish formal linkages between HIV testing and treatment sites, when possible. All HIV testing staff should be trained on how to use and maintain these linkages.

22. The DOH should require that all contracted HIV testers and field staff to be trained on how to offer comprehensive patient education at time of confirmatory results. This includes training on how to evaluate and support clients in meeting medical, physical, psychosocial, environmental, and financial needs to support a client's readiness to engage in HIV care.
23. The DOH needs to mandate that all HIV testers, program planners and those implementing LTC programs be trained on dual diagnosis and linkage procedures to mental health and substance abuse services.
24. The DOH and AETC should collaborate and coordinate on training on LTC.

Needs Assessment

25. Challenges with transportation emerged as a key barrier to LTC from rural areas in terms of distance to HIV provider clinics, cost of transportation and a lack of confidential transport options for clients. The DOH should gather data on transportation options and problems faced by clients by region when linking to HIV care from rural areas.
26. The DOH should gather more data on use of HIV services by transgender people.

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F3: HPG Access Subcommittee Peer Navigator Framework

HPG Peer Navigator Framework May 2016

GOALS

To increase access and improve health outcomes of people living with HIV disease (PLWH) across Pennsylvania.

To standardize a curriculum to train peer navigators to assist PLWH obtain optimal health through the navigation of both medical and non-medical services.

This framework will be modified to meet the needs of different geographic areas and populations in order to reduce disparities in navigation services across the state of Pennsylvania.

PREFERRED CHARACTERISTICS

The following are desired characteristics of a peer navigator. These characteristics are not pre-requisites to become a peer navigator but should act as a guide to support a peer navigator's development.

1. A person who identifies as a peer. A peer is someone who is either directly a part of the same social group as the individual with whom the knowledge is being shared, or who is the same age, gender, sexual orientation, race and ethnicity, occupation, socio-economic and/or health status.
2. A person who is 18 years of age or older
3. A person who has a high school diploma or GED, preferred
4. A person who can maintain confidentiality of patient health information
5. A person who is able and willing to travel to meet client
6. A person who speaks the language and knows the cultural norms and values of the group/community
7. A person who has the desire and willingness to increase one's knowledge of the subject and related healthcare matters (e.g., sexually transmitted infections, reproductive health, group facilitation and peer education)
8. A person who can influence community norms
9. A person who inspires and encourages her/his peers to adopt health-seeking behaviors through sharing common weaknesses, strengths, and experiences
10. A person who has an interest in leading by example
11. A person who is sensitive, open-minded, non-judgmental, a good listener, and a strong communicator
12. A person who is goal-driven with strong motivational skills
13. A person who can work in the field with limited supervision

TRAINING

Peer navigators will engage in formal training and fieldwork prior to working, in addition to ongoing training throughout their careers.

Training for peer navigators will include:

- HIV 101 Basics training

- Training based on the National Minority AIDS Council’s “Optimizing Entry into and Retention in HIV Care and ART Adherence for PLWHA” Train-the-Trainer Manual which includes the following key components:
 - The Role of Peer Navigators
 - ART 101: What You Need to Know
 - Adherence and HIV Treatment
 - Drug Resistance and HIV Treatment
 - State of HIV Care in the United States
 - Guidelines for Improving Entry into and Retention in care and Antiretroviral Adherence for Persons with HIV
- Professional development to maintain and increase competency

PEER JOB RESPONSIBILITIES

The job responsibilities of a peer navigator differ from the work of case managers, community health workers and other positions in terms of the intensity and time working with clients. Peer navigators work intensively with clients by fostering a time bound relationship based on specific identified risk of being lost to care. The expectation for the framework is that the peer navigator supports the client until the client is stable enough to engage in care optimization. The peer navigator then engages in a discharge process which might involve transferring the client to a case manager or a community health worker, if appropriate.

1. Work as a member of an interdisciplinary team, attending team meetings if available
2. Attend weekly supervision meetings
3. Provide peer support to participants individually or in a group setting
4. Document activities, including medical and nonmedical outcomes
5. Write plans for interactions including assisting others in setting and pursuing goals
6. Coordinate with traditional service providers, including housing and other social service providers
7. Engage with community through fieldwork
8. Identify and document the systemic barriers in agency and at large
9. Outline strategies to improve timely linkage to and retention in care as an effective means of assuring successful ART initiation and optimal adherence
10. Apply evidence-based education and counseling interventions as provided in training that will help PLWH engage in HIV care and achieve HIV treatment success
11. Maintain current knowledge of the challenges faced by special populations
12. Follow criteria in discharging client

ORGANIZATION / PROGRAM RESPONSIBILITIES

1. Actively pursue collaborative relationships with other organizations as needed to support participants in care and supportive services
2. Ensure that peer navigators are fully integrated into the interdisciplinary team including in any interdisciplinary team meetings

3. Ensure that peer navigators are supervised by a person who is properly trained and can offer the support they need in this position including establishing healthy boundaries and addressing interpersonal issues
4. Ensure that the peer navigator's caseload reflects need and includes a mix of high risk and less intensive clients
5. Ensure a clear distinction between program success and individual peer navigator success
6. Maintain a formalized mechanism to document and address the systemic barriers in the agency and at large
7. Document any system or infrastructure changes resulting from peer navigator input
8. Establish policies and procedures for implementing the peer navigator program including intake, discharge, follow-up, supervision, and evaluation
9. Ensure that the peer navigator has access to ongoing education and training opportunities as outlined in a staff development plan
10. Monitor the interaction between peer navigators and participants

EVALUATION / OUTCOMES

1. Support linkage to HIV care for newly diagnosed clients within 30 days of diagnosis
2. Support the increase in the ratio of kept to missed appointments
3. Support two consecutive kept medical appointments, more than 90 days apart
4. Document how the program was implemented (process evaluation)
5. Document progress towards achieving participant goals
6. Document medical outcomes related to linkage to care and retention as identified in changes in health status or clinical outcomes (outcome evaluation)
7. Document linkages to other medical services such as mental health and substance use services
8. Document non-medical outcomes related to linkage to care and retention such as housing status, education, employment, secure transportation, and other relevant outcomes
9. Assess attitudes towards participant experience with peer navigation program through a standardized feedback mechanism

ELIGIBILITY BASED ON HIGH RISK ASSESSMENT INDICATORS

The following list will be used as a guide to identify participants who may need additional support in their HIV care:

1. New Patient
2. Learning of HIV status/Disclosure of status
3. Detectable viral load
4. Last Medical Appointment more than 1 year prior
5. Starting ARV meds
6. Homelessness or unstable housing
7. Pregnancy
8. Hospitalization
9. Occurrence of any other physical illness
10. New symptoms/disease progression/AIDS diagnosis

11. Death of significant other
12. Major lifestyle transition (new job, end of relationship, relocation)
13. Incarceration
14. Individuals recently released from jail or prison

Glossary of Terms and Acronyms

These lists have been compiled by the HPG to improve accessibility at HPG meetings and in planning documents. They are included here to increase the general accessibility of this document as well.

Acronym Reference List

These terms are found abbreviated within this Plan.

ACA	Affordable Care Act
ADAP	AIDS Drug Assistance Program
ADR	ADAP Data Report
AETC	AIDS Education & Training Center
ARTAS	Anti-Retroviral Treatment & Access to Services
CARE	Comprehensive AIDS Resources Emergency
CAREWARE	Customers Always Require Excellence. We Always Respond Earnestly
CDC	Centers for Disease Control and Prevention
CMHD	County Municipal Health Department
CPG	Community Planning Group
CPI	Critical Phase Intervention or Critical Prevention Initiative
CTR	Counseling, Testing & Referral
DEBI	Diffusion of Effective Behaviors Intervention
DOH	Department of Health - also known as "Department"
HE/RR	Health Education/Risk Reduction
HOPWA	Housing Opportunities for Persons With AIDS
HPCP	HIV Prevention and Care Project
HPG	HIV Planning Group
HRSA	Health Resources and Services Administration
HUD	Housing and Urban Development
PWID	People Who Inject Drugs
IPC	Integrated Planning Council
MAI	Minority AIDS Initiative
MSM	Men who have sex with men
NASTAD	National Alliance of State and Territorial AIDS Directors
NHAS	National HIV/AIDS Strategy
PA-NEDSS	Pennsylvania National Disease Surveillance System
PaUDS	Pennsylvania Uniform Data System
PEHTI	Pennsylvania Expanded HIV Testing Initiative
PEMS	Program Evaluation and Monitoring System
PEP	Post Exposure Prophylaxis
PLWH/ PLWHA	People Living with HIV / People Living with HIV/AIDS
PPA	Preferred Provider Agreement

PPA	Pennsylvania Pharmacists Association
PrEP	Pre-Exposure Prophylaxis
PSRA	Priority Setting and Resource Allocation
PS	Partner Services
PWD	People With Disabilities
RFP	Request for Proposal
RW	Ryan White
SCSN	Statewide Coordinated Statement of Need
SPBP	Special Pharmaceutical Benefits Program
STI	Sexually Transmitted Infection

Glossary of Key Terms

Affordable Care Act ACA

The Affordable Care Act refers to two separate pieces of legislation — the Patient Protection and Affordable Care Act (P.L. 111-148) and the Health Care and Education Reconciliation Act of 2010 (P.L. 111-152) — that, together, expand Medicaid coverage to millions of low-income Americans and makes numerous improvements to both Medicaid and the Children's Health Insurance Program (CHIP)

Asian Pacific Islanders (API)

“Asian” refers to those having origins in any of the original peoples of the Far East, Southeast Asia or the Indian subcontinent, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan and the Philippine Islands. “Pacific Islander” refers to those having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands

Centers for Disease Control & Prevention (CDC)

An agency of the United States Department of Health and Human Services (HHS) based east of Atlanta, GA. It works to protect public health and the safety of people by providing information to enhance health decisions and promotes health through partnerships with state health departments and other organizations. The CDC is the primary funding and informational source for HIV prevention in the United States.

Community Resource Inventory

This is an inventory of all known HIV prevention resources within the jurisdiction. This is the goal of the HIV AIDS Service Provider (HASP) registry.

Diffusion of Effective Behavioral Interventions (DEBI)

CDC approved interventions of scientifically proven effectiveness for HIV prevention. These interventions are designed to be implemented by community-based service providers and state and local health departments.

Evidence-Based Interventions (EBI)

HIV prevention interventions that are based in behavioral and social science theory; these interventions are not part of the CDC’s Diffusion of Evidence Based Interventions (DEBI)

Health Communication/Public Information (HC/PI)

This is HIV prevention interventions such as mass media (print, electronic, broadcast), small media (brochures, flyers), social marketing, hotlines, and clearinghouses.

Health Education/Risk Reduction (HERR)

Individual counseling (peer counseling, non-peer counselor, skills training), group counseling (peer mediated, non-peer mediated, skills training), Institution-based programs (school-based programs and work site health programs)

Health Resources and Services Administration (HRSA)

An agency of the Department of Health and Human Services (HHS) that administers and funds the Ryan White HIV/AIDS Care Act for persons living with HIV/AIDS.

Hepatitis C (HCV)

A blood borne sexually transmitted virus that is spread by sharing of syringes and drug works. Approximately 40 percent of those infected with HIV are co-infected with HCV. Hepatitis disease can become chronic and lead to liver failure and death.

HIV Community Planning Group (CPG)

The former statewide (not including Philadelphia) planning body for HIV prevention.

HIV Planning Group (HPG)

This is the combined HIV prevention and care planning group for the Department of Health. They will communicate with key stakeholders in reviewing the HIV prevention and care plans developed by the Health Department.

Individual level interventions (ILI)

HIV prevention directed toward individuals one-on-one to create change in HIV risk-related behaviors such as, HIV testing and counseling, partner notification, individualized prevention counseling, couples counseling and telephone hotlines. Also known as interventions directed to individuals (IDI).

Injection drug user (IDU)

A population at higher risk for HIV transmission based upon their syringe, needle and injection drug works sharing.

Integrated Epidemiological Profile

This is the combined epidemiological profile for HIV Prevention and HIV care.

Integrated Work Group (IWG)

This was the combined Steering Committee of both the CPG and IPC, which was tasked with creating a single planning body: the HIV Planning Group (HPG).

Integrated Planning Council (IPC)

This was the former statewide HIV Ryan White Part B planning body.

Men who have sex with men (MSM)

A population at higher risk for HIV transmission that is comprised of men who self-identify as gay or bisexual and/or had sexual activity with another man in the past five years.

Needs assessment

This is a formalized process for gathering both qualitative and quantitative HIV prevention needs and barriers through surveys, focus groups and key informant interviews with specific populations.

Pennsylvania HIV Prevention and Care Project

The Pennsylvania Department of Health, Division of Disease funded subcontractor at the University of Pittsburgh Graduate School of Public Health providing needs assessments, evaluations, facilitation, integrated planning and meeting support, and behavioral health science support to the Division of HIV Disease and the HPG.

Statewide Coordinated Statement of Need (SCSN)

This is the Health Resources and Services Administration (HRSA) required statewide needs assessment and gap analysis of Ryan White HIV care services.