

Health Innovation in Pennsylvania Plan

June 30, 2016





COMMONWEALTH OF PENNSYLVANIA
OFFICE OF THE GOVERNOR
HARRISBURG

THE GOVERNOR

June 30, 2016

Ms. Janet Heinrich
Project Officer
Center for Medicare and Medicaid Innovation
7500 Security Boulevard
Baltimore, MD 21244-1849

Dear Ms. Heinrich:

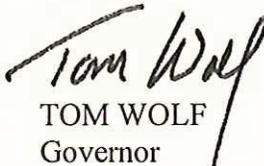
It is with great pleasure that I submit the enclosed Health Innovation in Pennsylvania (HIP) plan as fulfillment of the final deliverable for our State Innovation Models Initiative Model Design grant. I fully endorse this plan and the transformations proposed within.

The design award has fostered the development of a bold initiative that will improve the health of all Pennsylvanians and change the way we think about paying for, delivering, and coordinating health care services across the commonwealth. Since receiving the design award, Pennsylvania has partnered with over 200 stakeholders statewide, including payers, providers, hospital systems, academicians, population health experts, consumers, employers, and state officials, to develop the HIP plan.

The HIP plan outlines three primary strategies: 1) accelerate the transition from volume - to value-based payment models; 2) achieve price and quality transparency; and 3) redesign rural health care delivery. These primary aims are supported by population health, delivery system transformation, health information technology, and workforce development initiatives.

Thank you for your support as we accelerate health care delivery system transformation across the Commonwealth of Pennsylvania.

Sincerely,


TOM WOLF
Governor

Perspectives from Stakeholders

Efforts to engage stakeholders for the HIP plan development brought together experts from every health and health care perspective in the commonwealth, including payers, providers, hospitals, population health experts, academic researchers, state officials, employers, consumers, foundations, associations, and community-based organizations.

Below they share their experience in participating in this process and the importance of transforming health care in Pennsylvania.

“

“Stakeholders across the commonwealth are contributing to accelerating health innovation in Pennsylvania. We look forward to working with sister agencies as well as stakeholders to implement HIP.”

*—Secretary Karen Murphy, Pennsylvania
Department of Health*

“

“I truly believe that this HIP plan if implemented will transform the way healthcare is delivered and provided throughout the Commonwealth. It represented stakeholders from all walks of life and brings together input so valuable to our future. I am also glad to see it mirrors work already done by departments and agencies throughout the state.”

—Geoffrey M. Roche, Pocono Medical Center

“

“We have extensive experience with consumers, understanding how consumers shop for and utilize healthcare, and how they make decisions around getting the care they need. We know that consumers frequently feel overwhelmed when it comes to making these kinds of decisions. We applaud the state's efforts to make sure that consumers have more information and data at their disposal.”

*—Antoinette Kraus, Pennsylvania Health Access
Network*

“

“The Health Innovation in Pennsylvania Plan will push health care outcomes to the next level by creating a state-wide infrastructure to support coordinated, data-driven approaches to care delivery and new incentive programs aimed at episodes of care across the continuum of care. The resultant transformation will lead to interdisciplinary approaches to improve outcomes and will align state efforts with national priorities.”

—Susan L. Freeman, Temple University Health System

“

“We applaud the Commonwealth for convening stakeholders to facilitate a discussion regarding health care innovation. Given the numerous initiatives underway across the State, it is important to learn from one another to leverage best practices. We look forward to shaping the HIP plan as it evolves to prioritize and focus the discussion on meaningful, high-impact areas, which best utilize and align the resources of the State and stakeholders.”

—R. Scott Post, Independence Blue Cross

“

“The planning process was an all-inclusive process that facilitated opportunities for a diverse set of stakeholders to participate and provide input. The plan addresses many of the key issues that impact health care delivery and the health status of Pennsylvanians.”

—Lisa Davis, Pennsylvania Office of Rural Health

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“Pennsylvania Homecare Association was pleased to see the broad focus on healthcare data and information exchange throughout the plan. Simply having baseline knowledge about the characteristics of the patients we care for will help providers better coordinate care and also plan for value-based collaborations with others.”

—Janel Gleeson, Pennsylvania Homecare Association

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Executive Summary

In December 2014, Pennsylvania was granted a \$3 million award by the Center for Medicare and Medicaid Innovation (CMMI). Pennsylvania is one of 38 total awardees in the State Innovation Models Initiative, which includes 34 states, three territories, and the District of Columbia. Through this initiative, CMMI enters cooperative agreements with states to design and/or implement plans for multi-payer, multi-stakeholder health and health care delivery system transformation. Through these awards, states explore new and improved ways of paying for, delivering, and coordinating health and health care services.

The commonwealth has used this funding to develop a comprehensive plan – known as the Health Innovation in Pennsylvania (HIP) plan – that addresses health care delivery system transformation, value-based payment, expanded use of health information technology, population health improvements, and workforce development across Pennsylvania. The ultimate goal of Pennsylvania’s HIP plan is to improve the health of all Pennsylvanians through these collective strategies.

Given the imperative for change in Pennsylvania, a diverse array of over 200 stakeholders, including payers, providers, hospitals, population health experts, academic researchers, state officials, employers, consumers, foundations, associations, and community-based organizations have been engaged through the HIP process. These stakeholders have committed their time and expertise over the past nine months and will continue to be engaged during implementation.

The HIP plan focuses on three primary strategies: 1) to accelerate the transition from volume- to value-based payment models; 2) to achieve price and quality transparency; and 3) to redesign rural health care delivery. These primary aims are supported by population health, delivery system transformation, health information technology, and workforce development initiatives. For each strategic priority area, specific initiatives and opportunities have been identified in the planning process that will enable the commonwealth to meet the HIP plan goals, as well as the Triple Aim: better care, smarter spending, and healthier people.

HIP Primary Strategies:

Value-based Payment: Pennsylvania will join federal efforts to increase the percentage of health care spend in value-based payments by establishing a four-year goal similar to targets set for increasing percentages of Medicare FFS payments in alternative payment models. To achieve this goal, Pennsylvania’s value-based payment strategy will include both advanced primary care and episode-based payment models. Both approaches have been pursued in other states, often with positive early results. Pennsylvania’s approach emphasizes building on existing work and momentum in the commonwealth and identifying targeted areas where the state can accelerate model development, deployment, and effectiveness.

Price and Quality Transparency: The commonwealth will focus on four transparency initiatives: consumer health literacy, broad transparency for all data users, “shoppable” care for commodities,

and “shoppable” care for episodes.¹ These initiatives were selected with a primary focus on improving transparency for Pennsylvania consumers, while other end-users (i.e. providers, payers, policy-makers, researchers) will benefit, as well. In the upcoming months, the state will convene stakeholders committed to implementing specific solutions discussed in this plan.

Rural Health Redesign: The state aims to ensure that its citizens achieve greater health, whether they live in rural or urban areas. The launch of the prescription drug monitoring program (PDMP), the expansion of tele-health services, and the use of community health workers, among other efforts, will elevate the health status of people living outside the densely populated urban centers of Pittsburgh, Philadelphia, and other cities. In addition, the commonwealth is exploring the potential for alternative payment models specifically targeted at sustaining access to health care services at hospitals in rural settings. Many stakeholders have additionally been engaged in this rural hospital payment design work, efforts that have been running in parallel to the broader HIP initiative. These initiatives will help improve access to high quality health care for those living in rural Pennsylvania.

HIP Enabling Strategies:

Health Care Delivery System Transformation: Transformation in the commonwealth will center on improving population health and enabling broader access to care through several strategies, including the expansion of tele-health services, meaningful data collection and analysis, and enhanced workforce capacity. These strategies were chosen, in part, because they will substantially improve the lives of rural Pennsylvanians, who comprise twenty percent of the commonwealth’s population. They will allow for increased provider productivity and leveraging of existing resources, enabling Pennsylvania to realize improved outcomes with limited additional investment.

Population Health: The commonwealth will both advance population health initiatives across Pennsylvania and align population health outcomes with value-based payment approaches. The HIP plan defines initiatives for five key population health priorities: obesity/physical inactivity, diabetes self-management, oral health, substance use, and tobacco use. These priorities were chosen because of their applicability to a wide cross section of the population and their potential positive impact on overall health in the commonwealth. The commonwealth will work with programs and partner organizations that have already demonstrated success, applying additional resources to accelerate the positive results they have already achieved.

Health Information Technology (HIT): The commonwealth will pursue a set of technology initiatives that support and enable the other innovation strategies. This approach will include developing a centralized Health Information Exchange (HIE), supporting ongoing efforts to evaluate the utility and potential implementation of an all-payer claims database (APCD), developing a population health dashboard, launching the prescription drug monitoring program (PDMP), and expanding the use of tele-health.

¹ Note: The use of shoppable here denotes the ability for consumers to compare pricing and make decisions regarding care in the same way that they might shop for other non-health care related services.

Monitoring, Implementation, and Impact:

The commonwealth will identify and track measures to monitor the progress and impact of each initiative outlined in the HIP plan. The Health Innovation Center within the Department of Health (DOH) will support the leaders of each initiative, collecting and analyzing relevant data, and serving as the central repository to track progress and monitor innovation in the commonwealth.

The initial design for Pennsylvania's innovation plan has been finished. The next phase will involve refining the design for execution, with particular attention paid to human and capital investments needed for implementation. Throughout the remainder of 2016 and the beginning of 2017, stakeholders will continue to convene and prepare to begin executing the plan. Additionally, ongoing transformation research efforts, led by the APCD Council, Catalyst for Payment Reform, and VBID Health, Inc., will be completed by the end of the year, further empowering the state to make additional strategic decisions.²

Achieving the HIP objectives will mark a fundamental shift in the delivery of health care in Pennsylvania. In particular, this HIP plan will transform the health care system by focusing on the health and wellbeing of patients, families, and communities. Additionally, the plan will help ensure that high quality care is financially sustainable and accessible for all Pennsylvanians. The HIP plan truly marks the beginning of a multi-year, multi-stakeholder journey to improve health and health care delivery across Pennsylvania.

² Note: APCD Council has been engaged to perform a study on the feasibility and potential utility of an all payer-claims database (APCD) in Pennsylvania. Catalyst for Payment Reform has been commissioned to develop a value-based payment scorecard, which amongst other data, will inform the state of the current level of value-based payments in the commonwealth. VBID Health, Inc. provided information to DOH executive leadership and the payment work group about value-based insurance design principles and provided insight into how value-based insurance design (VBID) principles could be applied to redesigning rural health and advancing population health in rural settings.



SECTION 1: THE CONTEXT FOR HEALTH INNOVATION IN PENNSYLVANIA

Chapter 1: State Health Care Environment

1.1 Population Demographics, Health Assessment, and Disparities

DEMOGRAPHICS

Pennsylvania has a population of approximately 12.8 million residents³ and is the sixth most populous state.⁴ The majority of the population (83%) lives in metropolitan areas, and four counties (Philadelphia, Allegheny, Montgomery, and Bucks) account for one-third (33%) of the population.⁵ Pennsylvania population is less racially/ethnically diverse and slightly older than the northeast region or the United States overall. Additional demographic patterns are summarized in Table 1.1 below.

Table 1.1: Selected Demographics of the Pennsylvania Population, Compared to the Northeast⁶ and United States, 2012-13⁷

	Pennsylvania	Northeast	United States
Race/Ethnicity			
White	78%	68%	62%
Black	10%	10%	12%
Hispanic	7%	13%	17%
Other Race/Ethnicity	5%	8%	8%
Age			
0-18	22%	23%	25%
19-64	61%	62%	61%

³ U.S. Census Bureau. (2014). *Pennsylvania quick facts* available at <https://www.census.gov/quickfacts/table/PST045215/42>

⁴ World Atlas, United States, *U.S. States By Size* available at <http://www.worldatlas.com/aatlas/infopage/usabysiz.htm>

⁵ The Henry J. Kaiser Family Foundation. (2015). *Fact sheet: The Pennsylvania health care landscape* available at <http://kff.org/health-reform/fact-sheet/the-pennsylvania-health-care-landscape/>

⁶ Note: Northeast region refers to Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont.

⁷ Kaiser Family Foundation estimates based on Census Bureau's March 2014 Current Population Survey (CPS: Annual Social and Economic Supplement).

	Pennsylvania	Northeast	United States
65+	16%	15%	14%
Citizen Status			
U.S.-Born Citizen	94%	84%	87%
Naturalized Citizen	3%	8%	6%
Non-Citizen	3%	7%	7%
Educational Attainment of Adults (19-64)			
Less than High School	9%	9%	10%
High School Graduate	35%	28%	26%
Some College/Assoc. Degree	21%	22%	25%
College Grad or Greater	27%	31%	26%
Employment Characteristics of Nonelderly			
Household with at Least 1 Full-time Worker	83%	82%	81%
NOTE: Data may not sum to 100% due to rounding and data restrictions.			

The overall share of Pennsylvanians living in poverty is slightly lower than the national average (13% vs. 15%). However, Pennsylvania has wide disparities in poverty rates by race/ethnicity and age. Blacks are twice as likely and Hispanics are more than three times as likely as whites to be poor.⁸ Children are also substantially more likely than adults to live in a poor household.

HEALTH ASSESSMENT

In 2014, the DOH released its State Health Assessment (SHA) that reported on the health status of its residents, factors that contribute to health issues and resources that can be mobilized to address population health improvement. Assessment results showed that Pennsylvania residents face health issues similar to the rest of the nation:

- 29% of adult residents are obese, compared to 28% nationally
- 22.4% of residents smoke, compared to 23.6% nationally
- 86% of adults reported having a primary care provider, compared to 76.8% nationally
- Pa's teen birth rate was below the national average (25 and 31.3 per 1,000, respectively)
- Many adults suffer from high blood pressure, diabetes, and untreated mental health conditions
- The percentage of adults aged eighteen and over who have had their teeth cleaned in the past year declined from 76% in 1999 to 71.2% in 2010⁹

⁸ Ibid.

⁹ U.S. Centers for Disease Control and Prevention, Explore Oral Health by Location, Behavioral Risk Factor Surveillance System (BRFSS) available at the [CDC website \(see hyperlink\)](#)

- The number of traditional dental Health Professional Shortage Areas has nearly tripled—from 800 in 1993 to 2,300 in 2010¹⁰

HEALTH DISPARITIES

Pennsylvania also has significant disparities in health status and access by race/ethnicity. Twenty five percent of black and twenty-two percent of Hispanic residents report being in fair or poor general health compared to 16% of those who identify themselves as white. Over four in ten Hispanics (43%) and blacks (41%) report having frequent mental distress, compared to 34% of whites. Additionally, blacks (28%) and Hispanics (26%) are more likely to smoke than whites (20%). Please see Table 1.2 below for further detail.

Table 1.2 Selected Measures of Health Status and Health Access by Race/Ethnicity in Pennsylvania Compared to the United States, 2011-2012¹¹

Share of respondents reporting that they:	Pennsylvania			United States		
	White	Black	Hispanic	White	Black	Hispanic
Have a fair or poor general health	16%	25%	22%	16%	23%	26%
Are overweight or obese	65%	70%	69%	63%	73%	68%
Smoke	20%	28%	26%	19%	20%	14%
Have frequent mental distress	34%	41%	43%	33%	36%	34%
Have no usual source of care	12%	20%	30%	18%	26%	41%
Have not had a checkup in the past 2 years	17%	10%	16%	17%	11%	22%

Data may not sum to 100% due to rounding and data restrictions. Data for Whites and Blacks exclude Hispanics.

Pennsylvania also has health disparities based on geography. Large areas of Pennsylvania are rural (48 of 67 counties)¹², and Pennsylvania residents living in rural communities are more likely to have unmet health needs and have poor access to care. For example, in 2012, the Pennsylvania DOH reported that individuals living in rural communities had higher rates for cancer, obesity, heart

¹⁰ Health Resources and Services Administration, *Health Professional Shortage Areas* available at <http://www.hrsa.gov/shortage/>

¹¹ KCMU analysis of the Centers for Disease Control and Prevention (CDC)'s Behavioral Risk Factor Surveillance System (BRFSS) available at <http://kff.org/health-reform/fact-sheet/the-pennsylvania-health-care-landscape/>

¹² Center for Rural Pennsylvania, Rural Urban Definitions available at http://www.rural.palegislature.us/demographics_rural_urban.html

disease, and diabetes.¹³ Additionally, similar racial disparities in health status can be observed in rural area as in the state overall.

Pennsylvania also has significant disparities in oral health care and access. The percentage of adults aged eighteen and over who have had their teeth cleaned in the past year declined from 1999 to 2010 (76% to 71.2% respectively).¹⁴ Over the past 25 years, the number of traditional dental Health Professional Shortage Areas has nearly tripled—from 800 in 1993 to 2,300 in 2010.¹⁵

Pennsylvania's overarching goal in pursuing delivery system transformation is that residents should not be disadvantaged in their health status or access to health care services on the basis of living in Pennsylvania – or by where they live in Pennsylvania. The HIP plan strategies aim to mitigate these disparities and improve health and health care for all Pennsylvanians.

1.2 Major Payers in Pennsylvania

More than half of Pennsylvanians are covered by private insurance, including employer-sponsored insurance (53%) and non-group coverage (6%). Another third of Pennsylvanians are covered by public insurance, either Medicaid (17%) and/or Medicare (15%). About 8% of Pennsylvania residents are uninsured.¹⁶ The recent expansion in Medicaid will drive an increase in the population insured by this program. In fact, as of April 2016, the expansion had reached 625,970 newly eligible Pennsylvanians, ages 18 to 64.¹⁷

Data from the Centers for Medicare & Medicaid Services (CMS) demonstrate that Medicare spending per enrollee in 2012 was four percent higher than the national average.¹⁸ Total health care spending, for all coverage types and services was 13.4% higher than the national average.¹⁹ In Pennsylvania, Medicaid spending accounts for approximately 30% of the total budget.²⁰ Data from 2011 shows that

13 Pennsylvania Department of Health, Pennsylvania Health Disparities Report 2012 available at [DOH website \(see hyperlink\)](#)

14 U.S. Centers for Disease Control and Prevention, Explore Oral Health by Location, Behavioral Risk Factor Surveillance System (BRFSS) available at [the CDC website \(see hyperlink\)](#)

15 Health Resources and Services Administration, *Health Professional Shortage Areas* available at <http://www.hrsa.gov/shortage/>

16 The Henry J. Kaiser Family Foundation, *Health Insurance Coverage of the total population (2014)* available at <http://kff.org/other/state-indicator/total-population>

17 Pennsylvania Department of Human Services HealthChoices, *Celebrating One Year Medicaid Expansion in Pennsylvania* available at <http://www.healthchoicespa.com/newsroom>

18 Centers for Medicare & Medicaid Services (CMS), *Geographic Variation Public Use File [Data set]* available https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Medicare-Geographic-Variation/GV_PUF.html

19 Center for Medicare and Medicaid Services, *Health Expenditures by State of Residence, 1991-2009* [Data set]

20 Pennsylvania Department of Human Services. (2015). *Fiscal Year 2015-16 Executive Budget* available at <http://www.budget.pa.gov/PublicationsAndReports/CommonwealthBudget/Pages/PastBudgets2015-16To2006-07.aspx#.VzHffHr1Klo>

Medicaid spent 36% more on older adults and 25% more on children than the national average.²¹ Overuse of medical care for high-cost, high-need patients accounts for 50% of patient costs that result from five percent of the population.

Pennsylvania has a fairly fractured payer landscape with 9, 10, and 12 small group, large group, and individual carriers, respectively. Major payers include Aetna, Capital Blue Cross, Geisinger, Highmark, Independence Blue Cross, UnitedHealth Group, and University of Pittsburgh Medical Center Health Plan. In 2013, Aetna had the largest small group market share (31.5%) while Highmark has the largest large group and individual market share (33.0% and 34.3%, respectively). Compared to the US, there is a higher prevalence of both managed Medicaid and Medicare Advantage plans in Pennsylvania. Table 1.3 below highlights specifics about the Pennsylvania health insurance market including carrier size, managed care penetration, and self-insured.

Table 1.3 Health Insurance Markets in Pennsylvania

	Pennsylvania	United States
Number of credible insurance carriers, 2013 ²²		
Small group	9	5
Large group	10	6
Individual market	12	6
Market share of largest carrier, 2013 ²³		
Small group	31.5%	54.8%
Large group	33.0%	55.8%
Individual market	34.3%	56.0%
Largest carrier by market, 2013 ²⁴		
Small group	Aetna	
Large group	Highmark BCBS	
Individual market	Highmark BCBS	
Managed care penetration in public programs ²⁵		
Medicaid, 2011	81.5%	74.22%

21 Medicaid and CHIP Payment and Access Commission (MACPAC), *MACStats: Medicaid and CHIP Program Statistics, June 2014* available at <https://www.macpac.gov/wp-content/uploads/2015/03/June-2014-MACStats.pdf>

22 SHADAC analysis of 2013 Supplemental Health Care Exhibit data from the National Association of Insurance Commissioners available at [SHADAC's website \(see hyperlink\)](#)

23 Ibid.

24 Ibid.

25 Center for Medicare and Medicaid Services, CMS Managed Care Enrollment Reports available at <https://www.medicare.gov/medicaid-chip-program-information/by-topics/data-and-systems/medicaid-managed-care/medicaid-managed-care-enrollment-report.html>

	Pennsylvania	United States
Medicaid, 2014	91.9%	77.0%
Managed care and other plan types, among private sector employers offering coverage, 2013 ²⁶		
Two or more plans	43.3%	43.3%
Conventional indemnity	11.3%	11.3%
Any managed care	90.5%	91.0%
Exclusive provider	23.2%	27.9%
Mixed provider	75.6%	73.2%
Self-Insurance		
% of employers self-insuring, 2013 ²⁷		
Total	39.5%	37.6%
Firms with fewer than 50 employees	15.3%	13.2%
Firms with 50 or more employees	63.5%	64.6%
% of workers with self-insured plans, 2013 ²⁸		
Total	63.7%	58.2%
Firms with fewer than 50 employees	14.4%	11.5%
Firms with 50 or more employees	72.7%	67.7%

1.3 Health System Performance Trends

HEALTH CARE COST TRENDS

From 1991 to 2009, Pennsylvania's health care market overall expenditures grew at an annual growth rate of 5.7%. During the same period, the rate of spending on hospital services for all payers increased 4.7%, while spending on physician and clinical services rose at a rate of 5.4%.²⁹ Pennsylvania's per capita health care spending was 13% higher than the average U.S. per capita spending level at \$7,730 in 2009.³⁰ Compared to other states, Pennsylvania had the twelfth highest

²⁶ AHRQ, Medical Expenditure Panel Survey - Insurance Component available at http://meps.ahrq.gov/mepsweb/data_stats/quick_tables_search.jsp?component=2&subcomponent=2

²⁷ Ibid.

²⁸ Ibid.

²⁹ Center for Medicare and Medicaid Services, *Health Expenditures by State of Residence, 1991-2009* [Data set]

³⁰ Ibid.

long term services and supports (LTSS) expenditures per state resident in FY 2012.³¹ That equated to \$7.7 billion spent on LTSS, devoting approximately 41%, or \$3.2 billion, to home and community based services (HCBS). The share of LTSS dollars that have been devoted to HCBS increased from 29% in 2007 to 41% in 2012, which mirrors a national shift toward serving more people in home and community-based settings.

The drivers of growth in health care expenditures in Pennsylvania are consistent with those seen nationally:

- Incentives for providers to perform more care (fee-for-service), rather than rewarding outcomes and quality
- Fragmented care, resulting in uncoordinated care and unnecessary testing
- A larger population aging in place that is increasing demands on health care services
- Ever increasing rates of chronic disease, often with costly complications
- Both overuse and underuse of care, increasing costs in the near and long term
- Pressure on health care facilities to invest in higher priced medical equipment

HOSPITAL READMISSIONS

Pennsylvania hospitals perform better than average on hospital readmission rates, but still have room for improvement. In 2010, approximately two out of every 15 hospital stays (13.5%) were followed by at least one readmission for any reason within 30 days.³² By comparison, the national readmission rate was 19.5% in the same period.³³ Readmission rates have generally been on the decline in the commonwealth. Between 2008 and 2013, statewide patient readmission rates significantly decreased in eight of the 13 conditions for which readmissions were studied including congestive heart failure, pneumonia, kidney failure, chronic obstructive pulmonary disease, and kidney and urinary tract infections.³⁴

The most common reason for readmission was for the same condition as the initial hospital stay.³⁵ In a recent report, for four chronic conditions, between 29% - 45% of readmissions were for the same

³¹ Steve Eiken, Kate Sredl, Lisa Gold, Jessica Kasten, Brian Burwell, Paul Saucier, Medicaid Expenditures for Long-Term Services and Supports in FFY 2012, (Centers for Medicare and Medicaid Services and Truven Health Analytics, April 28, 2014) available at <http://www.medicare.gov/medicaid-chip-program-information/by-topics/long-term-services-and-supports/downloads/ltss-expenditures-2012.pdf>

³² Pennsylvania Health Care Cost Containment Council, *Hospital Readmissions in Pennsylvania 2010* available at <http://www.phc4.org/reports/readmissions/10/docs/readmissions2010report.pdf>

³³ American Medical Association, *Rethinking the Hospital Readmissions Reduction Program March 2015* available at <http://www.aha.org/research/reports/tw/15mar-tw-readmissions.pdf>

³⁴ Pennsylvania Health Care Cost Containment Council, *PHC4 Annual Report 2015* available at <http://www.phc4.org/council/annualreports/annual2015report.pdf>

³⁵ Pennsylvania Health Care Cost Containment Council, *Readmissions for the Same Condition June 2015* available at <http://www.phc4.org/reports/readmissions/samecondition/14/docs/about-the-report.pdf>

condition. These same-condition readmissions accounted for a total of approximately 61,000 additional days spent in the hospital and an estimated \$139 million in health care spending.³⁶

The conditions considered in the study were:

- **Heart failure:** Patients hospitalized initially for heart failure returned most frequently for another heart failure stay, accounting for 34.5% of the readmissions. On average, the hospital stay for these readmissions was 5.0 days.³⁷
- **COPD:** Patients hospitalized initially for a mental health disorder were readmitted most frequently for the same reason, where 39.4% of the readmissions were for additional treatment of a mental health disorder. The average hospital stay for these readmissions was 4.1 days.
- **Abnormal heartbeat:** Patients hospitalized initially for an abnormal heartbeat were readmitted most frequently for the same reason, where 28.8% of the readmissions were for additional treatment of an abnormal heartbeat. The average hospital stay for these readmissions was 3.3 days.³⁸
- **Diabetes:** Patients hospitalized initially for diabetes were readmitted most frequently for the same reason, where 45.1% of the readmissions were for additional treatment of an abnormal heartbeat. The average hospital stay for these readmissions was 3.5 days.³⁹

HOSPITAL PERFORMANCE

Across Pennsylvania, hospitals showed revenue growth, driven by a number of factors, including shifts in site of service from inpatient to outpatient and changes in reimbursement rates, particularly for Medicare and Medicaid. General acute care hospitals collectively posted an increase in operating revenue of 5.0%, or \$2 billion, while operating expenses increased to 3.7%, or \$1.4 billion. The Table 1.4 below shows selected measures of hospital performance in Pennsylvania.

Table 1.4 Selected Measures of Hospital Performance⁴⁰

Select Hospital Performance Measures	2013	2014	2015
Operating income	\$1.8 billion	\$1.7 billion	\$2.3 billion
Average operating margin	4.7%	4.3%	5.5%

³⁶ Ibid.

³⁷ Ibid.

³⁸ Ibid.

³⁹ Ibid.

⁴⁰ Pennsylvania Health Care Cost Containment Council, *An Annual Report on the Financial Health of Pennsylvania Hospitals*, May 2016.

QUALITY PERFORMANCE BY KEY INDICATOR

Quality ratings from the Agency for Healthcare Research and Quality (AHRQ) have shown that Pennsylvania is in line with national trends.⁴¹ Compared to all states, Pennsylvania reported strong results in acute and chronic care measures, but was weaker in preventive measures. In settings of care, PA was strongest in home health, hospital, and ambulatory care measures, but weakest in nursing home care. Tables 1.5 and 1.6 illustrate examples of Pennsylvania’s strongest and weakest quality measures.

Table 1.5 Pennsylvania’s Strongest Measures⁴²

Measure Short Name	Measure Long Name
Always had good communication with providers – adults on Medicare managed care	Percentage of adults who had a doctor’s office or clinic visit in the last 12 months whose health providers always listened carefully, explained things clearly, respected what they had to say, and spent enough time with them, Medicare managed care
Dialysis and on kidney transplant list	Percentage of dialysis patients under age 70 who were registered on a waiting list for transplantation
Always had good communication with providers – adults on Medicare fee-for-service	Percentage of adults who had a doctor’s office or clinic visit in the last 12 months whose health providers always listened carefully, explained things clearly, respected what they had to say, and spent enough time with them, Medicare fee-for-service
Diabetes hemoglobin A1c tests	Percentage of adults age 40 and over with diagnosed diabetes who received a hemoglobin A1c measurement in the calendar year
Always got appointment for illness/injury/condition – adults on Medicare fee-for-service	Percentage of adults who needed care right away for an illness, injury, or condition in the last 12 months who always got care as soon as wanted, Medicare fee-for-service
Home health care – less urinary incontinence	Percentage of home health care patients who have less urinary incontinence

Table 1.6 Pennsylvania’s Weakest Measures⁴³

Measure Short Name	Measure Long Name
Nursing home long-stay residents – with declining mobility	Percentage of long-stay nursing home residents whose ability to move about in and around their room declined
Nursing home long-stay residents - low-risk with less control of bowels or bladder	Percentage of low-risk long-stay nursing home residents who lose control of their bowels or bladder
Nursing home long-stay residents - with increased need for help	Percentage of long-stay nursing home residents whose need for help with daily activities has increased

⁴¹ Agency for Healthcare Research and Quality, *2010 State Snapshots* available at <http://nhqrnet.ahrq.gov/snaps10/>

⁴² Ibid.

⁴³ Agency for Healthcare Research and Quality, *2010 State Snapshots* available at <http://nhqrnet.ahrq.gov/snaps10/>

Measure Short Name	Measure Long Name
Nursing home long-stay residents - more depressed or anxious	Percentage of long-stay nursing home residents who are more depressed or anxious
Nursing home long-stay residents - received flu vaccine	Percentage of long-stay nursing home residents who received influenza vaccination during the flu season

1.4 Current Initiatives for Health Improvement

Pennsylvania has already started laying critical groundwork for health and health care delivery system transformation.

- **Workforce data analysis:** Since 2002, DOH, with the assistance of the Department of State, has been surveying nurses, physicians, physician assistants, dentists, and dental hygienists during the license renewal process. Pre-licensure nursing education programs submit annual reports to the Department of State with information about their program, faculty, student enrollment, and graduation rates. Additionally, the Department of Labor and Industry has developed an online portal known as PA WorkStats that offers a full range of features and services to assist labor market analysts, job seekers, and employers in their workforce development needs.
- **Workforce development:** DOH operates multiple programs to train the health care workforce and build the educational pipeline.
 - The Pennsylvania Primary Health Care Loan Repayment Program (LRP) provides loan repayment opportunities as an incentive to recruit and retain primary care providers willing to serve underserved Pennsylvania residents and to make a commitment to practicing in federally designated Health Professional Shortage Areas (HPSAs).
 - The Pennsylvania Department of Health and The Pennsylvania Association of Community Health Centers (PACHC) founded The Pennsylvania Primary Care Career Center to match up primary care providers (physicians, nurse practitioners, physician assistants, dentists, and more) with organizations that provide primary care services. The center connects candidates to the most compatible opportunities and communities in which to live and work.
- **Population health improvements:** DOH published the State Health Assessment (SHA) in March 2014 which assessed and reported on the health status of Pennsylvania’s population, factors that contribute to health issues, and resources available to address population health improvement. As a result of the SHA findings, the department engaged in a year-long stakeholder engagement process to develop the 2015-2020 State Health Improvement Plan (SHIP). The SHIP is a comprehensive, long-term plan to address health risk factors identified in the SHA.⁴⁴ It details how DOH and the communities it serves will work together to improve the health of Pennsylvania residents.
- **Medicaid expansion:** In 2015, Pennsylvania expanded Medicaid through the HealthChoices managed care plans to all individuals below 138 percent of Federal Poverty Level.

⁴⁴ See Chapter 7.1 Leveraging Population Health Assessments for more details on both the SHIP and SHA

HealthChoices provides health care coverage in a streamlined manner to Pennsylvanians who are most in need. The Pennsylvania Medicaid program, often referred to as the Medical Assistance program, currently provides a comprehensive array of health and long-term care services to over 2.7 million Pennsylvanians, with expected growth to 2.8 million once the expansion takes full effect.⁴⁵ These benefits are provided to persons of all ages including adults, children, pregnant women, low-income families, people with disabilities, and seniors. Currently one out of every six residents in Pennsylvania receives Medicaid benefits.

- **Health information exchange:** The state adopted a health information exchange (HIE) framework in 2014 and has been working toward a model that supports health transformation through better data exchange. Currently, there are two health information organizations (HIOs) connected to the statewide HIE. Once the HIEs are fully operational, there are plans for both direct and query capabilities. Recently, Governor Wolf proposed a measure within his 2016-17 budget that would move the legislatively-mandated Pennsylvania eHealth Partnership Authority to operate under the Department of Human Services (DHS) effective July 1, 2016. While specifics on this move have not yet been released, the role of the eHealth Authority would still remain to improve health care delivery and health care outcomes by enabling the secure exchange of electronic health information.

⁴⁵ Pennsylvania Department of Human Services, *FACT SHEET: Medicaid Expansion and Pennsylvania* available at https://www.portal.state.pa.us/portal/server.pt/document/1320335/aca-ma_expansion_sheet_pdf

- **Participation in national innovative models:** Pennsylvania providers and payers participate broadly in programs sponsored by the CMS Center for Medicare and Medicaid Innovation (CMMI). As of the writing of this plan, at least 538 sites across the commonwealth were participating in programs such as the Bundled Payments for Care Improvement (BPCI) initiative, the Comprehensive End-stage Renal Disease Care Model, and the Federally Qualified Health Center (FQHC) Advanced Primary Care Practice Demonstration. A map Figure 1.7, illustrates where supported innovation is occurring in Pennsylvania

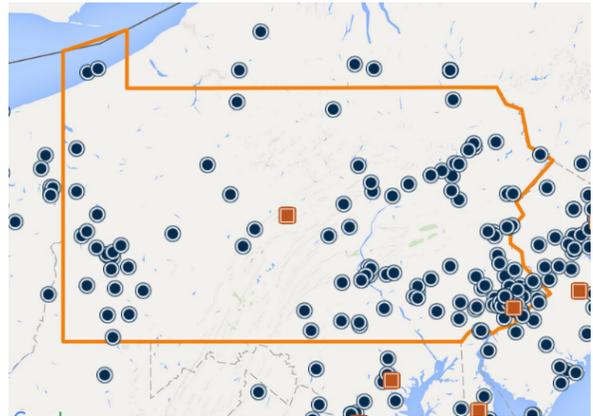


Figure 1.7 CMMI Innovation Sites in Pennsylvania⁴⁶

- The Pennsylvania Department of Aging (PDA) is leading a number of innovative initiatives through its program called, Pharmaceutical Assistance for the Elderly (PACE):
 - **Collaborative research:** PACE provides support to the leading research universities in the commonwealth with regard to gerontology and pharmacology initiatives affecting older Pennsylvanians. Recent activities include outreach efforts on behalf of the University of Pennsylvania and the University of Pittsburgh for projects that explore treatment for depression and brain health in conjunction with physical activity and daily problem solving. The PACE program engages with the University of the Sciences in Philadelphia on research topics covering pharmacy reimbursement, pharmacy access, and prescription initiation by patients.
 - **Academic detailing:** PDA provides funding (\$1.5M per FY) and support to the Alosa Foundation at Harvard Medical School for the delivery of academic detailing focused on prescriptions to primary care clinicians who care for older Pennsylvanians. Academic detailing entails outreach education for health care professionals to improve clinical decision-making. Rather than promote particular products, educators provide comprehensive summaries of the body of evidence for a particular topic to help clinicians prescribe the safest, most effective and appropriate medications for their patients.
 - **Mental health services:** Supporting Seniors Receiving Treatment and Intervention (SUSTAIN) and Caregiver Resources, Education, and Support (CREST) provide funding (\$800K per FY) and support programming at the University of Pennsylvania Medical School for the delivery of care management concerning pharmacologic treatment to improve mental health and referrals to available community resources based on the needs of cardholders in the Department's pharmaceutical assistance program.
- **Diabetes self-management program (DSMP):** In October 2015, the Health Promotion Council was awarded a two-year grant by the Administration for Community Living (ACL) to provide the

⁴⁶ Center for Medicare and Medicaid Services, *CMS Innovation Center Interactive Map: Where Innovation is Happening* available at <https://innovation.cms.gov/initiatives/map>

DSMP, an evidence-based program developed by Stanford University that provides education on managing participants' diabetes.

- **Community HealthChoices (CHC):** CHC will be a new program under the Department of Human Services (DHS) and the Pennsylvania Department of Aging for older Pennsylvanians, adults with physical disabilities, and Pennsylvanians who are dually eligible for Medicare and Medicaid. The program will coordinate physical health care and long-term services and supports (LTSS) through managed care organizations (CHC-MCOs). CHC-MCOs will also coordinate behavioral health (BH) services with Behavioral Health-MCOs for individuals that participate in both programs. On March 1, 2016, the commonwealth released a request for proposal (RFP) to competitively procure MCO services to support CHC. CHC will roll out in three phases, beginning in the southwest in July 2017, the southeast in January 2018, and the remainder of the commonwealth in January 2019.

These programs illustrate Pennsylvania stakeholders' experience with and commitment to health care innovation. The HIP plan builds upon this foundation, identifying opportunities to further accelerate innovation through the commonwealth's role to convene stakeholders and directly act through state agencies and policy and regulatory levers.

1.5 Current Demonstrations and Waiver Efforts

Below, in Table 1.8, is a list of the current Medicaid waivers and demonstrations.

Table 1.8 Medicaid Waivers and Demonstrations in Pennsylvania

Program Name	Program Number	Status	Waiver Authority
PA Consolidated Waiver	0147.R05.00	Approved	1915 (c)
PA Person/Family Directed Support	0354.R03.00	Approved	1915 (c)
PA Attendant Care	0277.R04.00	Approved	1915 (c)
PA HCBW for Individuals Aged 60 & Over	0279.R04.00	Approved	1915 (c)
PA Commcare	0386.R03.00	Approved	1915 (c)
PA Independence	0319.R04.00	Approved	1915 (c)
PA Medicaid Waiver for Infants, Toddlers and Families	0324.R03.00	Approved	1915 (c)
PA Adult Autism	0593.R01.00	Approved	1915 (c)
PA OBRA	0235.R04.00	Approved	1915 (c)
Pennsylvania - Early MAGI Implementation	None	Expired	1115
PA 67 – HealthChoices and FFS Specialty Pharmacy	PA-09	Approved	1915 (b1), 1915 (b2), 1915 (b4)

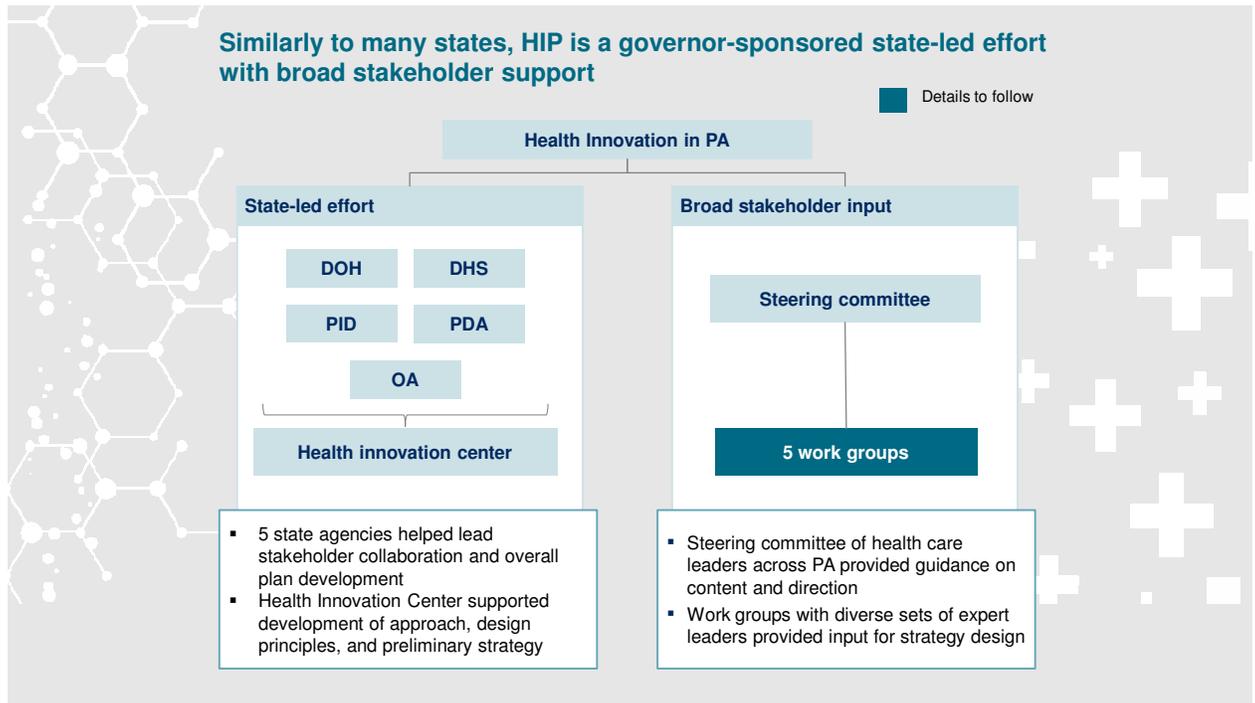
Chapter 2: Report on Stakeholder Engagement in the Design Phase

Governor Wolf's vision for health care delivery system transformation requires significant and ongoing stakeholder engagement, input, and leadership to ensure that transformation initiatives will be aligned and effective. At the outset of the design phase, a stakeholder engagement plan was written to serve as a framework for how Pennsylvania would involve stakeholders throughout the HIP process. Over 200 stakeholders across the state – representing payers, providers, hospitals, population health experts, academic researchers, state officials, employers, consumers, foundations, associations, and community-based organizations – helped shape the HIP plan through participation in the steering committee and work groups. Their involvement helped to:

- Identify existing innovation work related to health, health care delivery, and health care costs in Pennsylvania
- Suggest potential strategies, barriers to implementation, and options to overcome barriers and enable implementation
- Ensure that the plan contains the most impactful strategies and to prepare for implementation of the HIP plan

Overall, Health Innovation in Pennsylvania is a state-led effort. Multiple state agencies, coordinated by DOH, worked together to develop the content for the HIP plan, incorporating input from the stakeholder groups. This governance structure is illustrated below in Figure 2.1.

Figure 2.1 Governance for Health Innovation in Pennsylvania, Design Phase



2.1 Stakeholder Profile and Overview

Pennsylvania's stakeholder engagement efforts emphasized a collaborative approach on multiple levels. Governor Wolf appointed a diverse Steering Committee to advise him during the plan's development about top health and health care delivery system transformation priorities. Five work groups were also established to advance the commonwealth's priorities and to provide more detail around specific solutions, evaluation metrics, and implementation strategies.

HEALTH INNOVATION CENTER

The Health Innovation Center (within DOH) coordinated stakeholder involvement on behalf of the Governor and sister agencies to develop the HIP plan, engage consultants with expertise in helping states accelerate health care delivery system transformation, and build a sustainable plan to be implemented over the next four years. The Deputy Secretary for Health Innovation directs the Health Innovation Center with executive oversight from the Secretary of Health.

Four consultant teams were engaged to assist the commonwealth with technical expertise and research support. These efforts include developing a payment scorecard, evaluating the feasibility of an all payer-claims database, education on value-based insurance design, and implementing value-based payments.

STATE AGENCIES

Multiple state agencies influence the health status and health care access for Pennsylvanians. Under the direction of Governor Wolf, the HIP plan was developed as an interagency effort with contributions from the following agencies:

- The Department of Health (DOH), led by Secretary Karen Murphy, has provided major oversight to the project and direct guidance to the Health Innovation Center.
- The Pennsylvania Insurance Department (PID), led by Commissioner Teresa Miller, has spearheaded efforts on price and quality transparency.
- The Department of Human Services (DHS), led by Secretary Ted Dallas, has spearheaded efforts to expand access to health care, including Medicaid expansion and the new Community HealthChoices program.
- The Department of Aging (PDA), led by Secretary Teresa Osborne, has invested heavily in new programs that improve the health of elderly Pennsylvanians in both urban and rural areas.
- The Pennsylvania Employees Benefit Trust Fund (PEBTF), the organization that provides and manages health benefits for commonwealth employees, provided expertise, representing the perspective of an employer-based health insurance program.
- Numerous state agencies contributed time and expertise through participation in the five work groups, including:
 - Pennsylvania Office of Administration
 - Pennsylvania Department of Military and Veterans Affairs
 - Pennsylvania Department of Community and Economic Development
 - Pennsylvania Department of Transportation
 - Pennsylvania Department of Conservation & Natural Resources
 - Pennsylvania Department of Agriculture
 - Pennsylvania Department of Education
 - Pennsylvania Department of Labor & Industry
 - Pennsylvania Health Care Cost Containment Council
 - Pennsylvania eHealth Partnership Authority
 - Pennsylvania Department of Drug & Alcohol Programs

STEERING COMMITTEE

The Steering Committee included 67 health care leaders across the commonwealth. State agency leaders on the committee included the Secretary of Health, the Insurance Commissioner, the Secretary of Human Services, the Secretary of Aging, the Secretary of Administration, the Secretary of Drug and Alcohol Programs, and the Physician General. Private sector members included constituents from academic and community health systems, insurers, hospitals, provider groups, public health departments, business, associations, foundations, and consumer groups. The committee provided guidance to the Governor and DOH on strategic issues that will affect HIP initiatives. Please see Appendix 1 for the full list of Steering Committee members. The Steering Committee kicked off the design phase in July 2015 at a three-day health care summit co-hosted by

Governor Wolf and the National Governors Association. The committee reconvened in January 2016 to discuss the design planning progress and will meet in Summer 2016 to review the final HIP plan.

WORK GROUPS

Five work groups supported the development of the HIP plan strategies and implementation tactics. Work groups were designed to bring together a wide cross-section of stakeholders in the commonwealth. Over 200 people participated in HIP work groups, representing:

- Academic medical centers
- Commercial payers
- Community-based and long-term services and support providers
- Consumer advocacy organizations
- Health care providers
- Hospitals
- Medical associations
- Pharmaceutical and medical device companies
- Public health, business, and consumer organizations
- State agencies

The five work groups were:

- **Value-based Payment:** This group developed recommendations to accelerate transition to value-based payment models, specifically advanced primary care and episode-based payments.
- **Price and Quality Transparency:** This group defined high-level price and quality transparency focus areas, including improving consumer health literacy, enhancing transparency around “shoppable” health care commodities (such as imaging or elective surgeries), and recommended state-led or multi-stakeholder levers to reach these goals.
- **Health Care Delivery System Transformation:** This group recommended health care delivery system transformation strategies and identified state-led or multi-stakeholder levers to address community health workers, improved access to oral health and dental care services, tele-health service expansion, and physical and behavioral health integration.
- **Population Health:** This group designed high-level population health strategies and recommended state-led or multi-stakeholder levers to address five key state priorities: obesity, diabetes prevention and self-management, oral health access, substance use, and tobacco use.
- **Health Information Technology (HIT):** This group recommended strategies that support the technology requirements of the broader set of initiatives.

Lists of the work group members can be found in Appendix 2.

2.2 Work Group Structure and Design Deliberations

The stakeholders in each work group participated in a series of three, three-hour sessions throughout the innovation planning process.

The first sessions, taking place in November and December of 2015, focused on the current state of affairs in their subject areas and successful innovation strategies underway both in Pennsylvania and across the United States. During the first meetings, the work group developed principles to guide the design of the HIP plan and provided input on strategic priorities. These principles, established in the early stages of HIP, were later revised to reflect stakeholder feedback that resulted in specific initiatives for implementation and a preliminary timeline which can be found in Chapter 13. The guiding principles for each work group are listed below:

VALUE-BASED PAYMENT WORK GROUP GUIDING PRINCIPLES:

- The work group should build upon existing payment innovations already underway in Pennsylvania
- New payment models should incorporate a ramp-up period to allow providers time to prepare
- Payment model innovations need to be sustainable so that providers and payers invest in the necessary capabilities to be successful, but also flexible enough so that they can adapt and improve over time
- Different types of providers (e.g., by geography or size) may require different payment models

PRICE AND QUALITY TRANSPARENCY WORK GROUP GUIDING PRINCIPLES:

- The work group's main focus is consumers and how transparency innovations impact their experiences and decisions
- It is important to understand the consumer journey to help identify different needs for information throughout all stages of care (e.g., provider quality and cost information to help consumers select primary care providers)
- Clarifying and standardizing definitions and formulas for cost, quality, and value metrics are critical to advancing transparency
- It will be important to build upon existing transparency initiatives underway in Pennsylvania and leverage ideas and concepts from other industries

HEALTH CARE DELIVERY SYSTEM TRANSFORMATION WORK GROUP GUIDING PRINCIPLES:

- Many of the transformation initiatives the commonwealth may pursue are not necessarily new, but challenges must be approached in a different way to change how care is delivered
 - Embracing disruptive technologies is critical to improving care delivery
 - New innovations should align with, and augment, existing care delivery goals

- Care collaboration must be the focus. As providers increasingly work together in interdisciplinary teams, care should be driven by:
 - Improving technology and driving accountability across the full care team
 - Shifting the culture to advance care as a broad team effort that includes patients
 - Retraining for providers to work with additional types of care providers
 - Cultivating a patient-centric view of care delivery
 - Reinforcing appropriate reimbursement practices for new care models

POPULATION HEALTH WORK GROUP GUIDING PRINCIPLES:

- The work group's main focus is operationalizing approaches to improving five state health priorities and defining key strategies and tactics to support them
- Integrating population health outcomes is critical to advancing value-based payment methodologies
- It will be important to develop and report baseline data; bridge the gap between hospitals and social service agencies; and clarify protected information in regards to behavioral health

HIT WORK GROUP GUIDING PRINCIPLES:

- The work group's main focus areas are data extraction, data sharing, and technology enhancements
- It will be important to focus efforts on the impact of HIT on various stakeholders, including consumers, providers, payers, and policy makers
- Strategies should build upon and leverage existing payment models
- Ideal HIT solutions will marry clinical data with claims data
- Identifying appropriate, standard cost and quality measures across provider scorecards, consumer tools, and payer metrics should be consistent and based on evidence

During the second sessions held in January and February 2016, the work groups were asked to bring their diverse perspectives and expertise to bear to test potential strategies developed during the first round. During these sessions, the work groups finalized design principles for the development of the state's strategy in each focus area, tested specific tactics and elements of each emerging strategy, and identified potential barriers to implementation. Input from this round of work groups informed issue prioritization, metric definition, and initial implementation planning.

In March and April 2016, the third and final round of work group sessions set the stage for implementation. The groups reviewed the proposed HIP initiatives aligned to each strategy with an eye toward how to successfully move forward and execute the strategies. The core activities included reviewing the outcome of the HIP strategic planning process, assessing interdependencies against other work groups and initiatives, and providing final input on the overall strategy within each work group.

During the final work group sessions, the Health Innovation Center team vetted the HIP plan components, identified factors necessary for achieving success, and worked with stakeholders to ensure sustained engagement throughout the implementation phase.

Detailed minutes from each work group session are located in Appendix 3.

Chapter 3: Health System Design and Performance Objectives

Pennsylvania has multiple opportunities to improve health and health care for all Pennsylvanians.

The current health care system in Pennsylvania does not adequately meet the health care needs of its residents. While urban areas have high concentrations of providers, the commonwealth's rural areas face challenges due to a disproportionate lack of providers thereby limiting access. Portions of fifty-five of the 67 counties in PA are federally designated Health Professional Shortage Areas (HPSAs) or Medically Underserved Areas (MUAs). Pennsylvania has the third largest rural population of any state, with more than 20% of its residents living in rural areas. Approximately 50% of Pennsylvania's doctors practice in only three counties (Philadelphia, Montgomery, and Allegheny), even though the remaining 64 counties have almost 75% of the state's total population.⁴⁷

The Health Innovation in Pennsylvania (HIP) plan defines a multifaceted approach to accelerate delivery system transformation that will lead to achieving both the Triple Aim articulated by the Center for Medicare and Medicaid Services (CMS) and the three objectives for innovation articulated by the Commonwealth of Pennsylvania.

At the national level, CMS' Triple Aim includes the tenets of better care for patients, smarter spending throughout the health care system, and healthier people in communities. The diagram, Figure 3.1, below depicts the relationship between the Triple Aim, the primary drivers that contribute directly to achieving the aim, and the secondary drivers that advance the primary drivers. It serves as a process improvement tool that will be continually updated as plan implementation progresses. The driver diagram represents the commonwealth's current theories of "cause and effect" in the system – and the specific strategies and initiatives to achieve the overall plan goals.

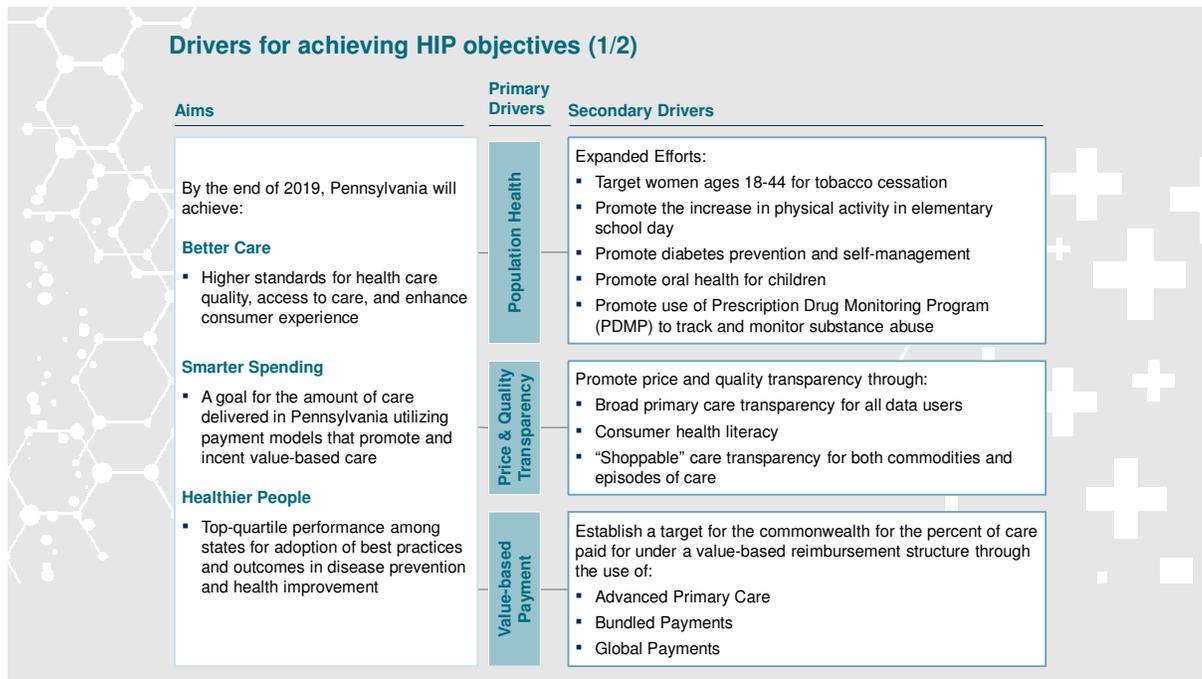
In practice, the driver diagram provides a general framework for the entire HIP initiative:

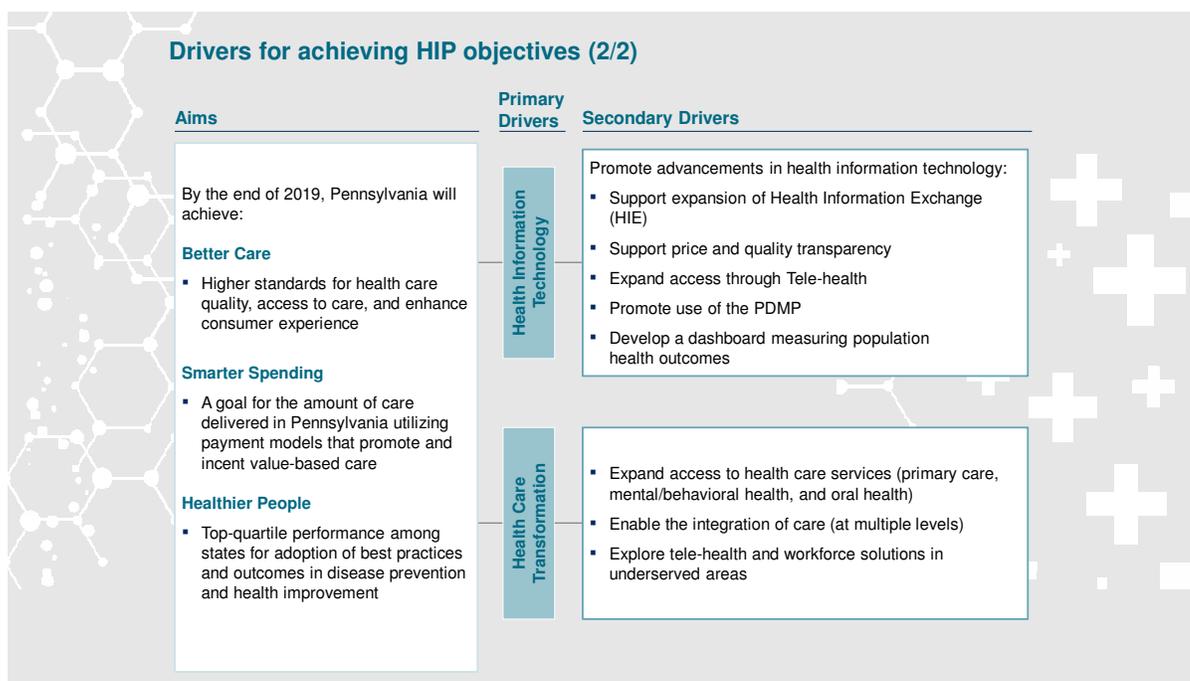
- The commonwealth has its own objectives associated with each of the aims
 - Better Care—Pennsylvania will accomplish this objective by building upon advanced primary care models around the commonwealth, accelerating the utilization of technology to enhance access to health care, and redesigning rural health care delivery (i.e., using tele-health to extend the reach of dentists in rural communities)

⁴⁷ The Henry J. Kaiser Family Foundation. (2015). *Fact sheet: The Pennsylvania health care landscape* available at <http://kff.org/health-reform/fact-sheet/the-pennsylvania-health-care-landscape/Ste>

- Smarter spending—The commonwealth will achieve this objective by establishing a statewide volume-to-value payment goal, exploring the development of multi-payer bundles for high-cost procedures, and pursuing a multi-pronged strategy to promote price and quality transparency (i.e., supporting existing advanced primary care programs)
- Healthier people—The commonwealth will reach this objective by integrating population health-based outcomes with value-based payment methodologies, identifying tailored population health needs for strategic deployment of resources, and developing a process for aligning locally collected data with state-level population health data to better monitor and evaluate health outcomes (i.e., launching a prescription drug monitoring program)
- Each of the primary drivers align with one of the HIP focus areas and one of five work groups
- Each of the secondary drivers align with a specific initiative that the commonwealth anticipates partnering with stakeholders to implement

Figure 3.1 HIP Driver Diagram



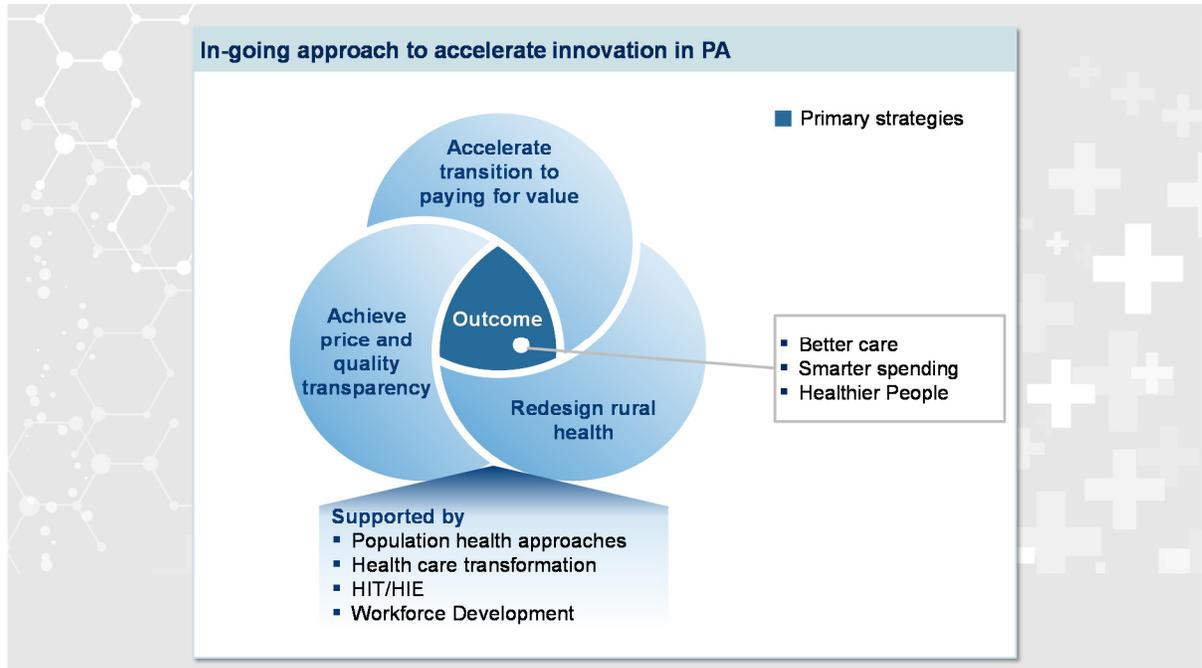


At the state level, the commonwealth has applied the Triple Aim to Pennsylvania specifically and narrowed its focus, choosing three targeted health innovation objectives:

- **Accelerating the transition to value-based payment for health care services.** Pennsylvania will promote the transition from fee-for-service, volume-based health care to value-based payments that reward quality outcomes. The move will incentivize health care providers to focus on improving population health as well as health care delivery.
- **Achieving price and quality transparency.** Pennsylvania will inform health care consumers regarding the price and quality of health care services. Like other states, the commonwealth will implement consumer-friendly tools that provide users with data on price and quality in order to allow for more informed health care decisions.
- **Redesigning rural health care services.** Pennsylvania will improve health care for residents living in rural areas in a manner that is sustainable and ensures greater access to health care services for rural communities.

Achievement of these goals will result in the fulfillment of the vision for HIP: Transformation in how we collectively pay for, deliver, and coordinate health and health care that leads to better health outcomes. Pennsylvania's three goals are the three main priorities underpinning all HIP efforts, and are visually represented in the Figure 3.2 below.

Figure 3.2 Approach to Health Innovation in Pennsylvania



3.1 Accelerate the Transition from Volume to Value-based Payment Models

Pennsylvania will promote the transition from fee-for-service, volume-based health care to value-based payments that reward quality outcomes. The move will incentivize health care providers to focus on improving population health as well as health care delivery. For the first time in its history, the U.S. Department of Health and Human Services (HHS) has set explicit goals for alternative payment models and value-based payments for Medicare by mandating 30% of payments through alternative payment models, such as episode-based payments, by the end of 2016 and 50% by the end of 2018. The commonwealth will set its own targets based on research currently being conducted by Catalyst for Payment Reform, which is slated for completion in fall 2016. Their work will produce a scorecard on the current state of value-based payments across public and private payers that will establish the baseline for the state's decision-making.

In response to these changes in the health care environment, Pennsylvania's Department of Human Services (DHS) released a request for proposals (RFP) requiring that 30% of payments made by the selected HealthChoices managed care plans change to value-based alternative payment models. The new requirements when implemented in January 2017 will mark the most significant changes to the Medicaid managed care program in Pennsylvania since DHS first moved to mandatory managed care 20 years ago.

3.2 Achieve Price and Quality Transparency

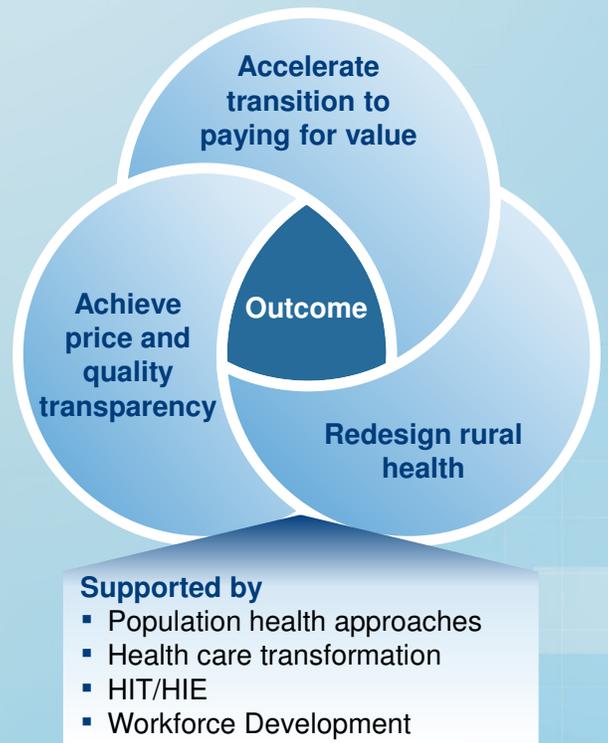
Pennsylvania will inform health care consumers regarding the price and quality of health care services. Like other states, PA will implement consumer-friendly tools that provide consumers with data on price and quality in order to allow for more informed health care decisions. To support this particular priority, the commonwealth developed four key objectives:

- **Performance transparency:** Patients, providers, employers, and other stakeholders will have a clearer understanding of cost and quality performance (e.g., a portal where consumers can view physician and/or facility quality metrics).
- **“Shoppable” care transparency:** Patients will be empowered, enabled, and incented to make value-conscious decisions about their care choices (e.g., use of a commodity cost tool to compare out-of-pocket costs for mammograms or MRIs).
- **Rewarding value:** The increased level of transparency enables the implementation of innovative payment models to reward providers for delivering patient outcomes and cost-effectiveness (e.g., data analytics and reporting capability that allows for reporting on episodes of care).
- **Consumer behavior change:** Consumers will be better able to understand the impact of their behaviors on their own personal health (e.g., ability to track goals in a structured program, such as the through the Diabetes Prevention Program).

3.3 Redesign Rural Health Delivery

Rural hospitals and communities are a particular focus of the HIP plan. One out of every five Pennsylvanians lives in a rural area, but many face very limited access to care. Moreover, many rural hospitals in the commonwealth are struggling with low or declining operating margins. In this environment, system transformation is particularly urgent.

Through this priority, Pennsylvania will improve the health status and health care access for residents living in rural areas in a manner that is sustainable and better serves the health needs of local populations. Strategies arising from all five work groups have an impact on rural health. Health care delivery system transformation efforts will help extend the rural workforce and provide enhanced access in currently underserved communities. Population health initiatives will target rural citizens who suffer disproportionately due to lack of access to providers and resources. Health information technology initiatives, including a strong focus on tele-health, the population health dashboard, and the prescription drug monitoring program (PDMP), will help improve health outcomes in remote areas of the state. More details on HIP’s impact in rural communities can be found in Chapter 6: Redesigning Rural Health.



SECTION 2: STRATEGIES FOR HEALTH INNOVATION IN PENNSYLVANIA



Chapter 4: Accelerate the Transition from Volume to Value-based Payment Models

Health care costs in Pennsylvania are rising unsustainably. Per capita health care spending in Pennsylvania is growing at 5.4%,⁴⁸ and health care costs are 13% higher than the national average. Health care costs comprise an increasing share of the state’s budget, employer costs, and consumer pocket books. For example, between 2004 and 2015, spending on Medicaid in Pennsylvania rose 5% as a share of the overall state budget, displacing spending on education by the same percentage.⁴⁹ Overall, health care spending in the commonwealth represents 37% of per capita income (including both average premiums per employee and out-of-pocket costs).⁵⁰

In the face of these rising health care costs, Pennsylvania aims to accelerate the shift from volume to value-based payment models, for both public and commercial payers. Value-based payment models reward providers for delivering high quality, cost-effective care. In contrast, the present and predominant fee-for-service payment system rewards the delivery of more care, regardless of its outcome.

Pennsylvania will join federal efforts in establishing a four-year goal to shift the payment mechanisms across the state to ones that reward positive, sustainable outcomes versus ones that incent higher patient volume. The final targets will be set in late 2016 based on research currently being conducted by Catalyst for Payment Reform, a non-profit think tank devoted to accelerating the adoption of value-based payment mechanisms.

To achieve this goal, Pennsylvania’s value-based payment strategy will include both population-based payment models and episode-based payment models. Population-based models, such as advanced primary care (i.e., patient-centered medical homes, accountable care organizations, or similar models), provide incentives to proactively manage care across a patient population and to address individual patients’ end-to-end health needs. These models are most effective where one

48 The Kaiser Family Foundation, *Average Annual Percent Growth in Health Care Expenditures per Capita by State of Residence (1991-2009)* available at <http://kff.org/other/state-indicator/avg-annual-growth-per-capita/>

49 Pennsylvania Governor’s Budget Office, *2014-15 Governor’s Executive Budget* available at <http://www.budget.pa.gov/PublicationsAndReports/Documents/2014-15%20Budget%20Document%20WEB.pdf>

50 The average premium per enrolled employee includes both the employee and employer share of the premium. Premiums: Medical Expenditure Panel Survey, Insurance Component available at http://meps.ahrq.gov/mepsweb/data_stats/MEPSnet/C/startup ; Out-of-pocket costs: Health Care Cost Institute available at <http://www.healthcostinstitute.org/files/HCCI%20Data%20Brief%20No%201%20Feb%202015.pdf> ; Median household income: Median Household Income by State - Single-Year Estimates available at <http://www.census.gov/hhes/www/income/data/statemedian/index.html>

provider, typically a primary care provider, acts as the central hub to coordinate care across patients' needs, such as for chronic conditions like diabetes or heart disease.

Episode-based payments, or bundled payments, provide incentives to actively manage care from beginning to end of a defined event or condition, deploying evidence-based medicine practices to reduce variation in care, improve quality, and lower costs. While up to 70% of medical costs could potentially be covered through episodes of care, these models are most often used for procedures and acute incidents, where care is measured for a defined period of time before, during, and after an episode trigger or initiating event. Figure 4.1 below illustrates an example from Ohio on how health care spending can be addressed by population-based models and episodes of care.

Figure 4.1 Ohio Example of Health Care Costs Addressed by Population and Episode-Based Models⁵¹

~50 – 70% of costs may be addressable through episodes vs. population based models

	Examples	Percent of total spend			
		Commercial	Medicaid	Medicare	
Prevention	Routine health screenings	~5	~5	~3-5	Addressed through population-based model (e.g., advanced primary care)
Chronic care (medical)	Diabetes, chronic CHF, CAD	~15-25	~10-15	~20-30	
Acute outpatient medical	Ambulatory URI, sprained ankle	~5-10	~5-10	~5-10	
Acute inpatient medical	CHF, pneumonia, AMI, stroke	~20-25	~5-15	~20-30	
Acute procedural	Hip/knee, CABG, PCI, pregnancy	~25-35	~15-25	~20-25	Potentially addressable through episodes
Cancer	Breast cancer	~10	<5	~10	
Behavioral health	ADHD, depression	~5	~15-20	~5	
Supportive care	Develop. disability, long-term care	N/A	~20-30	N/A	

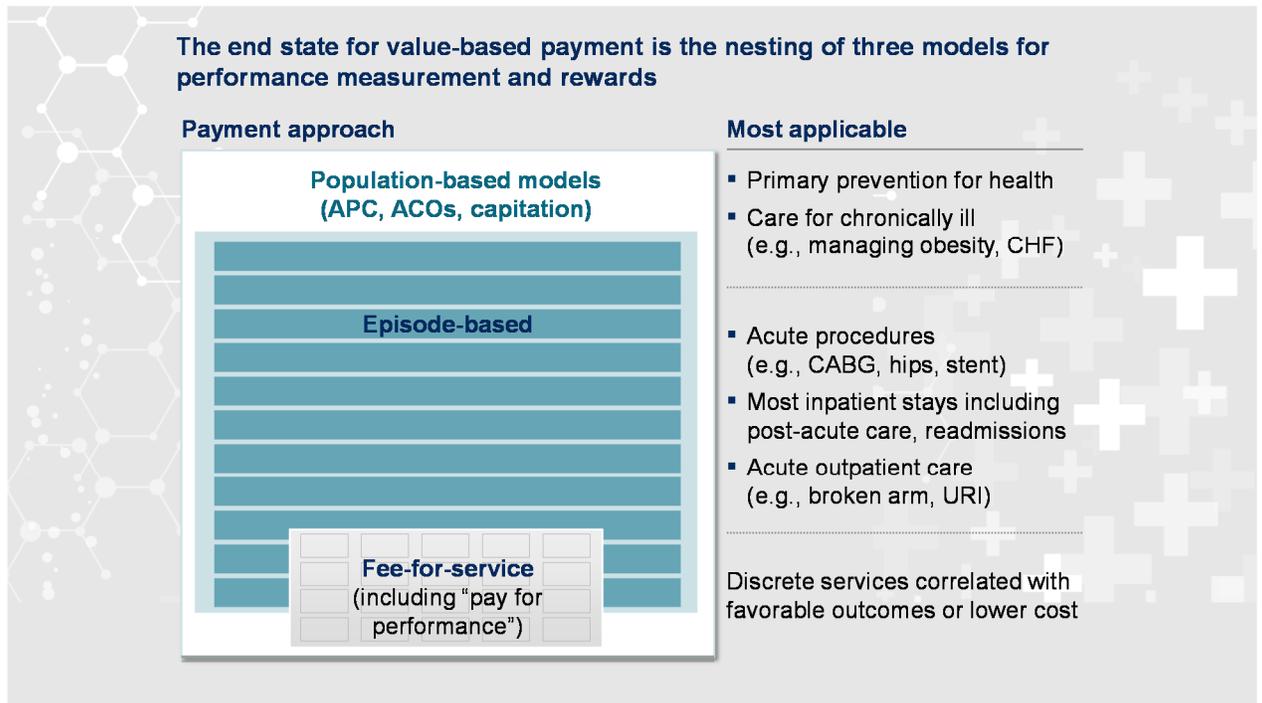
Pennsylvania's strategy includes both population-based and episode-based payment models due to their complementary nature. Using this portfolio of approaches, the commonwealth can improve quality for the majority of health care activity and spend in Pennsylvania, while reducing costs.

Population-based models provide a structure to manage total cost of care, quality, and overall health outcomes, with an emphasis on chronic conditions and prevention. Additionally, these models encourage coordination of primary care providers, community health workers, behavioral health specialists, and other providers who work with patients across the continuum to keep them healthier overall and thereby avoid spending on unnecessary utilization of services.

⁵¹ Ohio Governor's Office of Health Transformation, *Transforming payment for a healthier Ohio* available at www.HealthTransformation.Ohio.gov

Episodes of care can be used to address spending that cannot be addressed through population-based models. When acute events occur, the episode approach incentivizes effective, evidence-based management of those particular conditions. Bundling payments across providers yields greater data transparency on quality and cost metrics across clinicians, and incentivizes the accountable provider to actively work with their peers to manage an episode from end to end. In doing so, specialists working in episode models provide valuable information for primary care providers in population-based models about where to look for opportunities to improve total cost of care and quality. Episodes of care help mobilize the necessary array of specialists to coordinate care in line with best practices and ensure patients receive optimal care while reducing waste and duplication of services. Figure 4.2 depicts this end state for value-based payments.

Figure 4.2 End State for Value-Based Payments



4.1 Approaches to Value-Based Payments in Pennsylvania

Pennsylvania's strategy emphasizes building upon existing work and momentum across the commonwealth, learning from the experience of the other SIM states implementing these models (with early positive results) and identifying targeted areas where it can accelerate model development, deployment, and effectiveness.

Advanced primary care models, driven by payers and providers throughout the commonwealth, are well underway. The critical need and largest opportunity for impact identified by stakeholders in the payment work group is driving to standardized definitions and measures for advanced primary care.

Episode-based payment models are less prevalent in Pennsylvania, though single-payer programs, such as Geisinger Health System's bundled payments program or the Pennsylvania Employees Benefit Trust Fund (PEBTF) pilot program for joint surgeries, do employ this payment approach.

Pennsylvania will pursue multi-payer episode-based payments as a feasible and attractive model, based on stakeholder input recognizing the potential value to create common elements of an episode approach across all payers.

Outside of Pennsylvania, in states such as Maryland, multi-payer hospital global budget models have been effectively deployed to align incentives to reduce unnecessary utilization and to increase hospitals' focus on population health. Pennsylvania is developing a global budget model for rural hospitals, as part of a broader effort to redesign rural health.

The Medicaid approach in Pennsylvania is also aligned with the goal to move toward value-based payment, proposed strategies to be tested include advanced primary care (i.e., patient-centered medical home and accountable care organizations) and episodes. Through its recent RFP for the physical health HealthChoices program, the Department of Human Services is requiring selected managed care plans to commit to increasing their medical and maternity spend in value-based payment models to 30%. Geisinger Health Plan has already begun to implement an innovative bundled payment agreement with Clean State Addiction Treatment Centers in northeastern Pennsylvania for services to address opioid addiction.⁵²

4.2 Advanced Primary Care

The Advanced Primary Care (APC) model emphasizes a team approach to primary care delivery that centers on the patient and his or her needs. This approach fosters greater efficiency and collaboration across providers to meet patients' health care and social needs. Originally developed in 1967 by the American Academy of Pediatrics,⁵³ the APC concept was more recently adopted by Center for Medicare and Medicaid Services (CMS) as a leading model for implementing value-based payments after the passage of the Affordable Care Act. In its APC demonstrations, CMS has articulated the following objectives for these models:⁵⁴

1. Reduce unjustified variation in utilization and expenditures
2. Improve the safety, effectiveness, timeliness, and efficiency of health care
3. Increase the ability of beneficiaries to participate in decisions concerning their care
4. Increase the availability and delivery of care that is consistent with evidence-based guidelines in historically underserved areas

In a move to accelerate the adoption of the APC models by providers, Congress recently passed the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA). The new law changes how physicians will be paid under Medicare, providing incentives for doctors to adopt a series of quality improvement or alternative payment models. Physicians who do not shift into one of these two tracks

⁵² PA Department of Human Services, *Department of Human Services Awards Landmark Medicaid Agreements April 27, 2016* [Press Release]. Retrieved at <http://www.prnewswire.com/news-releases/department-of-human-services-secretary-announces-innovative-changes-to-medicare-in-pennsylvania-300144295.html>

⁵³ American Academy of Family Physicians, *Joint Principles of the Patient-Centered Medical Home* available at http://www.aafp.org/dam/AAFP/documents/practice_management/pcmh/initiatives/PCMHJoint.pdf

⁵⁴ Center for Medicare and Medicaid Services, *Multi-Payer Advanced Primary Care Practice Demonstration* available at https://www.cms.gov/Medicare/Demonstration-Projects/DemoProjectsEvalRpts/downloads/mapcpdemo_QA.pdf

may experience lower payments through Medicare; we believe MACRA will motivate many providers, especially those for whom Medicare is a large part of their payer mix, to implement APC in their practices. Going forward, the state will monitor the impact of MACRA and assess opportunities to further evolve APC models.

APC models are underway in Pennsylvania and have had significant momentum to date. In an American Hospital Association survey, 45% of responding Pennsylvania hospitals were associated with a patient-centered medical home and 30% were partnering with, or had plans to partner with, an accountable care organization entity.⁵⁵ Moreover, more than half of the commonwealth's Federally Qualified Health Centers have achieved PCMH recognition and many others are in process. While results of these models have varied by program, several have reported positive outcomes including cost savings, fewer emergency department visits, and improved health, access, prevention, and patient/provider satisfaction. A snapshot of some of the current APC models driven by Pennsylvania payers and providers are summarized in Table 4.3 below.

Table 4.3 Advanced Primary Care

Program Name	Description	Program scope	Select results
Blue Cross Affiliates Programs: ⁵⁶			
Highmark Patient-Centered Medical Home Program	Early PCMH program	1,050 primary care doctors in more than 100 physician practices; Western and Central Pennsylvania and West Virginia	Nearly a 2% decrease in overall health care costs; 3.5% decrease in total PMPM costs for diabetics; 13% fewer 30-day hospital readmissions
Independence Blue Cross Patient-Centered Medical Home Program	PCMH derived from IBC's progressive incentive program	300 practices, Southern Pennsylvania	Total medical cost savings of 7.9% (2010) in PCMH high-risk group; 5-8% reduction in ED utilization for patients with chronic illness
IBC Patient-Centered Oncology Care	Oncology-specific PCMH	10 oncology practices, Southeastern Pennsylvania	No results reported
Integrated Care Systems ⁵⁷			
Geisinger ProvenHealth Navigator	Early PCMH program	43 primary care clinics, Southeastern Pennsylvania	7.9% total cost savings

⁵⁵ American Hospital Association, *Survey of Care Systems and Payment (2013)* available at <http://www.ahadataviewer.com/book-cd-products/aha-survey/>

⁵⁶ Patient Centered Primary Care Collaborative, *Primary Care Innovations and PCMH Programs by Title* available at <https://www.pcpcc.org/initiatives/list>. Details can be found by filtering for Pennsylvania as the State and clicking on the program name

⁵⁷ Ibid.

Program Name	Description	Program scope	Select results
South Central Pennsylvania Alliance (SCPA)—Wellspan	PCMH bring together broad base of community stakeholders	37 practices, York and Adams Counties	12% reduction in avoidable hospitalizations
UPMC Patient-Centered Medical Home Model	Early PCMH program	The program was expanded in January 2009 to include a total of ten practice sites with 162 physicians serving 23,930 UPMC Health Plan members.	2.6% reduction in total costs; 12.5% fewer readmissions; 160% ROI
Other Commercial Payers ⁵⁸			
Cigna Collaborative Accountable Care Program - Valley Preferred	Cigna's approach to accomplishing the same population health goals as accountable care organizations	5,500 individuals covered by a Cigna health plan who receive care from Valley Preferred primary care and specialty physicians, in Leigh Valley	No results reported
Medicare and Medicaid ⁵⁹			
CMS CHIPRA Quality Demonstration Program – Pennsylvania	Testing and reporting on the pediatric core measures of quality; Promoting the use of HIT in children's health care delivery; Demonstrating the impact of the CMS pediatric EHR model format	73 practices with 445 providers, Statewide	No results reported
HealthChoices September 2015 MCO RFP	RFP to re-procure Managed Care Organization contracts for HealthChoices physical health, Medicaid's mandatory managed care program	Statewide	RFP requires that 30% of medical and maternity spending be through value-based payment models

58 Ibid.

59 Patient Centered Primary Care Collaborative, *Primary Care Innovations and PCMH Programs by Title* available at <https://www.pcpcc.org/initiatives/list>. Details can be found by filtering for Pennsylvania as the State and clicking on the program name

Program Name	Description	Program scope	Select results
CMMI ⁶⁰			
Coordinating All Resources Effectively (CARE) - Pennsylvania--CMS Innovation Award	Medical home concept aimed at reducing costs for children with medical complexity	10 pediatric hospital partners, California, Colorado, Florida, Missouri, Pennsylvania, Texas, Ohio	No results reported
Pittsburgh Regional Health Initiative--CMS Innovation Award	Specialized support centers, helping small primary care practices offer more integrated care	450 health care workers, western Pennsylvania	No results reported

Payers and providers are continuing to innovate, expand, and refine these models. For example, Highmark, the largest commercial payer in PA, experienced success with the initial pilot of their patient-centered medical home (PCMH) program. They have rolled out the program to include nearly 1,050 primary care doctors in more than 100 physician practices, covering about 171,000 Highmark members in western and central Pennsylvania and West Virginia. The University of Pittsburgh Medical Center (UPMC) has provided financial and programmatic support for PCMH sites since 2008, experiencing a 160% return on the plan's investment when compared with non-participating sites. Geisinger Health System's PCMH model, the ProvenHealth Navigator (PHN), produced the following results with 80,000 patients over 5 years:⁶¹

- Reduced acute care admissions by 27.5%
- Reduced 30-day readmissions by 34%
- Reduced risk for heart attacks, strokes, and damage to the retina in patients with diabetes
- Kept emergency department visits stable

Going forward, stakeholders identified that creating more consistent definitions of APC models (i.e., types of activities considered part of APC models, as well as metrics and measures) would enhance the ability for providers to be successful in achieving the goals of these models. Given the significant progress and interest, the commonwealth will take an active role in supporting multi-payer alignment on the most important areas. In particular, starting in Q1 2017, the commonwealth will work with insurers on their implementation of consumer-friendly tools that provide users with data on price and quality in order to allow for more informed health care decisions. This will include aligning on common definitions of core elements for APC programs, including a common set of quality measures:

- **Definitions**—As the commonwealth moves forward on developing common definitions for APC, it will explore several principles articulated by stakeholders:

⁶⁰ Ibid.

⁶¹ Medscape Family Medicine, *Physician Assistants Filling Gaps at Geisinger Health System* available at http://www.medscape.com/viewarticle/830559_2

- Creating opportunities for both providers and payers to share savings if benchmarks are achieved
- Ensuring flexibility and scalability to allow all providers to participate
- Rewarding improved performance as well as continued high performance
- Allowing for a flexible, multi-year phase in to recognize administrative complexities
- Providing financial incentives to providers who deliver high-quality care
- **Metrics**—Given the potential administrative burden faced by providers throughout the commonwealth, aligning on measures is an important first step towards ensuring rapid adoption of value-based payment methodologies. In the next phase, stakeholders have articulated an interest in creating a focused list of metrics that measure outcomes starting with developing a comprehensive inventory of measures utilized by payers within their value-based purchasing programs. Updated over time, this inventory will
 - Capture the metrics that are already in use such as quality metrics by DHS for Pennsylvania Medicaid program
 - Help all parties identify the scope of the problem,
 - Identify common measures, and thereby serve as a starting point for discussions relating to the development of a common data set

4.3 Episode-Based Payment

The episode-based payment model incentivizes providers to manage quality and cost of care for a defined health care event, over a specific period of time. Although utilized by private payers on a limited basis since the 1980s, the Medicare program for episode-based payments brought the model into national focus with the launch of the Affordable Care Act. The Bundled Payments for Care Improvement initiative (BPCI) started as a voluntary program in April 2013 to test four models for bundled payments.⁶² Since then, the BPCI has grown to include 2,115 providers nationally, with 132 in Pennsylvania.⁶³ Because of the model's growth, CMS announced a new bundled payment for joint replacements, the Comprehensive Care for Joint Replacement (CCJR) model, to start on April 1, 2016, with mandatory participation in three Pennsylvania metropolitan statistical areas (MSAs): Reading, Harrisburg, and Pittsburgh, plus the New York MSA which includes parts of Pike County.⁶⁴

In episode-based payments, also known as bundled payments, a single physician, hospital, or institution is responsible for managing the episodes for both quality and cost efficiency. This provider, called the Principal Accountable Provider (PAP), may bring other providers into the episode as necessary to care for the patient. Not only does the PAP lead the team, he or she is responsible for driving the improvements and results associated with value-based payments.

There are four core components of comprehensive episode model design:

⁶² Center for Medicare and Medicaid Services, *Bundled Payments for Care Improvement (BPCI) Initiative: General Information* available at <https://innovation.cms.gov/initiatives/bundled-payments/>

⁶³ Center for Medicare and Medicaid Services, BPCI Initiative Filtered View [Data set] available at <https://data.cms.gov/dataset/BPCI-Initiative-Filtered-View/e5a5-c768>

⁶⁴ Center for Medicare and Medicaid Services, *Comprehensive Care for Joint Replacement Model* available at <https://innovation.cms.gov/initiatives/cjr>

- **Accountability:** The number of providers accountable for an episode of care and types of providers that may be selected as a “quarterback” or accountable provider.
- **Payment model mechanics:** Overview of payment model including whether it is retrospective or prospective; type of gain / risk sharing; and method by which providers are measured to determine performance outcomes (e.g., absolute vs. relative thresholds).
- **Performance management:** Describes components integral to determining provider performance in an episode model (e.g., risk adjustment, patient-specific exclusions to the calculation of average cost per episode).
- **Payment model timing and thresholds:** Describes payment model timing including the time window for each episode cost calculation and dates for launch and link to payment. Thresholds are compared to a provider’s average cost and determine level of gain / risk sharing.

While definitive results from the BPCI program – the largest implementation of the episode-based payment model to date – are not yet available, bundled payments show significant promise.⁶⁵

In addition to the BPCI, multiple states, including Arkansas, Ohio, and Tennessee, have developed, implemented, and scaled multi-payer episodes of care as a core component of their state innovation models. In terms of results, Arkansas launched their bundled payments program in 2011 with five episodes and since then, has seen improvements in both quality and cost containment. Specifically, 73% of accountable providers for Medicaid and 60% of accountable providers for private payers were able to either improve costs or keep them in the acceptable range for the bundles, which included URIs, total hip and knee replacements, CHF, ADHD, and pregnancy.⁶⁶

In Pennsylvania, Geisinger Health System runs a long-standing episode-based payment model while other payers have tested pilots as well.

One such pilot has been the bundled payments for hip/knee joint replacements undertaken by the Pennsylvania Employees Benefit Trust Fund (PEBTF) from January 2014 to December 2015. Targeting 100 cases, the pilot showed positive results such as:

- Reduced length of stay
- Cost reduction in all outpatient care, including physician costs
- Self-reported patient satisfaction and Western Ontario & McMaster Universities (WOMAC) Osteoarthritis Index⁶⁷ scores at or greater than 87%

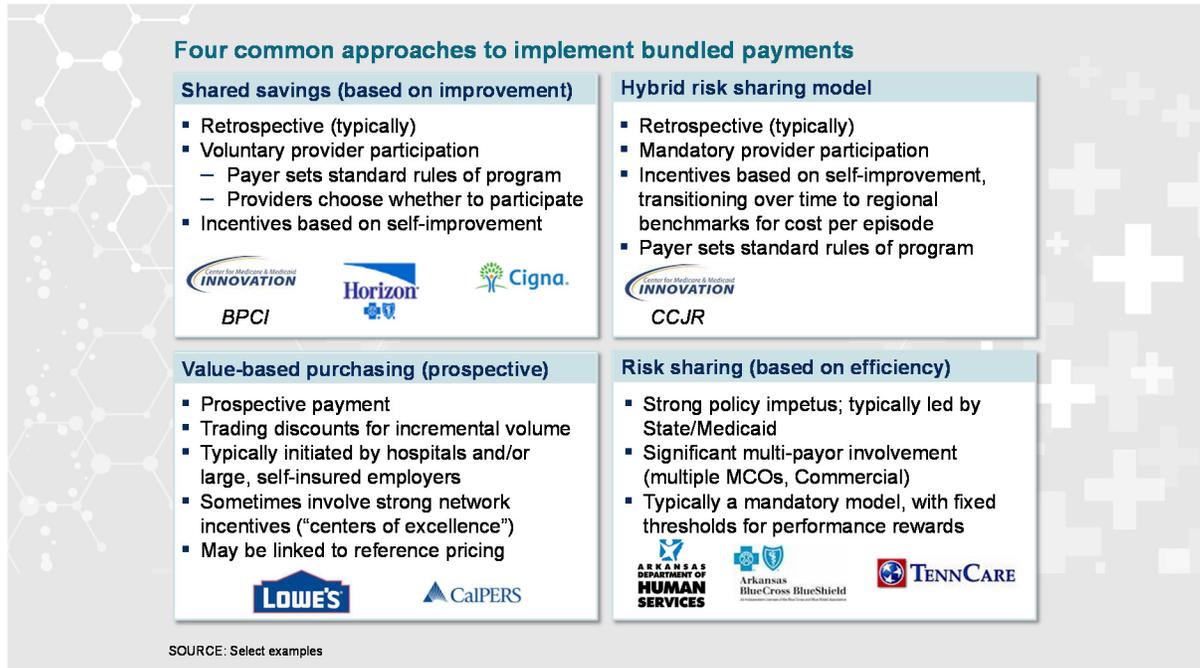
For example, episode-based payments in Pennsylvania may take on a wider implementation through one or more of the four approaches, currently being used in other states and organizations. See Figure 4.4.

⁶⁵ Lewin Group, *CMS Bundled Payments for Care Improvement (BPCI) Initiative Models 2-4: Year 1 Evaluation & Monitoring Annual Report* available at <https://innovation.cms.gov/Files/reports/BPCI-EvalRpt1.pdf>

⁶⁶ Arkansas Center for Health Improvement, *Statewide Tracking Report January 2015* available at <http://www.achi.net/Docs/276/>

⁶⁷ Note: The index assesses pain, stiffness, and physical function in patients with hip and/or knee osteoarthritis

Figure 4.4 Approaches to Bundled Payments



Through the value-based payment work group, stakeholders identified that episodes of care provide an area of opportunity for a multi-payer approach in Pennsylvania. Since these models are less broadly developed and implemented in Pennsylvania compared to other models, the commonwealth will work with leading stakeholders to establish common definitions for episodes of care and an infrastructure for implementation by:

- Aligning on the final model or models to be pursued
- Identifying areas to align approaches, creating better consistency for providers and scale for development across payers
- Creating multi-payer analytic and reporting capabilities that could spur transparency, referrals, and/or payment
- Synchronizing the transition to episode-based payment across payers to increase alignment of incentives across the full patient panel treated by providers

Beginning in 2017, the commonwealth will convene public and private payers, as well as providers, to further align on the specific approach for episode-based payment and deployment across Pennsylvania. This will include working with stakeholders to:

- Adopt a common approach (and/or shared analytics/reporting) for episode-based performance measurement
- Encourage the use of episode-based reporting to influence referrals for elective care
- Identify select regions and/or clinical episodes where payers may shift to episode-based payment
- Develop an episode-based payment charter and roadmap to implementation

Once the roadmap is completed, Pennsylvania will work with stakeholders to help drive payment-focused episode implementation accordingly.

4.4 Global Payment Models

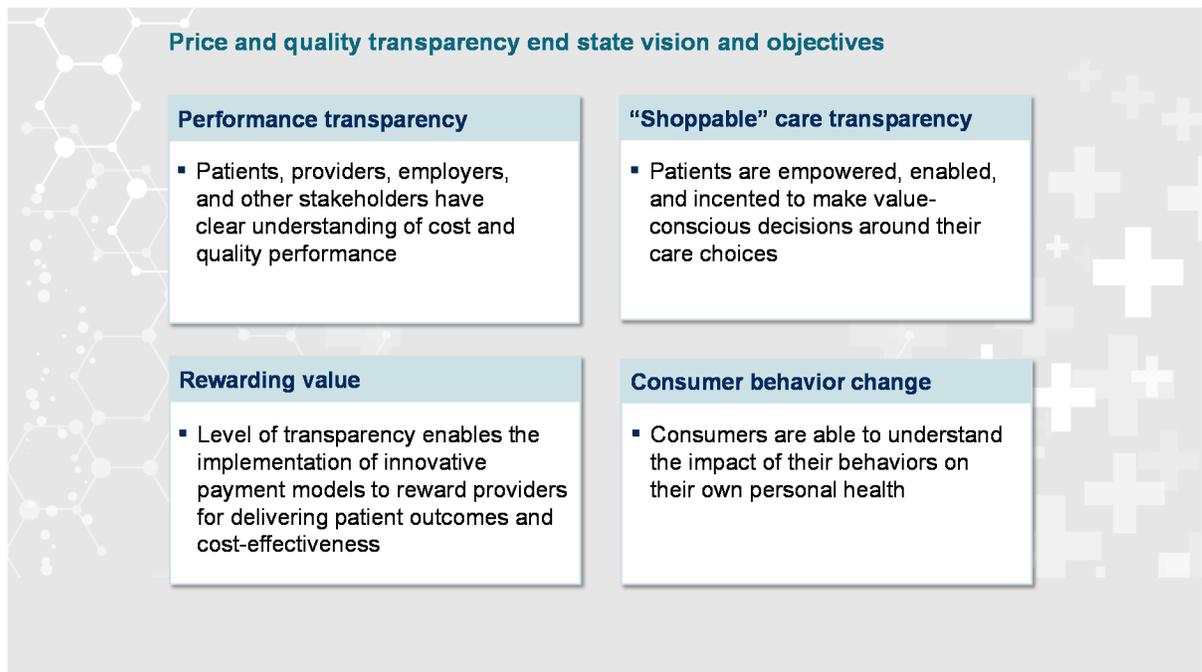
The commonwealth is working with the Centers for Medicare and Medicaid Innovation, Pennsylvania payers and providers, and national health experts to develop a multi-payer global budget model for rural hospitals. The goal of this model is to transform rural health care, creating a path to sustainability for struggling rural hospitals. The global budget would replace the current fee-for-service payment model, which rewards volume over value of care and is failing rural hospitals as hospital volume has declined in rural areas. In contrast, a global budget model creates predictable revenue streams for hospitals and incentives to reduce unnecessary utilization and manage population health. The payment model, coupled with technical assistance, will enable them to transform how they deliver care to better match the care provided to local population health needs.



Chapter 5: Achieve Price and Quality Transparency

Transitioning to value-based payments is predicated on better access to timely data. For stakeholders to implement new or refined payment models, price and quality transparency efforts are critical to realizing the HIP plan. Stakeholders aligned on the following vision and objectives, shown in Figure 5.1, for the price and quality transparency priority:

Figure 5.1 Price and Quality Transparency End State



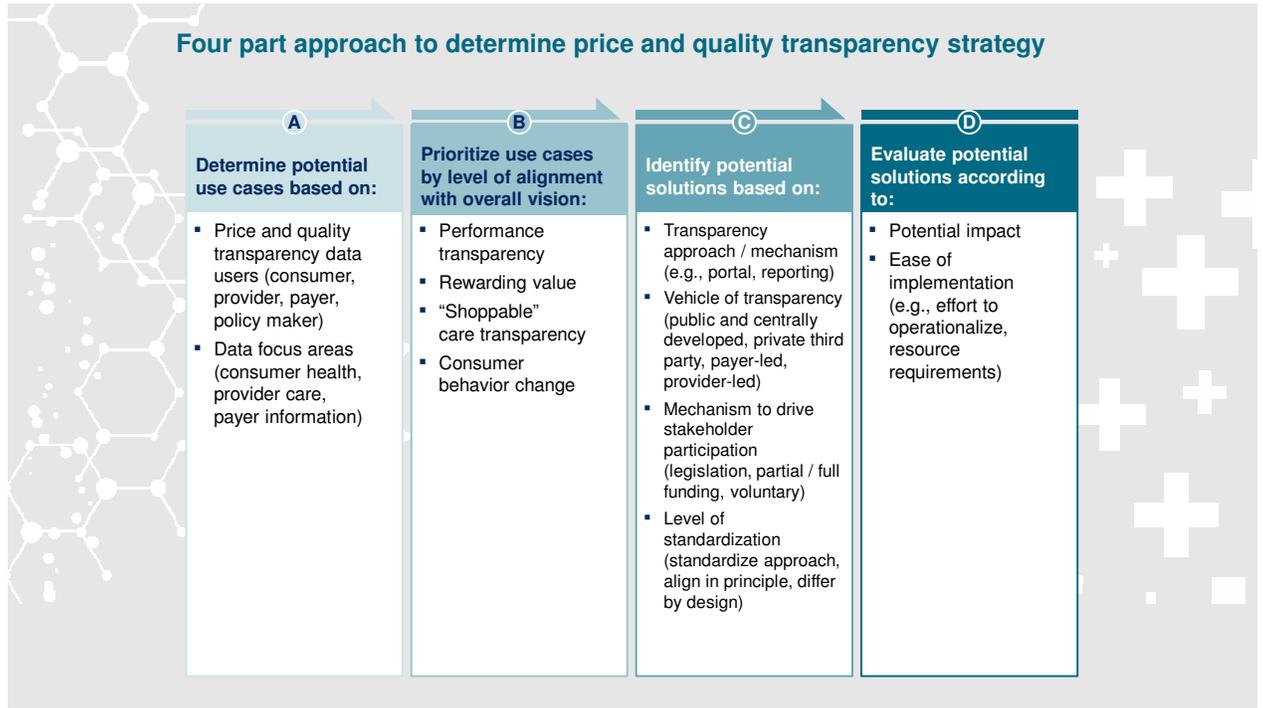
1. Within the price and quality transparency work group, stakeholders identified several challenges and needs for price and quality transparency: There is insufficient transparency of health care provider cost and quality data (e.g., quality data for primary care physicians, cost data for episodes of care), leading to suboptimal decision-making and uncertainty for consumers, professionals, providers, payers, and policy makers.
2. According to Catalyst for Payment Reform⁶⁸, several insurance companies have sophisticated transparency tools with the following strengths:

⁶⁸ Catalyst for Payment Reform, *Synopsis of Health Plan Transparency Tool Evaluations—Pennsylvania* available in forthcoming report to be released in Fall 2016

- a. Scope: All tools demonstrate adequate scope of information in their tools, including services, procedures, facilities, providers, and provider information.
 - b. Quality: All tools accommodate narrow network or tiered network benefit design to direct users to higher value providers.
 - c. Price Accuracy: Each tool displays real-time information related to a user's financial liability (including deductible, copay, coinsurance and out-of-pocket maximum) and either a market average price or range of prices for services and procedures.
 - d. Usability: All tools have advanced search functionality to simulate the shopping experience to which consumers are accustomed for other goods and services.
3. While these are of benefit to all stakeholders, they also identified several gaps, including:
- a. Scope: Users must currently navigate to a separate tool or website outside of the cost estimator tool versus integrating into one seamless experience.
 - b. Quality:
 - 1) Tools have begun directing users to general quality data but each face challenges in making quality metrics available for specific procedures, services, or providers.
 - 2) Tools do not yet demonstrate flexibility in accommodating certain innovative benefit designs, such as reference pricing or value-based insurance design.
 - 3) There is a gap across tools when it comes to decision support and user education about value and appropriateness of care.
 - c. Price Accuracy: There is a gap in educating consumers that higher prices may not indicate that care is of higher quality or that lower prices indicate a lack of quality.
 - d. Engagement: Vendors that provide health plan tools are not yet providing performance guarantees for consumer utilization of tools.
4. There is a growing need to leverage data in a meaningful way to improve transparency, driven by:
- a. Increasing demand from health care consumers to understand quality and out-of-pocket cost of care options due to both increased consumer cost sharing and a growing health care "shopping" culture
 - b. Shifting focus to value rather than volume leading to an increased need for providers to understand performance due to greater provider accountability for health outcomes and total cost of care
 - c. Growing need for payers and policy makers to analyze data to understand market dynamics and effectively make strategic decisions

Based on Catalyst's recommendations, the commonwealth will work with stakeholders to update its approach to price and quality transparency forward. With this context, a four-part approach was used to determine the commonwealth's specific transparency strategies. (See Figure 5.2)

Figure 5.2 Approach to Price and Quality Transparency Strategy



Step A involved identifying “use cases” for health care data. A use case represents the intersection of data users (i.e., consumer, provider, payer, or policy maker) with how that data will be used. The work group’s evaluation identified eight use cases for price and quality transparency in Pennsylvania (described in Figure 5.3 and Table 5.4).

Figure 5.3 Price and Quality Transparency Use Cases

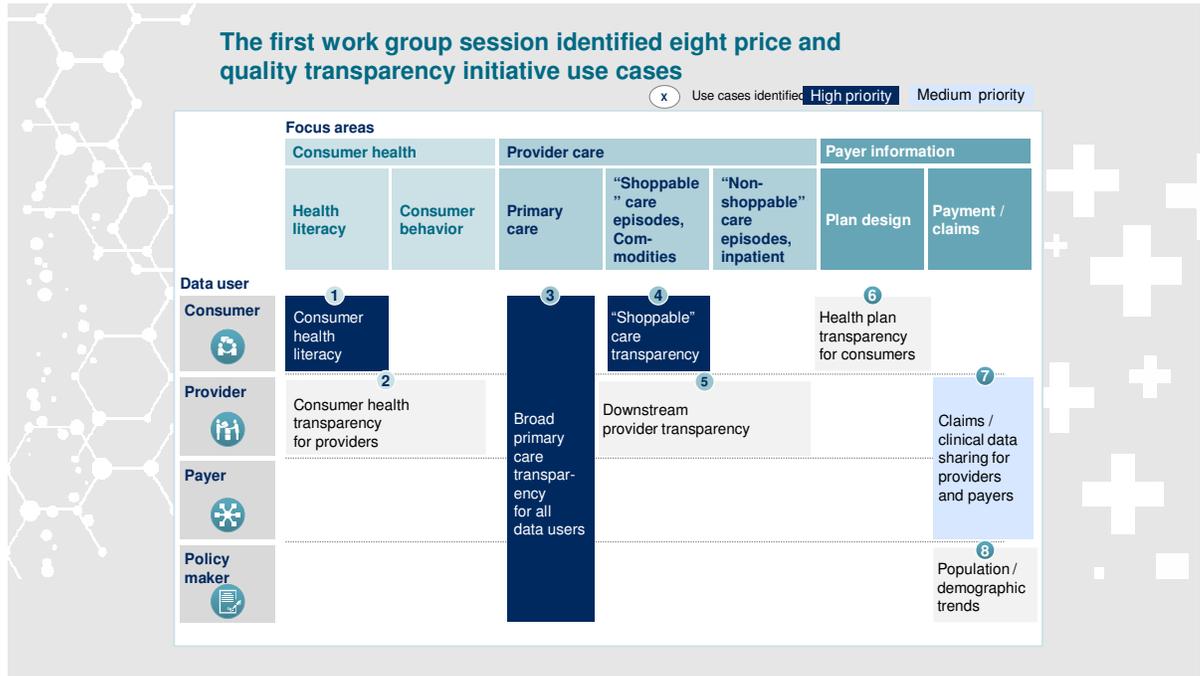


Table 5.4 Price and Quality Transparency Use Case Descriptions

	Use Case	Description
1	Consumer health literacy	Health care education to help consumers Understand personal cost of care decisions (e.g., co-insurance) Leverage care resources (e.g., build relationship with a primary care provider, free preventive care) Select appropriate site / mode of care (e.g., emergency department vs. urgent care, in-network vs. out-of-network)
2	Consumer health transparency for providers	Provider access to non-clinical consumer behaviors (e.g., tobacco use, diet) Provider understanding of consumer health literacy to reduce consumer education gaps
3	Broad primary care transparency for all data users	Accurate, relevant, granular, and timely quality, price, and value data on primary care providers for all data users (including PCPs for self-evaluation or other downstream providers)
4	"Shoppable" care transparency	Consumer-centric accurate, relevant, granular, and timely quality, price, and value data for "shoppable" care episodes and commodities
5	Downstream provider transparency	PCP-oriented transparency / analytics centered on health care quality, costs, and value data indirectly related (i.e., downstream) to PCP (e.g., referrals / specialists, inpatient care, post-acute and community providers)
6	Health plan transparency for consumers	Easily comparable health plan data (e.g., co-pays, network breadth) Plan selection data allowing consumers to predicate annual health care cost on different plans based on personalized needs

	Use Case	Description
7	Claims / clinical data sharing for providers and payers	Claims and clinical data more readily available to enable broad transparency initiatives Enhanced data sharing technology and capabilities for providers and payers
8	Population / demographic trends	Availability of accurate, relevant, and granular claims data to help determine and predict health care spending trends (note: may be ancillary benefit of “7”)

In Step B, use cases were prioritized based on alignment with the transparency vision, impact on other areas of the HIP plan, and the potential for the commonwealth to play a meaningful role. Use cases **one** (consumer health literacy), **three** (broad primary care transparency for all data users), and **four** (“shoppable” care transparency) emerged as highest priorities. Use case **seven** (claims / clinical data sharing for providers and payers) is pending a feasibility study by NAHDO in collaboration with the APCD Council, which was retained via a competitive process in November 2015. NAHDO / APCD Council have been commissioned with planning for the potential development of an all-payer claims database (APCD), including:

- Identifying regulatory, legal, and legislative considerations (and developing proposed solutions)
- Defining infrastructure needs
- Engaging stakeholders
- Developing a sustainability plan
- Drafting a data submission guide
- Developing future RFPs for services needed to implement the APCD

In Steps C and D, specific solutions were identified within each selected use case and further prioritized based on potential impact and ease of implementation. Through this approach the Pennsylvania Insurance Department and the Health Innovation Center team along with key stakeholders developed a “go forward” strategy for price and quality transparency with three core initiatives:

1. Improve consumer health literacy to empower consumers to better use health care resources and improve health. The commonwealth will:

- Identify and solicit leaders interested in building on existing Pennsylvania efforts (e.g., Pennsylvania Health Literacy Coalition)
- Support existing collaboration initiatives to improve consistency and reach of efforts (i.e., Regional Health Literacy Coalition)
- Evaluate existing initiatives to identify areas that: (a) are already well supported; (b) require coordination across existing initiatives; or (c) would merit a Pennsylvania-branded campaign
- Drive a Pennsylvania-branded consumer health literacy campaign(s) focused on an area(s) that the commonwealth can impact, such as:
 - Where to seek care: primary care vs. retail clinics vs. urgent care vs. emergency departments
 - How to make health insurance plan or benefit selections
 - Making choices that support healthy living
 - How to shop for outpatient or elective inpatient care

- How to plan for long-term care

The commonwealth will establish ongoing stakeholder engagement as needed to execute the health literacy initiative, including securing funding for necessary investments. The commonwealth has already begun the process of identifying and soliciting leaders interested in continuing a multi-stakeholder effort. This initiative will include selecting one key health issue for an initial Pennsylvania-branded campaign, slated to begin in the first half of 2017.

2. Support broad primary care transparency for all data users through primary care measure and process alignment. The state will convene payers and providers to streamline and standardize PCP reporting requirements across payers and regulators, establish consistent operational channels for clinical data capture, help enable multi-payer alignment of value-based payment around common measures, and incorporate PCP transparency into tools for consumer selection of PCPs and/or health plans.

The commonwealth has already started identifying and soliciting leaders interested in continuing to shape this effort. The ongoing work group supporting this strategy will then partner with payers to develop a timeline and process by which they will work to align on common measures. Stakeholders are expected to reconvene in Q1 2017.

3. Enable “shoppable” care transparency by supporting the development of a commodity transparency tool, or set of commodity transparency tools that will enhance capability for price shopping, establishing “benchmark” prices that consumers may use to gather price information from payers / providers, and using standards for types of comparative price information, which payers and/or providers would make available.

In the initial stages of implementation, the commonwealth will review the findings of the APCD Council and Catalyst for Payment Reform. The commonwealth will then hold a series of meetings over the summer of 2016 where it will lay out the principles of transparency and investigate options moving forward on a commodity transparency strategy. While the development of an all-payer/claims database is only one of a number of paths to improving price and quality transparency, the commonwealth elected to engage the APCD Council to understand its potential capabilities and the feasibility of implementation as a starting point.

Based on this work, the commonwealth plans to drive the development of a commodity transparency tool or work with payers to develop or update payer-hosted tools. Both approaches will require collaboration with Pennsylvania stakeholders and developing a statewide program and roadmap. Chapter 13 includes a preliminary discussion of the commonwealth’s approach to implementing these strategies, which incorporate stakeholder feedback.

The commonwealth is also considering developing an episode transparency tool. This would require accessing episode-based data, deploying analytics to interpret data, and reporting results to stakeholders across the commonwealth (e.g., for consumer transparency, referrals, provider self-assessment, provider prioritized improvement areas). This episode transparency tool could be built upon the foundation of a commodity transparency tool.



Chapter 6: Redesign Rural Health

Rural health in Pennsylvania faces several unique challenges which impact access, cost, and quality of care for the 1.8 million Pennsylvanians⁶⁹ who live in rural areas. Access to care is limited and many rural providers are struggling financially putting access to care even more at risk. Nearly half (45%) of the 42 rural Pennsylvania hospitals faced negative operating margins in 2014, and an additional 33% of rural hospitals generated margins of only 0-3%.⁷⁰ The hospitals also provide 27,000 jobs in their communities.⁷¹ These vulnerable hospitals ensure both access to care and community jobs that would likely be lost if these hospitals fail to develop a sustainable business model.

In many cases, rural health providers are central to communities that are often located in medically underserved and/or health professional shortage areas. If they close, access to health care would transition to less convenient and typically higher cost urban centers. For example, a study published in a recent issue of the *Journal of the American Medical Association* reviewed 1.6 million hospital stays for common operations and found that, compared to larger hospitals, Critical Access Hospitals in rural areas had better outcomes for less cost. For the four operations studied (gallbladder removal, colon surgery, hernia repair and appendectomy), the risk of dying within thirty days of the operation was the same at CAHs and larger hospitals. But, the risk of suffering major complication after surgery, such as heart attack or pneumonia, was lower at Critical Access Hospitals, where costs to the Medicare system were nearly \$1,400 less per patient.⁷²

Moreover, quality of care is also at stake. While some hospitals deliver high-quality outcomes for lower cost, other rural hospitals often have sub-scale service lines that pose a risk of lower quality when a minimum threshold of procedures is not performed on a consistent basis. For example, 59% of rural Pennsylvania hospitals offering hip and femur (excluding major joint) procedures maintain the service line at a potentially sub-scale level compared to only 28% of those that are non-rural. In addition, 48% of stroke patients admitted to rural emergency departments received tPA over 3 hours after the stroke, compared to only 14% of stroke patients in non-rural hospitals.⁷³

Recent innovations in value-based payment and delivery models have largely passed by rural providers. In Pennsylvania, few rural hospitals participate in Medicare's Bundled Payment for Care

⁶⁹ Note: Based on population of PA counties in which rural hospitals are located; U.S. Census (2014)

⁷⁰ Pennsylvania Health Care Cost Containment Council (PHC4). *Financial data for general acute hospitals 2014* [Data set].

⁷¹ Pennsylvania Department of Health, *Annual Hospital Questionnaire (July 1, 2014 through June 30, 2015)* [Data set] available at <http://www.statistics.health.pa.gov/HealthStatistics/HealthFacilities/HospitalReports/Pages/HospitalReports.aspx#.VzH9NaDD-U>

⁷² *Journal of the American Medical Association*, *Association of Hospital Critical Access Status With Surgical Outcomes and Expenditures Among Medicare Beneficiaries*, available at <http://jama.jamanetwork.com/article.aspx?articleid=2521969>

⁷³ Center for Medicare and Medicaid Services, *Medicare Timely and Effective Care Quality Measures* available at <https://www.medicare.gov/HospitalCompare/data/Data-Updated.html#MG3>

Improvement (BPCI) initiative (10% compared to 35% of non-rural hospitals) or the Medicare Shared Savings Program (MSSP). And by design, the CMS Comprehensive Care for Joint Replacement (CCJR) initiative is only implemented in non-rural areas.

In response to these health care access, economic, and quality challenges, the commonwealth has developed a strategy to ensure better health and better care for rural residents. This strategy includes the following initiatives:

- Health care delivery system transformation for rural communities focuses on ways to improve access to care, including removing barriers to tele-health, increasing access to oral and behavioral health providers, and expanding opportunities for health professional students to learn and work in rural and/or underserved areas.
- The commonwealth is working with the Center for Medicare and Medicaid Innovation and Pennsylvania payers to develop a multi-payer global budget model for rural hospitals. The goal of this model is to create predictable revenue streams for hospitals to enable them to transform how they deliver care to better match the needs of the local population. This would replace the current fee-for-service payment model which rewards volume over value of care and is failing rural hospitals, as hospital volume has declined in rural areas.
- Several strategies will support population health improvements in rural areas. Pennsylvania will refocus efforts at several facilities, in rural communities, such as State Health Centers, Rural Health Clinics, and Critical Access Hospitals to align services to achieve population health goals. In addition, DOH will engage a broad array of sister state agencies to improve rural population health, including the Departments of Aging, Agriculture, Community and Economic Development, Conservation and Natural Resources, Drug and Alcohol Programs, Education, Labor and Industry, Human Services, and Transportation, as well as the Pennsylvania Insurance Department.
- As the commonwealth undertakes multiple efforts to spur health care transformation in rural communities, it will monitor progress with a data-driven approach using rural health information available through HRSA's Federal Office of Rural Health Policy (FORHP), the University of Minnesota, University of North Carolina, and University of Southern Maine, among other data sources.



Chapter 7: Population Health Improvement Plan

7.1 State Health Needs Assessment and Priority Setting

LEVERAGING POPULATION HEALTH ASSESSMENTS

In developing the population health plan, Pennsylvania reviewed several commonwealth data sources including the 2013 State Health Assessment (SHA), the 2015 State Health Improvement Plan (SHIP), local Community Health Needs Assessments (CHNAs), and Community Health Improvement Plans (CHIPs), as well as national resources such as the Robert Wood Johnson Foundation’s County Health Rankings and the U.S. Department of Health and Human Services’ Healthy People 2020 initiative to prioritize initiatives.

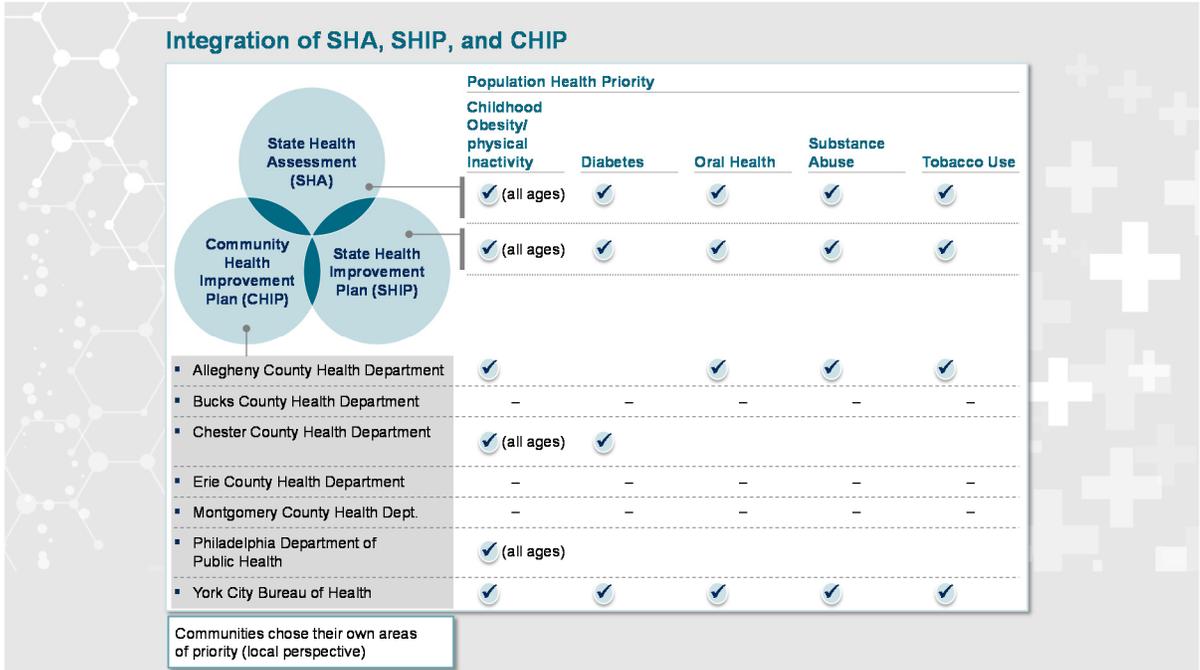
The SHA assessed and reported on the health status of Pennsylvania’s population, factors that contribute to health issues, and resources available to address population health improvement. Through the SHA, DOH identified five major risk factors that have the greatest impact on health outcomes: tobacco use/exposure, being overweight/obese in conjunction with lack of physical activity, alcohol/drug use, mental health disorders, and oral health.

Based on the SHA findings, DOH engaged in a yearlong stakeholder engagement process to develop the 2015-2020 SHIP. The SHIP is a long-term, comprehensive plan to address underlying risk factors identified in the SHA. It details how DOH and the communities it serves will work together to improve population health. Through the SHIP stakeholder engagement process, over 20 health priorities were identified and were condensed into three categories:

1. Behavioral/mental health access for all ages and drug and alcohol abuse treatment services for adults
2. Obesity, physical inactivity, and nutrition
3. Primary care and preventive screenings

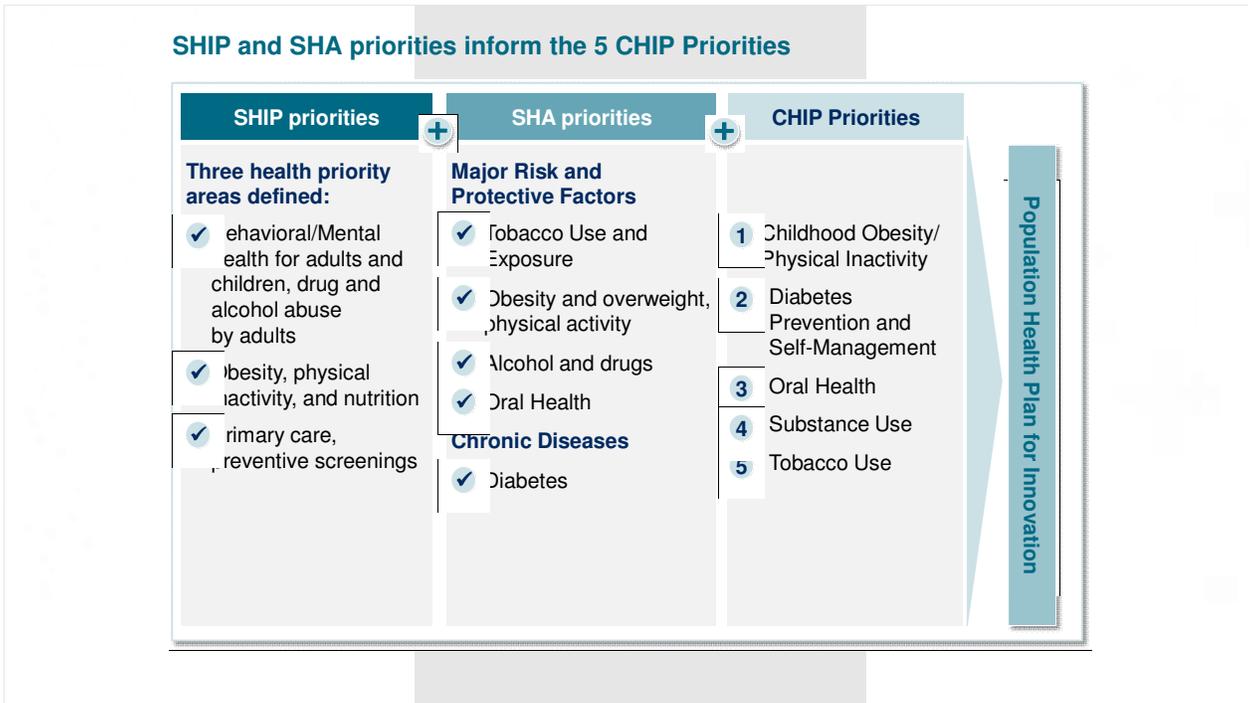
These priorities also had five cross-cutting themes: health literacy; public health system; health equity; social determinants of health; and integration of primary care and mental health. To ensure full coordination and integration with HIP work, members of the Department’s Health Innovation Center team serve on the SHIP Advisory Board and co-chair its Primary Care Task Force. As an application of the work at the state level, several local communities developed Community Health Improvement Plan(s) (CHIPs) to codify their own plans for improving population health. A summary of the findings for the SHA, SHIP, and CHIPs is located below in Figure 7.1.

Figure 7.1 Review of Community Health Improvement Plans (CHIPs) Health Priorities



In addition, Figure 7.2 provides a summary of the key priorities that resulted from the SHA, SHIP, and CHIPs.

Figure 7.2 Summary of Pennsylvania Health Assessments



Based on the summary of each of the assessments and plans, Pennsylvania defined the following health priorities for the HIP initiative: obesity/physical inactivity, diabetes (prevention and self-management), oral health, substance use, and tobacco use.

RESOURCES TO DETERMINE AREAS OF HIGH BURDEN AND COST

A review of national public health resources shows that Pennsylvania has high rates of obesity, tobacco use, unhealthy eating, drug-associated deaths, and high rates of physical inactivity. Pennsylvanians experienced on average 3.5 poor physical health days and 3.6 poor mental health days within a 30-day period. Twenty percent (20%) of adult Pennsylvanians are current smokers; however, smoking rates vary among counties ranging from 12% to 39%.⁷⁴

Although below the national average of 31%, Pennsylvania's adult obesity rate (29%) has varied widely by county, from 23% to 37%. While Pennsylvania has more available resources for exercise opportunities than other parts of the country (85% versus 65%), state residents are below the national average for participating in physical activity during leisure time (24% versus 27%).

These national findings align with the population health needs identified through the state efforts and the population health priorities defined for the HIP plan. A comparison of Pennsylvania's health priorities for the population health plan is listed in Figure 7.3 below.

⁷⁴ Robert Wood Johnson Foundation, *2015 County Health Rankings* available at <http://www.countyhealthrankings.org/>

Figure 7.3 Comparison of Health Priorities for Pennsylvania⁷⁵

Priority	Pennsylvania (National findings)	Pennsylvania (State Health Assessment)	Healthy People 2020 Goal (based on 2008 rates)
Obesity	30.2% of adults were obese in 2014	29% of adults were obese in 2011	Reduce the proportion of adults who are obese from 33.9% to 30.5%
Diabetes	For every 1,000 adults in PA, 7.8 were newly diagnosed with diabetes in 2013	In 2010, 19.6 per 100,000 population deaths were attributed to diabetes	Reduce the annual number of new cases of diagnosed diabetes from 8.0 to 7.2 new cases per 1,000 population
Substance abuse	In 2010, 15.3 per 100,000 people had a drug-associated death	--	Reduce drug-associated deaths from 12.6 to 11.3 deaths per 100,000 population
Oral health	In 2012, 54.6% of people were served by public water systems that are fluoridated	72.3% of adults reported visiting a dentist or dental clinic in the past year in 2010	Increase the proportion of the U.S. population served by fluoridated community water systems from 72.4 to 79.6%
Smoking	21.0% of adult residents are current smokers	In 2011, 22.4% of adults smoked cigarettes in the past 30 days	Reduce proportion of adults who are cigarette smokers from 20.6 to 12.0%

SOURCE: Centers for Disease Control and Prevention; Trust for America's Health; and Fluoride Action Network

7.2 Existing Capacity and Efforts Aimed at Population Health

ACTIVITIES AND CAPACITY TO BE LEVERAGED

Pennsylvania received the Centers for Disease Control and Prevention (CDC) Chronic Disease Prevention Grant that promotes state and public health actions to prevent and control diabetes, heart disease, obesity, and associated risk factors. This funding supports statewide implementation of

⁷⁵ Centers for Disease Control and Prevention <http://www.cdc.gov/obesity/data/table-adults.html>, <http://www.cdc.gov/diabetes/atlas/obesityrisk/atlas.html>, <https://www.healthypeople.gov/2020/data-search/Search-the-Data?nid>, <http://fluoridealert.org/researchers/states/pennsylvania>, <http://www.cdc.gov/statesystem/cigaretteuseadult.html>; U.S. Department of Health and Human Services, *Healthy People 2020 Objectives—Nutrition and Weight Status, Diabetes, Substance Abuse, Oral Health, Tobacco Use* available at <https://www.healthypeople.gov/2020/topics-objectives>; Fluoride Network available at <http://fluoridealert.org/researchers/states/pennsylvania/>; Pennsylvania Department of Health, *Pennsylvania State Health Assessment 2013* available at http://www.portal.state.pa.us/portal/server.pt/community/healthy_schools_businesses_and_communities/11601/state_health_assessment_page/1533419

cross-cutting approaches to promote health and prevent and control chronic diseases and their risk factors. Currently, there are a number of programs that are funded through the grant that focuses on the five identified priority health areas. They are outlined in detail below.

TOBACCO USE

The Pennsylvania Tobacco Control program follows the CDC's "Best Practices for Comprehensive Tobacco Control Programs." The 2012-2017 Strategic Plan for Comprehensive Tobacco Control Program in Pennsylvania outlined key goals to decreasing tobacco use across the commonwealth, including:

- Prevent initiation of tobacco use among youth and young adults
- Promote tobacco use cessation among adults and youth
- Eliminate exposure to secondhand smoke
- Identify and eliminate tobacco-related disparities
- Enhance Pennsylvania's role as a nationally recognized leader in tobacco control programs and policies

Pennsylvania has recently worked to address smoking during pregnancy. A specific pregnancy protocol was added to the statewide cessation Quitline that provides a dedicated coach for up to ten coaching sessions. The coach calls the client at times previously agreed upon by the client. Five of the ten sessions are provided postpartum due to the high recidivism rate that typically occurs after birth.

OBESITY/PHYSICAL INACTIVITY

DOH's Division of Nutrition and Physical Activity selected three areas of focus:

- Increasing health-related physical activity through population-based approaches
- Improving aspects of dietary quality most related to the population burden of chronic disease and unhealthy child development
- Decreasing prevalence of obesity through preventing excess weight gain and maintenance of healthy weight loss

DOH runs several nutrition and physical activity programs alone or in partnership with other entities across the state, described below:

1. EPIC® Pediatric Obesity Evaluation, Treatment, and Prevention in Community Settings:

The EPIC program delivers an educational curriculum on childhood obesity screening, treatment, and prevention within primary care practice settings in Pennsylvania to advance protocols that assure universal childhood obesity screening for all children. It also identifies appropriate patient education materials to prevent and treat overweight children and refers patients to community resources such as weight management programs, nutritionists, and dietitians.

2. Pennsylvania's Healthy Corner Store Initiative (HCSI):

The Pennsylvania Healthy Corner Store Initiative is a program aimed to ensure that underserved communities have equal access to healthy foods by encouraging corner storeowners to incorporate healthy food options into their product lines. The first phase in the HCSI model engages corner storeowners (generally defined as four or fewer aisles and one register) to introduce at least four healthy items from two food categories into their inventory. If storeowners successfully comply with the requirements, they may be eligible to receive a \$100 incentive check for enrolling, along with healthy inventory marketing materials, in-store training and technical assistance, and mini-conversions, which may include baskets, refrigerators, racks, or other similar items.

3. Pennsylvania Nutrition and Physical Activity Self-Assessment for Child Care (PA NAP SACC):

The PA NAP SACC enhances nutrition and physical activity practices in early child care and education programs by improving the nutritional quality of the food served. In particular, they address the amount and quality of physical activity; provider-child interactions around food and physical activity; educational opportunities for children, parents, and providers; and program policies related to nutrition and physical activity. The initiative provides continuous quality improvement for early care and education programs to assess and improve upon their nutritional environment, as well as to determine ways to increase the amount of daily physical activity for children.

4. Walk Works:

Walk Works is a collaborative effort among many commonwealth agencies. The initiative aims to increase opportunities for physical activity by planning, implementing, and marketing community-based walking routes utilizing the built environment; promoting and establishing walking groups for social support; and promoting policies designed to increase opportunities for physical activity.

5. Increase Physical Activity Access and Outreach:

The Department of Health, in collaboration with the Center for PRO Wellness and the University of Pittsburgh, is working to increase physical activity access by developing partnerships with targeted school districts and communities throughout Pennsylvania to promote school and community environments that support healthy eating and an increase in physical activity.

6. Schools Initiative:

The goal of the Schools Initiative is for school districts to focus on creating sustainable healthy nutrition environments and physical activity practices by customizing their own initiatives when completing the nationally recognized assessment tool. The initiative encourages targeted districts to make changes to their local wellness policies in an effort to decrease childhood obesity.

DIABETES PREVENTION AND CONTROL

Pennsylvania's Diabetes Prevention and Control Program strives to reduce the burden of diabetes in Pennsylvania and improve the quality of life of individuals living with diabetes by preventing and controlling its complications.

This is accomplished through the following initiatives:

1. Juvenile Diabetes Cure Research Tax Check-Off program:

The Juvenile Diabetes Cure Research Tax Check-Off program, created in 2004, allows individuals to contribute a portion of their state tax refund to support research for juvenile diabetes in Pennsylvania.

2. Diabetes Self-Management Education (DSME):

Through the DSME program, DOH, in collaboration with community partners, works to strengthen community-clinical linkages to increase the promotion of, referral to, and utilization of American Association of Diabetes Educators-accredited and/or American Diabetes Association-recognized diabetes self-management education. Under the program, DOH: 1) assesses DSME capacity in PA; 2) promotes DSME to people with diabetes, employers, payers, managed care organizations, and providers to increase DSME referrals and utilizations; 3) establishes a web-based statewide community-clinical linkages compendium; and 4) expands the number of DSME sites in PA in high-need, underserved areas.

3. Diabetes Prevention Program (DPP):

DPP is an evidence-based lifestyle change intervention that seeks to delay or prevent the onset of type 2 diabetes among high-risk individuals. Program participants with pre-diabetes meet in groups with a trained lifestyle coach once a week for 16 weeks and then once a month for six months. These meetings aim to teach the skills necessary to incorporate healthier eating, moderate physical activity, and problem-solving and coping skills into their daily lives.

ORAL HEALTH

Pennsylvania does not have recent data describing the oral health care status in the commonwealth; the last oral health care data was collected in 1999. The state does, however, keep current information on oral health care workforce numbers and information of providers who take patients with Medical Assistance (Medicaid) and the Children's Health Insurance Program (CHIP). In the past, DOH has partnered with the Pennsylvania Chapter of the American Academy of Pediatrics to implement and promote its Healthy Teeth Healthy Children program. This program aims to eradicate dental disease in young children, specifically to achieve 75% of children reaching age five without a cavity by 2020. The first phase of this program targeted the provision of fluoride varnish for children under age five at high-volume Medicaid providers.

In developing the HIP population health plan, Health Innovation Center staff met with DOH program staff to discuss how these current programs and initiatives could be leveraged to increase better health outcomes. The strategies and tactics defined in the corresponding section outline this collaboration to promote innovation and expand current efforts to move the needle towards healthier people across the commonwealth.

POPULATION HEALTH STRATEGIES AND ACTIVITIES UNDER HIP

Through the HIP work, Pennsylvania will advance five population health priorities: obesity/physical inactivity, diabetes prevention and self-management, oral health, substance use, and tobacco use. The HIP plan proposes a variety of policy, programmatic, and patient-provider initiatives to advance population health across the commonwealth.

The population health plan health priorities are outlined below:

OBESITY/PHYSICAL INACTIVITY

SMART⁷⁶ Objective: Reduce the proportion of children and adolescents who are considered obese from 17.4% to 15.7% by July 2019.⁷⁷

Strategy 1: Promote increased healthy environments in early care and education.

Tactic 1. Work with licensed early care and education centers to implement or improve policies to support healthy environments.

Strategy 2: Promote increased health and wellness within commonwealth schools.

Tactic 1. Work with school districts to implement comprehensive school physical activity programs.

Tactic 2. Develop and distribute evidence-based practices that:

- Strengthen school wellness policies to address food and beverage marketing, healthy celebrations, vending and fundraising, and water access
- Provide nutrition education through school gardens
- Promote Safe Routes to School (including walking school buses)

Strategy 3: Support efforts to increase residents' access to resources that promote active, healthy lifestyles.

Tactic 1. Connect residents with physical activity resources, such as the *Get Outdoors PA* and *Explore PA Local Parks* programs. Tactic 2. Provide resources for design and integration of active, safe, walkable/bike-friendly communities.

Tactic 3. Examine the built environment and encourage local communities to promote healthy transportation alternatives via comprehensive plans and regulatory ordinances to consider all modes of transportation, particularly active transportation modes of walking and bicycling.⁷⁸

DIABETES (PREVENTION AND SELF-MANAGEMENT)

SMART Objective: Reduce the annual number of new cases of diagnosed diabetes from 8.0 to 7.2 new cases per 1,000 population by July 2019.⁷⁹

⁷⁶ Note: SMART refers to setting objectives that are **S**pecific, **M**easurable, **A**chievable, **R**ealistic and **T**ime-targeted

⁷⁷ U.S. Department of Health and Human Services, *Healthy People 2020 Objectives* available at <https://www.healthypeople.gov/2020/topics-objectives>

⁷⁸ Pennsylvania Department of Conservation and Natural Resources, *SCORP Plan 2014-2019* available at <http://dcnr.state.pa.us/brc/recreation/scorp/index.htm>

⁷⁹ U.S. Department of Health and Human Services, *Healthy People 2020 Objectives* available at <http://www.healthypeople.gov/2010/hp2020/Objectives/TopicArea.aspx?id=16&TopicArea=Diabetes>

Strategy 1: Promote combined diet and physical activity programs aimed at preventing type 2 diabetes among people who are at increased risk of the disease.

Tactic 1. Promote the Healthy Corner Store Initiative across the commonwealth.

Tactic 2. Promote improved access to diabetes prevention programming for all Pennsylvania residents at risk for type 2 diabetes.

ORAL HEALTH PROMOTION (AMONG CHILDREN)

SMART Objective: Reduce the proportion of children who have dental caries experience in their primary or permanent teeth from 33.3% to 30% by July 2019.⁸⁰

Strategy 1: Promote better oral health across the commonwealth.

Tactic 1. Promote evidence-based benefits of community water fluoridation.

Tactic 2. Collaborate with family medicine physicians, pediatric dentists, and other pediatric providers to provide regular oral health assessments (and varnish, as appropriate) at well child visits.

Tactic 3. Promote referrals from family medicine physicians and pediatric providers to dentists for preventive oral care (including the provision of dental sealant applications) in children ages 6 to 12 years.

SUBSTANCE USE

SMART Objective: Reduce drug-associated deaths from 12.6 to 11.3 deaths per 100,000 population by July 2019.⁸¹

Strategy 1: Promote public education and awareness for preventing prescription drug and opioid abuse and overdose.

Tactic 1. Identify at-risk populations for opioid abuse and overdose, including through the Opioid Use Disorder Centers of Excellence.⁸²

Tactic 2. Identify where treatment is available and make this information easily available to at-risk populations.⁸³

⁸⁰ U.S. Department of Health and Human Services, *Healthy People 2020 Objectives* available at <http://www.healthypeople.gov/2010/hp2020/Objectives/TopicArea.aspx?id=38&TopicArea=Oral+Health>

⁸¹ U.S. Department of Health and Human Services, *Healthy People 2020 Objectives* available at <http://www.healthypeople.gov/2010/hp2020/Objectives/TopicArea.aspx?id=46&TopicArea=Substance+Abuse>

⁸² Pennsylvania Department of Health, *2015 State Health Improvement Plan (SHIP)* available at http://www.health.pa.gov/Your-Department-of-Health/Offices%20and%20Bureaus/Health%20Planning/Documents/SHIP/2015-2020_PA_SHIP.pdf

⁸³ Ibid.

Strategy 2: Reduce access to prescription drugs for misuse and abuse.

Tactic 1. Develop and maintain prescribing guidelines for prescription opioids.⁸⁴

Tactic 2. Encourage prescribers to access and use the soon-to-be-released prescription drug monitoring program to increase the quality of patient care and evaluate the potential for abuse and make informed treatment decisions.

TOBACCO USE

SMART Objective: Increase smoking cessation among women (ages 18-49) during their pregnancy from 11.3% to 30.0% by July 2019.⁸⁵

Strategy 1: Develop and implement a communication campaign targeting women ages 18-44 and expectant mothers to utilize the Pennsylvania Quitline.

Tactic 1. Develop and implement communication message(s) driving target population to the Pennsylvania Quitline.

Strategy 2: Collaborate with health care providers and health systems to increase referrals to the Pennsylvania Quitline for women ages 18-44.

Tactic 1. Increase utilization of e-referral system among health care providers.

Tactic 2. Expand and enhance e-referral in health care systems to target women of childbearing years and pregnant women.

Tactic 3. Increase enrollment rate of e-referrals to participation in Quitline services.

ADDITIONAL OPPORTUNITIES UNDER HIP

Develop a state population health dashboard: In the past, population health data has been reported, stored, and accessed in disparate data sets. Pennsylvania stakeholders need a better method to study health outcomes over time. Pennsylvania will develop a dashboard to track population health outcomes and progress toward meeting proposed objectives. The dashboard will first focus on the five health priorities outlined above. Pennsylvania will then monitor progress toward strategies and tactics included in the State Health Improvement Plan (SHIP). This will allow for easier access to data and a more uniform presentation to Pennsylvania stakeholders which is critical for allowing stakeholders to manage health of the populations they serve.

Integrate population health outcomes with value-based payment methodologies: Under the current fee-for-service environment, health care providers receive no financial benefit for spending time to connect patients to critical social services. This can dissuade providers from assisting patients

⁸⁴ Ibid.

⁸⁵ U.S. Department of Health and Human Services, *Healthy People 2020 Objectives* available at <http://www.healthypeople.gov/2010/hp2020/Objectives/TopicArea.aspx?id=47&TopicArea=Tobacco+Use>

with non-medical needs, even if addressing these needs could improve overall health. In order to effectively integrate social services with health care, providers must receive appropriate payment incentives that encourage or facilitate a connection between sectors.

In December 2015, Pennsylvania was selected for the National Governors Association (NGA) technical assistance program for Population Health and Delivery System Reform. Pennsylvania was one of only three states selected. The goal for this technical assistance was to learn from peer states and NGA staff about best practices for integrating of population health in larger health care delivery system transformation efforts, with an emphasis on aligning population health outcomes and value-based payment methodologies. A half-day meeting was held February 17, 2016, with key thought leaders in Pennsylvania to discuss: 1) data strategies to align local and state efforts to target geographic areas and resources; 2) strategic deployment of resources; and 3) sustainability of initiatives using existing funding sources. As Pennsylvania moves into the HIP implementation phase, the commonwealth will continue to work with payers and providers to understand which payment option(s) will work best to increase motivation in order to meaningfully integrate population health with value-based payment methodologies.

Promote the tenets of Public Health 3.0 across the commonwealth: On April 4, 2016, Pennsylvania Health Secretary, Dr. Karen Murphy, joined Acting U.S. Assistant Secretary for Health, Karen DeSalvo, and Director of the Allegheny Health Department, Dr. Karen Hacker for a day-long conference on “Public Health 3.0,” aimed at building innovative partnerships to improve health care for all Pennsylvanians. Public Health 3.0 is a movement in public health that emphasizes cross-sectoral environmental, policy and systems-level actions that directly affect the social determinants of health. The event, which took place on the first day of National Public Health Week, spotlighted the ways public health advocates are working across sectors to build partnerships with a common goal of improving health outcomes.

The conference brought together representatives from a variety of sectors, including federal, state and local public health officials, business leaders, nonprofit and urban planning organizations. Sessions focused on enhanced leadership and workforce skills, cross-sector partnerships, accreditation and infrastructure, data and analytics, and funding. Building off the momentum of the event, the commonwealth will be working with HHS’ regional office in Philadelphia to hold similar regional forums throughout Pennsylvania over the next year.

Integrate State Health Improvement Plan (SHIP) and Health Innovation in Pennsylvania (HIP) priorities: In the past, data has been collected and reported based on specific projects or programs within DOH. Through the HIP planning process, Pennsylvania has begun to make important linkages between reports and data sources to foster collaboration. One such link is the direct link between the SHIP and HIP plans. The five health priorities defined in the HIP plan were selected after researching the SHIP and other population health plans and statistics. Pennsylvania anticipates that close collaboration between the two efforts during implementation will lead to:

- Better linkages on population health outcomes to value-based payment methodologies
- Ongoing support to further support how best to deploy strategic resources (including funding, staff time, and organizational leads)
- Best methods to integrate data collected at the local and state levels
- Sustainable funding across population health priority areas

In addition to the priorities outlined above, Pennsylvania will be further exploring the following opportunities:

- Expanding access to wellness and prevention services through tele-health applications
- Supporting community collaborative efforts around regional community health needs assessments
- Promoting the use and expansion of community health workers (CHWs)
- Reviewing Pennsylvania's Clean Indoor Act to ensure the commonwealth is meeting national standards
- Utilizing predictive analytics to target population health needs and resources
- Developing an internal and external crosswalk to connect DOH resources and initiatives with those taking place locally and regionally
- Expanding health literacy for health care utilization and prevention and wellness services

The strategies, tactics and metrics to support the population health priority areas are summarized below in Table 7.4.

Table 7.4 Population Health Priorities⁸⁶

Priority Area	Level of Impact	Proposed Tactics	Proposed Metric
Obesity			
	Community-Wide	Work with licensed early care and education centers to implement or improve policies to support healthy environments	Number of licensed centers to implement or improve policies
	Community-Wide	Work with school districts to implement comprehensive school physical activity programs	Number of school districts with comprehensive programs
	Community-Wide	Develop and distribute evidence-based practices for:	Number of schools that revise their school wellness policies;
		Strengthening school wellness	Number of comprehensive school wellness policies
		Provision of nutrition education through school gardens	Number of school districts with school gardens
		Promotion of Safe Routes to School	Number of school districts implementing Safe Routes to School
	Community-Wide	Connect residents with physical activity resources, such as the Get Outdoors PA and Explore PA Local Parks programs	Number of new and returning users to website
	Community-Wide	Provide resources for design and integration of active, safe, walkable/bike-friendly communities	Number of walkable, bike- friendly communities

⁸⁶ U.S. Census Bureau. (2015). *Pennsylvania QuickFacts*. Retrieved December 7, 2015, available at <http://quickfacts.census.gov/qfd/states/42000.html>; Centers for Medicare & Medicaid Services (CMS), *Geographic Variation Public Use File* [Data set] available https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Medicare-Geographic-Variation/GV_PUF.html; Center for Medicare and Medicaid Services, *Health Expenditures by State of Residence, 1991-2009* [Data set]; Pennsylvania Department of Human Services. (2015). *Fiscal Year 2015-16 Executive Budget* available at <http://www.budget.pa.gov/PublicationsAndReports/CommonwealthBudget/Pages/PastBudgets2015-16To2006-07.aspx#.VzHffHr1Klo>; Medicaid and CHIP Payment and Access Commission (MACPAC), *MACStats: Medicaid and CHIP Program Statistics*, June 2014 available at <https://www.macpac.gov/wp-content/uploads/2015/03/June-2014-MACStats.pdf>

Priority Area	Level of Impact	Proposed Tactics	Proposed Metric
	Community-Wide	Examine the built environment and encourage local communities to promote healthy transportation alternatives...	Number of walkable, bike friendly communities
Diabetes			
	Community-Wide	Promote the Healthy Corner Store Initiative	Number of participating corners stores/bodegas
	Clinical Care	Promote diabetes prevention programming	Percent of referrals to the diabetes prevention program
Oral Health			
	Community-Wide	Promote evidence-based benefits of community water fluoridation	Number of counties who provide fluoridated water
	Patient-Centered	Collaborate with providers who provide children with oral health assessments at their well child visits	Percent of providers who provide oral health assessments at well child visits
	Patient-Centered	Promote referrals from family medicine physicians and pediatric providers to dentists for the provision of dental sealant applications in children ages six to twelve years	Percent of children (ages 6-12) who received dental sealant applications
Substance use			
	Clinical	Identify at-risk population for opioid misuse, abuse, and overdose	Percent of population at-risk
	Patient-Centered	Identify treatment options available for at-risk populations	Number of informational resources available
	Clinical	Develop and maintain prescribing guidelines for prescription opioids	Number of guidelines developed
	Clinical	Encourage providers to access and use the PDMP system	Number of dispensers and prescribers utilizing the PDMP system
Tobacco Use			
	Community-Wide	Develop and implement communication campaign targeting women ages 18-44	Reach of media campaign

Priority Area	Level of Impact	Proposed Tactics	Proposed Metric
		and pregnant women to quit smoking	
	Clinical	Increase utilization of e-referral system among health care providers	Number of patients referred to PA Quitline
	Community-wide	Expand and enhance e-referral in health care systems to target women of childbearing years and pregnant women	Percent of conversion (enrollment) rate; and rate of people who have sustained quitting at 7 months
	Clinical	Increase enrollment rate of e-referrals for participation in Quitline services	Percent of conversion (enrollment) rate; and rate of people who have sustained quitting at 7 months
Other			
	Community-wide	Develop a state population health metric dashboard	Dashboard developed
	Community-wide	Integrate population health outcomes with value-based payment methodologies	Pilot payment methodologies that incent population health
	Community-wide	Integrate the SHIP and HIP plan priorities	Strategies outlined on strategic deployment of resources



Chapter 8: Health Care Delivery System Transformation Plan

8.1 Pennsylvania’s Approach to System Transformation

Health care delivery system transformation in the commonwealth will center on improving access to care and population health through several enabling initiatives including the utilization of tele-health services, meaningful data collection and analysis, and building workforce capacity. These innovations and initiatives are not necessarily new, but the challenges must be approached in a new way in order to achieve meaningful and sustainable changes in health care delivery. Together, these initiatives serve as critical enablers for the HIP primary strategies of accelerating the transition to paying for value, achieving price and quality transparency, and redesigning rural health.

Pennsylvania stakeholders agree that care collaboration and patient engagement are critical to health care delivery system transformation. Advancing all these will require improving technology, driving accountability, and building awareness of the full care team to deliver high-performing, patient-centric care. The commonwealth will lead by adjusting regulatory structures to incent and support the exploration of delivery system transformation and the payment model reforms required to drive change.

8.2 Strategies

Health care delivery system transformation in Pennsylvania centers on the use and expansion of health information technology including tele-health, workforce education and training, and data collection and analytics, which are central to both implementation and evaluation of the HIP plan initiatives. Tele-health and workforce education and training are discussed in detail in Chapter 10. After meeting with stakeholders, the following data strategies were identified as valuable components to health care delivery system transformation in Pennsylvania:

- Utilization of federal data sources to identify areas of inadequate access and/or poor outcomes in order to strategically deploy resources
- Identification and alignment of local and state-collected data
- Definition and alignment on common metrics for evaluation and benchmarking
- Dissemination of data and analysis to stakeholders
- Tracking statistics for professions (e.g. physicians, nurse practitioners, other advanced practice nurses, and physician assistants) that are critical to the health care workforce
- Application of predictive analytics to determine future health care workforce needs to meet the needs of the populations served across the commonwealth

- Ongoing evaluation and quality improvement of transformation efforts including validity and reliability testing of data sources
- Interpretation of state regulations on confidentiality in order to provide guidance about what data can be shared and by what means

8.3 Current Initiatives

Pennsylvania has many initiatives in progress to achieve health care delivery system transformation. These strategies include streamlined data collection processes and health professional education and training to serve the population health needs of Pennsylvanians.

DATA ASSESSMENT—PENNSYLVANIA DEPARTMENT OF HEALTH

The Department of Health’s Bureau of Informatics and Information Technology (BIIT) has begun an assessment of the data assets within the Department. Examples of data assets include the Bureau of Epidemiology’s sentinel surveillance, Bureau of Facility Licensure and Certification’s hospital survey, and BIIT’s Behavioral Risk Factor Surveillance System (BRFSS). This assessment was compiled within a catalog to facilitate the best possible use of the department’s data and provide capacity for processing and performing analysis. This catalog will be crucial in planning for, implementing, and evaluating the various HIP strategies. Likewise, this resource will help further the alignment of Community Health Needs Assessments (CHNAs) that are happening in the South Central and South Eastern regions of the Commonwealth in collaboration with the Hospital and Healthsystem Association of Pennsylvania.

PUBLIC HEALTH GATEWAY—PENNSYLVANIA EHEALTH PARTNERSHIP AUTHORITY & PENNSYLVANIA DEPARTMENT OF HUMAN SERVICES

In Pennsylvania, several state agencies administer public health programs, all of which independently collect, store, and analyze health-related data. These distinct programs require health care providers to submit data to multiple agencies through multiple avenues. Additionally, these platforms usually require different passwords, credentials, and log-ins making them burdensome and time-consuming. The PA eHealth Partnership Authority, slated to begin operating under DHS as of July 1, 2016, is implementing the Pennsylvania Patient & Provider Network (P3N) to enable health information exchange by connecting health care providers to regional health information organizations. A component of the P3N, the Public Health Gateway (PHG), is the state’s streamlined, uniform way for providers and regional health information organizations to submit reportable public health data to state agencies. The PHG will provide a single point of entry for electronic lab reporting, syndromic (disease) surveillance, cancer reporting, immunization registry, and clinical quality measures. This initiative will not only save money by pooling resources to collect, store, and analyze reportable health information, but may also increase productivity and allow for more effective action in response to a disease outbreak.

ALIGNMENT OF COMMUNITY HEALTH NEEDS ASSESSMENTS—HOSPITAL AND HEALTHSYSTEM ASSOCIATION OF PENNSYLVANIA (HAP)

DOH supports and participates in current initiatives to leverage community health needs assessments (CHNAs) to develop coordinated community health strategies in both the South Central and South East regions of the commonwealth.

In Southeast Pennsylvania, the Collaborative Opportunities to Advance Community Health (COACH) group, led by HAP and the Health Care Improvement Foundations engages hospitals and stakeholders in developing coordinated approaches to address key community health needs. COACH has agreed to prioritize mental health and chronic disease prevention (i.e., obesity, nutrition, diabetes, and heart health). The hospitals will next reconvene to review best practices to identify possible implementation strategies and discuss specific next steps to address the identified key health needs. Likewise, COACH will focus on alignment of common metrics to establish a baseline and facilitate assessment of their communities.

DOH will continue to support this integration and additional collaborations among community organizations to ensure population health needs are being met with the best utilization of resources.

PRESCRIPTION DRUG MONITORING PROGRAM—PENNSYLVANIA DEPARTMENT OF HEALTH

Pennsylvania recognizes the importance of providing health care professionals with the appropriate tools to diagnose addiction and refer patients to treatment in order to help them better manage their chronic disease and to decrease overall substance use associated mortality rates. For this reason, DOH is currently implementing a comprehensive prescription drug monitoring program (PDMP) that allows physicians and pharmacists to identify patients at risk for addiction. In conjunction with system rollout, the commonwealth is launching a comprehensive educational program to inform physicians and their delegates how to use the program, how to integrate the PDMP into clinical workflow, and how to facilitate referral to treatment. This initiative will give providers important data to support or refute clinical intuition and will catalyze coordination among physical health and mental health providers regarding substance use treatment.

SUBSTANCE USE TRAINING FOR PROVIDERS

Led by the Pennsylvania Physician General, Dr. Rachel Levine, DOH and the Department of Drug and Alcohol Programs are working to enable the current and future health care workforce to recognize the signs of addiction and link patients with appropriate treatment, when needed. This effort includes the developing of substance use continuing medical education (CME) for current providers and prescribing guidelines for different medical indications including chronic, non-cancer pain, geriatrics, emergency care, dental issues, sports medicine concerns, and obstetrics and gynecology conditions. Additionally, the commonwealth is participating in multiple programs to support these efforts. For example:

- In collaboration with the Substance Abuse and Mental Health Services Administration (SAMHSA), the commonwealth has convened medical schools to design curricular change in order to produce health care providers in Pennsylvania who are ready to combat the heroin and opioid epidemic.

- DHS, in collaboration and coordination with DOH and the Department of Drug and Alcohol Programs has developed and application and conducted a solicitation for Opioid Use Disorder Centers of Excellence (CoE). The CoEs are intended to increase the capacity to serve and improve the quality of services provided to individuals with opioid-related substance use disorder (SUD). The CoEs will serve as hubs to coordinate and improve physical and behavioral health care and the use of evidence-based medications and treatments for over 11,250 individuals with SUD. Each successful applicant will receive funding to perform the following requirements:
 - Deploying a community-based care management team
 - Tracking and reporting aggregate outcomes
 - Meeting defined referral standards for drug and alcohol as well as mental health counseling
 - Reporting on standard quality outcomes
 - Participating in a learning network

- The Commonwealth Medical College anticipates offering a certificate training program in behavioral health (mental health and substance abuse) to primary care providers, to augment their ability to deal with problems including mild to moderate mental health disorders, substance abuse screening and management, and suicide prevention.

HEALTH PROFESSIONS DEVELOPMENT—PENNSYLVANIA DEPARTMENT OF HEALTH

The Primary Health Practitioners Program, led by The Division of Health Professions Development (DHPD) within the Bureau of Health Planning in DOH, works to improve primary care service delivery and the distribution of the health care workforce in Pennsylvania to meet the needs of medically underserved populations through the Primary Health Practitioner Program. This program includes the following initiatives:

- Loan Repayment Program that encourages primary care providers and dentists to practice in Health Professional Shortage Areas (HPSAs)
- J-1 Visa Waiver Program that may waive exchange visitor visa requirements for an international medical graduate completing primary care training in the United States if he/she agrees to practice in an HPSA for a minimum of three years
- National Interest Waiver Program extends permanent residency status to those committing to an additional two-year commitment after completion of a J-1 commitment
- The National Health Service Corps works to improve recruitment and retention of practitioners through loan repayment and scholarships

8.4 Future Direction

In addition to building upon the current strategies, the commonwealth has begun exploring the future for health care delivery system transformation initiatives and strategies to use the health care workforce to deliver and coordinate care more efficiently in underserved areas.

To address coordination and patient-focused care, Pennsylvania applied for received workforce technical assistance from the National Governors Association (NGA) and National Conference of State Legislatures (NCSL). Through this partnership, the commonwealth convened with stakeholders in March 2016 to discuss and strategize tele-health solutions, community health workers, and behavioral and mental health integration with primary care.

INTEGRATION OF BEHAVIORAL AND MENTAL HEALTH WITH PRIMARY CARE

During discussions of behavioral and mental health integration with primary care, stakeholders agreed to a shared vision for success, including:

- Widespread adoption of integration
- Enhanced capacity of primary care to provide high-quality behavioral health
- Expanded workforce to meet the needs of the populations served
- Flexible payment models that incentivize coordinated care
- Geographic parity
- Reduction in high utilization of health services due to meeting the needs of this population through care coordination
- Eliminated the stigma of seeking behavioral and mental health care by treating these services the same as physical health services

In particular, the commonwealth has numerous ongoing programs to bring primary care and behavioral health providers together to improve patient care:

- Care of Mental, Physical and Substance Use Syndromes (COMPASS) is a collaborative care management model designed to improve the care of patients with both physical and mental health conditions. It is currently being led by the Institute of Clinical Systems Improvement and including the Pittsburgh Regional Health Initiative in partnership with a consortium of eight implementation partners, through a three-year cooperative agreement with the Centers for Medicare and Medicaid Innovation.
- DHS has several initiatives in place to improve the integration and coordination of care for Medicaid beneficiaries as follows:
 - Beginning in January 2016, DHS implemented a new value-based purchasing program called the Integrated Care Program (ICP) for the physical health (PH) and behavioral health (BH) managed care organizations (MCOs). The ICP requires specific BH-PH MCO collaboration focusing on integration of care for those individuals with Serious Persistent Mental Illness (SPMI) and Substance Use Disorder. This program builds off the success of the Rethinking Care Program pilot initiative in the Southeast and Southwestern regions of Pennsylvania implemented through work with the Centers for Health Care

Strategies. The BH and PH-MCOs will be measured on process activities and performance measures to include:

- Member stratification
- Development of joint BH-PH integrated care plans
- Hospital Notification within 1-business day of learning of admission
- Social Determinants Reporting (BH-MCOs responsibility)
- Initiation and Engagement of Alcohol and Other Drug Dependence Treatment
- Adherence to Antipsychotic Medication for individuals with Schizophrenia
- Combined BH-PH 30-Day inpatient readmission rate for individuals with SPMI
- Combined BH-PH Inpatient Admission Utilization for individuals with SPMI

DHS has also been focused on removing other barriers to promote the co-location of providers. DHS has recently published a statement of policy to clarify current regulatory prohibitions around the sharing of space and will be revising long-standing regulations to remove the prohibition over the next year in an effort to improve the coordination and integration of care for Medicaid beneficiaries with multiple complex conditions.

- DHS and the Department of Aging are in the process of implementing the governor's new initiative, Community HealthChoices (CHC), that will use managed care organizations to coordinate physical health care and long-term services and supports (LTSS) for older persons, persons with physical disabilities, and Pennsylvanians who are dually eligible for Medicare and Medicaid (dual eligible). While, the way individuals access behavioral health services will not change and will continue to be offered through the existing network of behavioral health managed care organizations (BH-MCOs), the new CHC-MCOs and BH-MCOs will work together to ensure everyone gets the coordinated services they need. CHC will go live in the Southwest on July 1, 2017.
- On October 22, 2015, DHS was awarded a planning grant for Certified Community Behavioral Health Clinics (CCBHC) by the Substance Abuse and Mental Health Services Administration (SAMHSA). CCBHCs will allow individuals to access a wide array of services at one location and remove the barriers that too often exist across physical and behavioral health systems. For the adults and children with serious mental illnesses and substance use disorders that will primarily be served by these community clinics, the increase in coordination and individualized care has the potential to greatly improve the quality of life for those served and loved ones. The planning grant is the first phase of a two-phase process. When the planning phase ends in October 2016, awardees will have an opportunity to apply to participate in a two-year demonstration program that will begin January 2017.
- Finally, the aforementioned Centers of Excellence will focus on coordination of physical and behavioral care and warm handoffs to ensure individuals remain in treatment for opioid-related SUD

Future strategies include strategic planning, building workforce capacity (discussed in Chapter 10: Workforce Development), legislation and regulation, building infrastructure capacity, evaluation and quality improvement, payment methodologies and regulations, and patient and community engagement. Pennsylvania will continue to serve as a convener of stakeholders around this topic as the commonwealth moves towards a value-based, patient-centered health care system.

EXPANDING TELE-HEALTH CAPACITY

By pursuing tele-health work, Pennsylvania has the potential to help leverage a poorly distributed provider workforce, thereby increasing access to services and improving population health. In partnership with the NGA and the NCSL, DOH brought together tele-health experts and stakeholders in March 2016 to discuss the vision of tele-health for Pennsylvania. Participants shared support for development of tele-health regulations that emphasize patient safety, strategies to expand services in rural areas, payment changes to incentivize use of tele-health services, and expansion of infrastructure to facilitate robust connectivity and interoperability. Additionally, Pennsylvania will reconvene the Tele-health Advisory Committee originally established in 2014 to provide oversight and accountability for implementation of initiatives and recommendations. Pennsylvania stakeholders' input will shape approaches to mitigate tele-health barriers (infrastructure issues, hospital credentialing, patient education, and cost), identify and implement best practices, and further refine strategies for reimbursement parity, infrastructure development, governance, and patient experience.

BUILDING A MORE ROBUST HEALTH CARE WORKFORCE

Building and maintaining a competent and robust health care workforce is critical to health care delivery system transformation. Pennsylvania will evaluate additional workforce classifications including, but not limited to, expanded function dental assistants, and community health workers in order to meet the health needs of its residents. Additionally, Pennsylvania will ensure that the established and future workforce is trained in competencies to deliver care in a changing delivery system environment. These educational changes will include training in payment structure changes (movement away from fee-for-service), care collaboration, and population health. By changing the education-to-practice pipeline, providers will be better equipped to work with each other and across disciplines to improve the health and care experience of patients.

To meet the oral health needs of Pennsylvanians, DOH plans to explore the Department's health care facility authority regarding the expansion of oral health services to underserved areas, particularly rural areas, via public health dental hygiene practitioners and expanded functionality of dental assistants. Additional information about building workforce capacity can be found in Chapter 10.



Chapter 9: Health Information Technology Plan

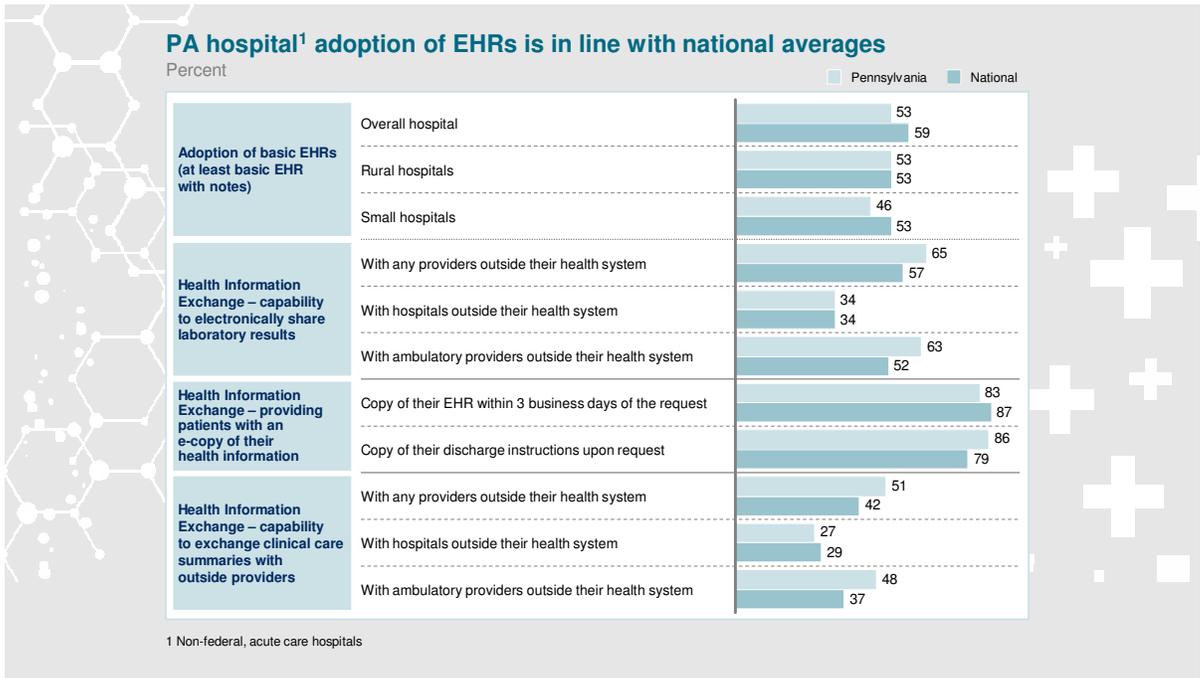
9.1 Overview

Pennsylvania has long invested significant state and federal resources in building health information technology (HIT) functionality and capacity across the commonwealth. Two independent state agencies, the Pennsylvania Health Care Cost Containment Council (PHC4) and the Pennsylvania eHealth Partnership Authority (eHealth Authority), were established in 1986 and 2012, respectively, to support data collection, analysis, and data transport and sharing among commonwealth stakeholders. See 9.2.1 HIT Governance for more details about each agency.

Across Pennsylvania, substantial infrastructure exists to support a highly functional health information exchange, and many hospitals and providers are utilizing electronic health records (EHRs) systems. According to the U.S. Department of Health and Human Services Office of the National Coordinator for Health IT (ONC), Pennsylvania's adoption of EHRs among hospitals and providers has been comparable to peers nationwide. Fifty-three percent (53%) of hospitals (including rural) have adopted basic EHRs. However, only 42% of providers have adopted at least basic EHRs.⁸⁷ Figures 9.1 and 9.2 provide further detail on EHR adoption in Pennsylvania.

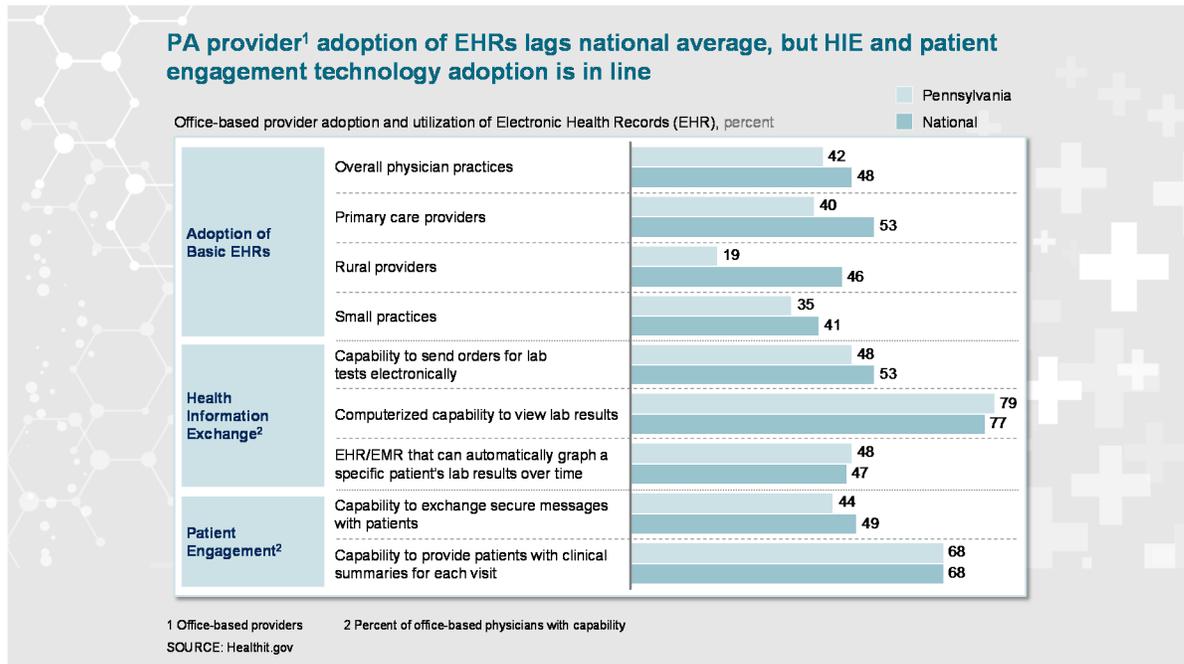
⁸⁷ U.S. Department of Health and Human Services, Office of the National Coordinator for Health IT, *Health IT State Summary—Pennsylvania* available at <http://dashboard.healthit.gov/quickstats/widget/state-summaries/PA.pdf>

Figure 9.1 Hospital Adoption of EHRs in Pennsylvania⁸⁸



⁸⁸ U.S. Department of Health and Human Services, Office of the National Coordinator for Health IT, *Health IT State Summary—Pennsylvania* available at <http://dashboard.healthit.gov/quickstats/widget/state-summaries/PA.pdf>

Figure 9.2 Provider Adoption of EHRs in Pennsylvania⁸⁹



While Pennsylvania ranks similarly to national statistics on the adoption of EHRs by physicians and health systems, adoption is not universal. Rural hospitals, long-term care providers, behavioral health providers, oral health providers, and social services agencies lag behind their physician and health system counterparts in EHR adoption, because some of these institutions were not given the same incentives through federal funding by the HITECH Act. Before integration and interoperability of clinical information systems can occur, adoption must be more widespread. Innovative funding and infrastructure support options may be necessary in order to see forward progress. To this end, Department of Human Services (DHS) has offered an onboarding incentive program to home health and nursing facility providers in 2016.

Pennsylvania's path forward for HIT hinges on the following objectives:

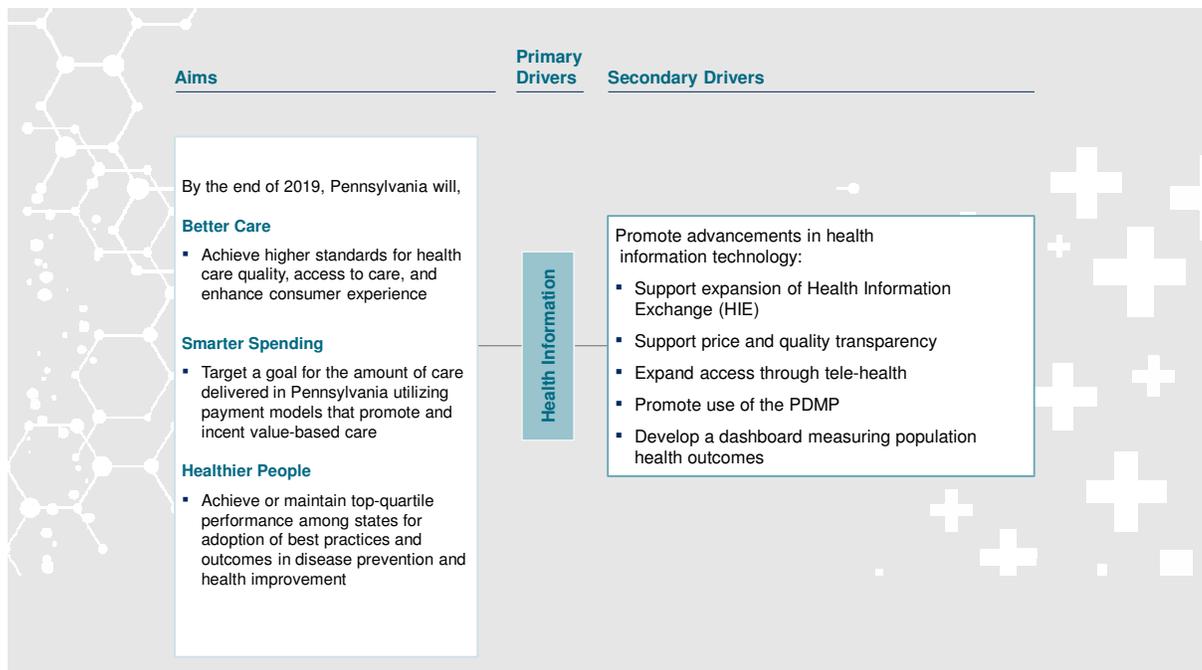
- **Expand the statewide health information exchange (HIE).** Support movement of robust regional Health Information Organizations (HIOs) to connect to the statewide exchange.
- **Support price and quality transparency.** Explore options for approach to claims and clinical data aggregation.
- **Enhance the use of tele-health technologies.** Leverage a shrinking and poorly distributed health care workforce, while increasing access to needed services; develop and release regulations regarding the use of tele-health technologies, in concert with the Tele-Health Advisory Committee that will be reconvened.

⁸⁹ Ibid.

- **Support the use of the prescription drug monitoring program (PDMP).** Create a PDMP tool that will allow physicians and pharmacists to access controlled substances prescription information that will help patients in need of addiction treatment get referred.
- **Develop a population health dashboard displaying status updates on health priorities.** Streamline and standardize data collection, analysis, and evaluation through the use of a state population health dashboard. This dashboard will ensure access to data and information that will allow providers to assume risk and manage population health.

Pennsylvania’s plan for health innovation includes employing HIT as an enabler of the primary priority strategies: Value-based Payment, Health Care Delivery System Transformation, Population Health, and Price and Quality Transparency. Figure 9.3 below depicts the commonwealth’s driver diagram outlining details of the commonwealth’s approach to HIT.

Figure 9.3 Drivers for Health Innovation in Pennsylvania through HIT



9.2 Health IT Domains

9.2.1 HIT GOVERNANCE

ORGANIZATIONAL STRUCTURE AND DECISION-MAKING AUTHORITY RELATED TO HIT

The hub for most of Pennsylvania’s HIT activity is the legislatively mandated eHealth Authority, a statutorily stakeholder-driven, public-private, state agency established by Act 121 of 2012. Recently,

Governor Wolf proposed a measure within his 2016-2017 budget plan that would move the eHealth Authority to operate under the Department of Human Services (DHS) effective July 1, 2016. While specifics on this move have not yet been released, the role of the eHealth Authority would still remain to improve health care delivery and health care outcomes by enabling the secure exchange of electronic health information.

Another important organization is the Pennsylvania Health Care Cost Containment Council (PHC4). The PHC4 is an independent state agency formed in 1986 in order to address rapidly growing health care costs. It collects data, including over 4.5 million inpatient hospital discharge and ambulatory / outpatient procedure records annually, from hospitals and freestanding ambulatory surgical centers across Pennsylvania to produce a variety of publicly available reports and data sets. Key PHC4 leaders are members of HIP work groups, including Price and Quality Transparency and Health Information Technology.

HIT ORGANIZATIONAL CAPACITY

Pennsylvania's HIT approach focuses on specific use cases to support the other HIP plan priority strategies and enablers, including value-based payment, price and quality transparency, population health, and health care delivery system transformation. Staffing, project management, and governance will vary by the specific use case. For example, population health and workforce development will be managed by DOH, as it is an extension of services already offered, while price and quality transparency is led by the Pennsylvania Insurance Department.

LEVERAGING EXISTING ASSETS TO ALIGN WITH FEDERALLY-FUNDED PROGRAMS AND STATE ENTERPRISE IT SYSTEMS

The commonwealth aims to identify where demand for HIT and/or HIE expansion exists, assess the ability of current initiatives to meet that demand, and engage stakeholders in designing possible solutions to expand the use and adoption of HIT. Utilizing existing HIT programs that are serving the dual objectives of improving quality and lowering costs is central to the Pennsylvania plan. Pennsylvania's HIT infrastructure includes capacity for data collection and data sharing through existing modalities.

When it was created in 1986, the original intent of PHC4 was to restrain rapidly rising health care costs by providing medical procedure charges and treatment information for consumers. Pennsylvania will utilize PHC4's periodic updates on hospitalization rates, readmissions, and Medicare payments to better define information about the burden of disease within the commonwealth and insights as to where prevention efforts can be directed. Pennsylvania will look into the feasibility of enabling PHC4 to collect additional hospital and long-term care facility data to support population health outcomes measurement.

Currently two health information organizations (HIOs) are connected to the statewide HIE. Once the HIE is fully operational, there are plans for both direct (a form of secure e-mail that provides the standards and services necessary to securely push content from a sender to a receiver) and query (message requesting information on a patient and receiving information in response) capabilities. There are currently no known behavioral health providers or substance use providers exchanging information through the HIE. However, two behavioral health HIOs are exchanging information among providers within their networks.

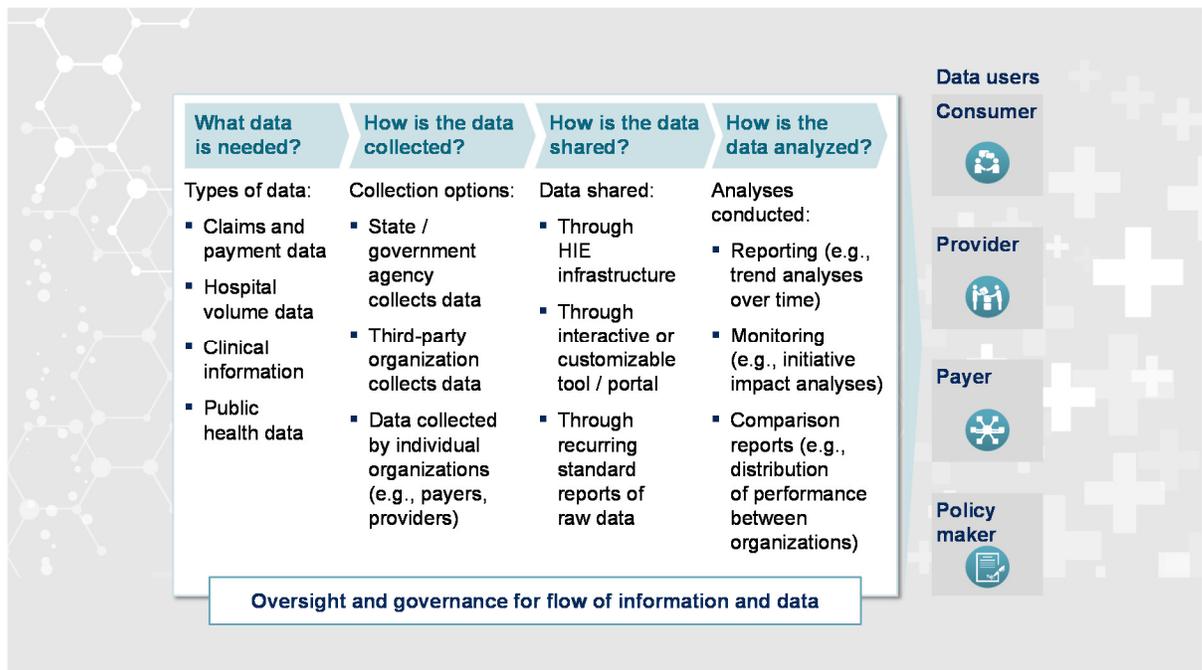
Public health reporting does not currently occur through the HIE. Several state agencies share responsibility for providing various public health programs. Currently, each agency independently collects, stores, and analyzes health-related data, but the ability to communicate with health care providers and to each other is limited. However, through the planned Public Health Gateway, the Department anticipates a direct link between hospital EHRs and state agencies, including DOH, which will allow a secure interface for the submission of key public health data such as immunizations, syndromic surveillance, and laboratory test results.

Currently, Pennsylvania has a prescription drug monitoring program (PDMP) housed in the Office of the Attorney General that collects Schedule II drug information and has primarily been used for law enforcement purposes. A new PDMP is under development by DOH that will expand the schedules of drugs that are tracked to II through IV and will provide qualified prescribers and dispensers access to their patients' prescription medication history through a secure electronic system. This will allow medical professionals to evaluate potential for abuse and make informed treatment and referral decisions. The PDMP will further the quality of patient care by allowing patients to obtain a record of their prescriptions to aid in making educated health care decisions.

PROCESSES AND MECHANISMS FOR DATA COLLECTION

Figure 9.4 depicts the data discussions currently underway for Pennsylvania's planned efforts, including data collection, sharing, and analysis. Stakeholders are still in the process of determining what data needs to be collected to support HIP implementation efforts and the approach to data collection will be refined as the commonwealth moves toward HIP implementation.

Figure 9.4 Anticipated Flow of Information and Data for Various User Groups

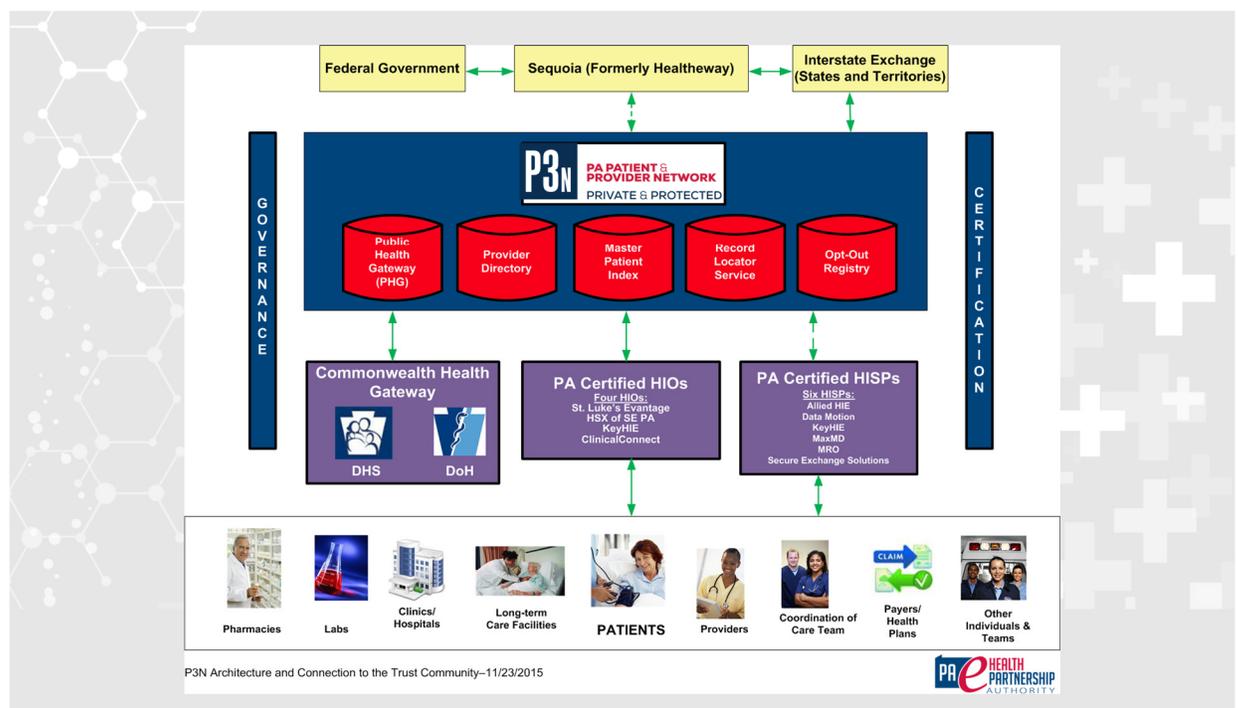


Despite gains in interoperability, participation in the HIE is still limited. Pennsylvania is committed to establishing a statewide HIE as a standard of care to bring real-time, comprehensive clinical

information to providers at the right time and in the right format in order to improve the effectiveness and efficiency of patient care. Currently, two types of health exchanges exist in Pennsylvania: the state exchange entitled Pennsylvania Patient & Provider Network (P3N), which is being developed and implemented by the eHealth Authority; and seven regional HIOs, which are hospital-based networks sharing information within their regions.

This work on P3N directly reflects the primary mission of the eHealth Authority, which is to improve health care through secure electronic health information exchange among health care organizations. The eHealth Authority's P3N statewide exchange is a federated entity that does not store data but serves to connect its disparate components. Currently, two HIOs are fully connected to P3N; three are completing onboarding, and two more are likely to be connected by the end of the year. The HIP plan will support the further expansion and promotion

Figure 9.5 Overview of the eHealth Authority's P3N Health Exchange



Building on annual surveys completed since 2011, the eHealth Authority conducted research with seven HIOs operating within Pennsylvania in 2015. The report found the following results:

- HIOs employ a diverse set of technology models and vendors⁹⁰
- Some organizations have identified perceived value in electronic HIE. However, measurable return on investment for either the HIOs or their member organizations remains inconclusive

⁹⁰ HealthIT Interoperability, *Changes Loom for Pennsylvania Health Information Exchange* available at <http://healthitinteroperability.com/news/changes-loom-for-pennsylvania-health-information-exchange>

- Discharge summaries remain the only universally enabled / planned function among the survey participants
- Adoption of both push and query for most electronic HIE functions continues among HIOs
- Geographic coverage by HIOs has dramatically shifted to a much more regional focus compared with previous reports. There is very little overlap county-to-county for current participation (only eight counties), and only 20 counties have planned overlapping coverage
- Two of the HIOs are aggregating data from constituents in centralized repositories. The other HIOs surveyed are implementing hybrid models in which some information is aggregated, while other data remains federated in repositories maintained by their members

9.2.2 POLICY

POLICY LEVERS

Pennsylvania maintains the following policy and regulatory levers that are being utilized to enhance HIT across the commonwealth:⁹¹

ECQM REPORTING AND PUBLIC HEALTH SURVEILLANCE

One service offered by the eHealth Authority as part of the P3N is the Public Health Gateway (PHG). This joint effort between the eHealth Authority, DHS, and DOH creates a single point of connection from the private sector to enable submission of key public health reports and data to various state-maintained registries, including the eCQM registry maintained by DHS. Future planned PHG enhancements include enabling bi-directional exchange so the private sector can query for information from the public registries and expansion to include other agencies, such as PHC4, the Department of Corrections, and the Military and Department of Veterans Affairs.

MEDICARE AND MEDICAID EHR INCENTIVE PROGRAM (MEANINGFUL USE)

The state expects to achieve minimum standards in foundational areas of HIT and to develop its own goals for the transformational areas of HIT use. Pennsylvania must have plans for HIT adoption for providers. This will include creating a pathway (and/or a plan) to adoption of certified EHR technology and the ability to exchange data through the commonwealth's HIE. If providers do not currently have this technology, there must be a plan in place to encourage adoption, especially for those providers eligible for the Medicare and Medicaid EHR Incentive Program. The state must participate in all efforts to ensure that all regions have coverage by an HIE. Federal funding for developing HIE infrastructure may be available, per State Medicaid Director letter #11-004, to the extent that allowable costs are properly allocated among payers. Currently there are multiple HIOs and multiple

⁹¹ U.S. Department of Health and Human Services, Office of the National Coordinator for Health IT, *State Health IT Policy Levers Compendium* available at <http://dashboard.healthit.gov/dashboards/state-health-it-policy-levers-compendium.php>

health information services providers (HISPs) offering electronic HIE service to providers in every county in the state.

STATE DESIGNATION OF EXCHANGE ENTITY

On March 18, 2015, the eHealth Authority announced the availability of up to \$11.8 million in onboarding grant funds to help connect hospitals and ambulatory practices to the eHealth Authority's P3N. The P3N enables electronic HIE across the state through the connection of health care providers to HIOs and the connection of HIOs to the P3N. This program is funded in part with implementation advanced planning document (IAPD) funds received from CMS via the Pennsylvania DHS. The grant requires that HIOs not only establish and implement technical interfaces, but also that they provide workflow integration, training, and go-live support. The grant also includes a small amount to assist HIOs in connecting to the P3N. In the future, it may incent specific objectives of the eHealth Authority and Pennsylvania's State Medicaid HIT Plan, such as creation of portals to permit electronic HIE participation by long-term / post-acute care providers who do not have sophisticated EHR systems.

STATE HIE / HISP ACCREDITATION, CERTIFICATION, REGISTRATION, OR QUALIFICATION

The eHealth Authority is the custodian and guardian of the P3N, a combination of governance, certification programs, and technical services to enable interoperability across HIOs and HISPs operating in the commonwealth. Certification is voluntary, but HIOs and HISPs wishing to participate in Pennsylvania's "trust community" (the network that supports health care participants to exchange information within and beyond Pennsylvania's borders) and P3N must achieve certification. Certification is also a pre-condition of most grants provided to the HIOs and HISPs by the eHealth Authority. Certification includes agreement to a common legal framework, attestation (and in some cases evidence) that they have faithfully implemented security and privacy policies, compliance with adopted technical standards, and testing to prove that constituents of the HIO or HISP can, in fact, interoperate with constituents of other trust community HIOs and/or HISPs. All aspects of the certification programs were developed, and are maintained, through consensus-based decisions of the members of the trust community themselves, guided by the eHealth Authority. National-level standards are leveraged wherever possible, and compliance with federal and state law is paramount. Organizations seeking to operate both as HIOs and HISPs must achieve both certifications.

SIM HIT ALIGNMENT WITH OTHER STATE, FEDERAL AND EXTERNAL HIT EFFORTS

The Pennsylvania Department of Human Services (DHS) leads the commonwealth's efforts to help hospitals and health care providers meet Medicaid HIT meaningful use requirements. As of June 2016, Pennsylvania's Medical Assistance HIT initiative issued 11,713 eligible professional and 506 eligible hospital payments, totaling \$375,698,574.⁹²

⁹² Pennsylvania Department of Health Office of Medical Assistance Programs, Internal department data

In 2015, the DHS released the State Medicaid Health Information Technology Plan, which outlines the strategic vision for HIT within DHS for the next five years. The plan outlined several goals:

Increase Quality of Medical Assistance Services – Ensure providers’ access to better, more timely information at the point-of-service to support clinical decisions, increase quality of patient care, and reduce unnecessary costs. DHS seeks to identify coverage and quality to improve efficiency and effectiveness of care and improve health outcomes for the Medical Assistance population. DHS currently uses claims data, managed care organizations (MCOs) quality reporting data, and cost data to monitor and improve its programs. By collecting electronic Clinical Quality Measures (eCQMs) and housing them in a repository that can be linked to other data, DHS will have a more comprehensive picture of its consumers. DHS will also work with PCH4 on sharing the electronic data.

Increase Coordination among DHS Programs and External Stakeholders – Eliminate duplicative services and administrative inefficiencies, and align resources to improve care coordination for consumers. This initiative will be a collaborative effort with the eHealth Authority to improve the flow of data between external stakeholders. Ultimately, Pennsylvania plans on a bidirectional flow of data; not just providers and MCOs pushing data to DHS, but DHS pushing data out to MCOs and providers such as accountable care organizations (ACOs). The bidirectional flow of data will give providers a more complete view of their patients’ care, enabling providers to see the full continuum of services provided. This flow of data to large health systems/ACOs will enable them to manage the health care needs of an attributable population. Furthermore, Pennsylvania plans to leverage HIT and electronic HIE to better coordinate care of vulnerable populations including, but not limited to, children in the commonwealth’s child welfare system, children screened for developmental delays, elderly and disabled individuals receiving home and community based waiver services, and individuals transitioning in and out of the commonwealth’s correctional system.

Increase Awareness – Educate providers and consumers on the benefits of being a Meaningful User of HIT; Educate providers on the changes and the benefits of the program, the importance of beginning to participate by December 31, 2016, and continuing their participation in the incentive program. DHS plans to continue current efforts to educate providers and consumers on the benefits of using EHRs and being Meaningful Users of HIT. Additionally, DHS plans to create a secure patient portal that will allow Medical Assistance (MA) members to view their MA EHR and other health coverage information, and to link that information to the best ways to manage and improve their health conditions.

System Redesign – Keep the Medical Assistance provider incentive repository (MAPIR) and systems infrastructure current to meet evolving program requirements and business needs, including scanning the environment to adopt the data capture and analysis tools necessary to enhance and improve current quality initiatives for both providers and consumers, and to meet the CMS updated requirements. Enhanced HIE will also enable DHS to move towards payment reform and redesign of health care delivery. A guiding principle for DHS Medicaid IT architecture (MITA) to increase awareness, quality, and coordination in public health coverage programs aligns with the broad HIT vision identified above. Keeping the DHS MAPIR system and other infrastructure current to meet evolving program requirements and business needs is essential to achieve their goals. Over the next five years DHS plans to:

- Enhance data capture and analysis capabilities for providers including ACOs, MCOs, and DHS
- Leverage software that supports robust care management

- Develop and implement the capability to push/pull health care information such as claims-based data, eQMs, and care plans across multiple waiver and special needs programs including long-term living services, community-based waivers, child welfare, and early intervention

METHODS TO IMPROVE TRANSPARENCY AND ENCOURAGE INNOVATIVE USES OF DATA

Pennsylvania convened the HIT work group to get input from stakeholders and to explore strategies to enhance the commonwealth's technology and capabilities in order to enable the priority strategies and enablers in the HIP plan.

- For example, Price and Quality Transparency is a priority of the HIP plan. The commonwealth has proposed initiatives to build and develop capabilities to improve price and quality transparency for all data users including consumers, providers, payers, and policy makers. Many of the initiatives are heavily HIT-dependent, such as consumer transparency tools or potentially, an APCD. More details on Pennsylvania's approach to Price and Quality Transparency can be found in Chapter 5.

The commonwealth may play different roles to achieve its transparency objectives. In some cases, the commonwealth may act as a catalyzer of health care change, enabling and supporting transformation of the system. In other cases, the commonwealth may serve as a direct actor, taking actions that improve state-run programs or alter health care for state employees. The state can also play a convener role to help standardize metrics across the commonwealth. As discussed in this plan, the commonwealth will build upon and continue to develop current initiatives and capabilities across Pennsylvania.

In addition to achieving price and quality transparency, the HIT work group focused on enabling and encouraging other innovative uses of data. Specifically, the work group has explored use cases that support payment innovation, population health, and health care delivery transformation. HIT will help enable the critical strategies within each of these areas of focus. For example, provider portals for provider self-evaluation, as well as clinical data entry, will help enable payment innovation initiatives to shift care delivery to value-based payment models. Similarly, the development of consumer tools (e.g., care plan portals and self-monitoring devices) will empower consumers to manage their own health, thereby improving the population health status of the commonwealth. Finally, developing the necessary structural capabilities underlying tele-health services will help improve patient access and support broad health care delivery transformation.

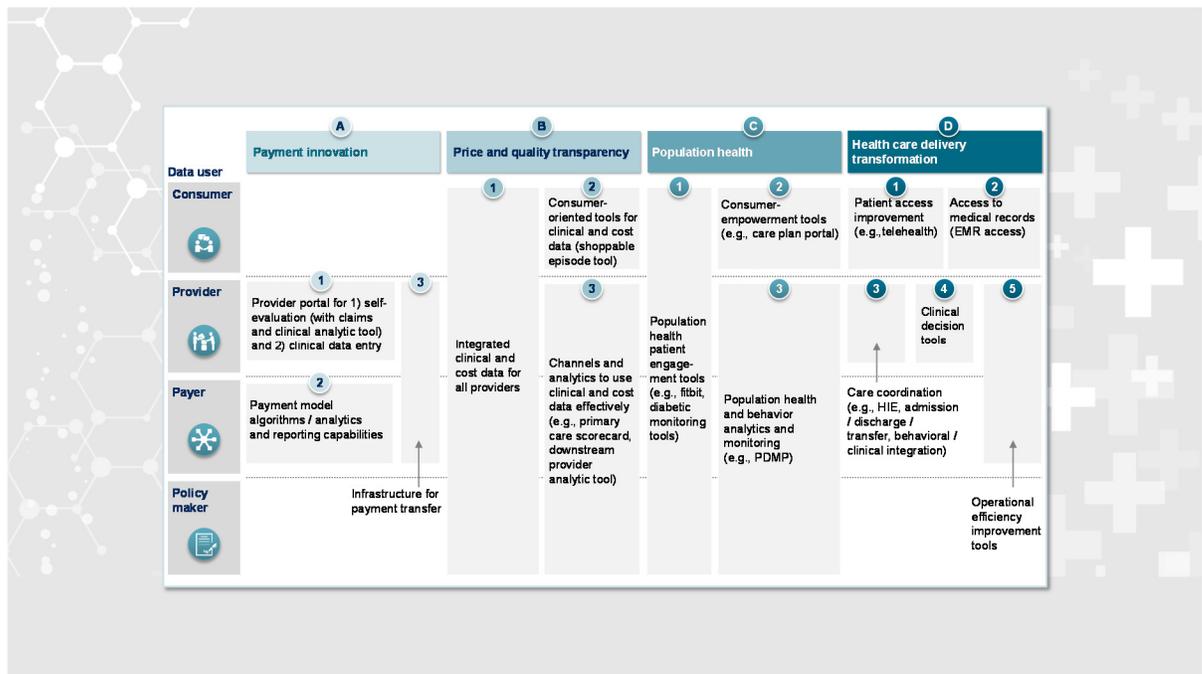
PROMOTION OF PATIENT ENGAGEMENT AND SHARED DECISION-MAKING

Pennsylvania's plan for HIT brings together relevant information from many public and private organizations and supports the overall goal of transforming Pennsylvania's delivery system by integrating service delivery information and data from disparate sources. This integration will serve not only to provide baseline and ongoing information to support value-based purchasing, but to engage health care providers, payers, policy makers, and patients with the tools needed to achieve better health.

MULTI-PAYER STRATEGIES TO ENABLE AND EXPAND THE USE OF HIT

The HIP plan focuses on utilizing multi-payer strategies across the priority strategies and enablers, all enabled by HIT supports. Pennsylvania's payment innovation has highlighted looking into episode-based payments, global budgets for rural hospitals, and defining a percentage for value-based care. In order to achieve these strategies, there will need to be uniform collection of agreed upon metrics to establish a baseline, as well as a method for data collection and data sharing to measure success. Under price and quality transparency, Pennsylvania is focusing on engaging multiple payers to provide consumers with cost and quality data that will allow them to make appropriate decisions about primary care providers. Through population health and health care delivery system transformation strategies, the commonwealth will engage payers to better integrate population health outcomes and value-based payment methodologies and establish improved access to a remote health care workforce through tele-health, respectively. Figure 9.6 below provides more details on each of the areas and engagement with payers, as well as other data users.

Figure 9.6 Health IT Strategies for Each of the Four Use Cases by User Type



9.2.3 INFRASTRUCTURE

ANALYTICAL TOOLS, DATA-DRIVEN, EVIDENCE-BASED APPROACHES, TELE-HEALTH AND REMOTE PATIENT MONITORING

The HIT work group has defined which analytical tools and evidence-based approaches should be utilized to enable HIP plan implementation. Pennsylvania's plan to utilize HIT to enable the other HIP plan priorities is highlighted in Figure 9.7.

Figure 9.7 Health IT Strategies to Enable Use Cases

HIT strategy enables the broader HIP initiative	
Work group	Preliminary vision
Payment	<ul style="list-style-type: none"> ▪ Align on metrics and analytics across payers as a step towards implementing bundled payments ▪ Accelerate moving to advanced primary care models ▪ Develop methodology for multi-payer global budgets for rural hospitals
Price & quality transparency	<ul style="list-style-type: none"> ▪ Design high-level transparency strategy focused on five priorities: <ul style="list-style-type: none"> – 1) Consumer health education; 2) broad primary care transparency; 3) “shoppable” care transparency; 4) downstream provider transparency; and 5) integrated claims and clinical data tied directly to payment incentives
Population health	<ul style="list-style-type: none"> ▪ Develop high-level population health strategy focused on five priorities: <ul style="list-style-type: none"> – 1) Childhood obesity/physical inactivity; 2) diabetes prevention and self-management; 3) oral health; 4) substance abuse; and 5) tobacco use
Health care transformation	<ul style="list-style-type: none"> ▪ Determine health care delivery system transformation strategy with three main goals: <ul style="list-style-type: none"> – 1) Workforce development; 2) tele-health services; 3) clinical and behavioral health integration
<ul style="list-style-type: none"> ▪ HIT strategy will enable the broader HIP by implementing the highest priority technology requirements (e.g., rewarding value to providers, care coordination, etc.). 	

During the design period, DOH received technical assistance from the National Governors Association to look at broad workforce strategies including tele-health, the oral health workforce, behavioral / mental health, primary care integration, and community health workers to increase access to care, as well as best practices related to greater alignment of population health outcomes and value-based payment methodologies. The results and future direction of the technical assistance has been reflected throughout this plan.

As part of this technical assistance, DOH hosted a half-day roundtable discussion on tele-health with thought leaders across the commonwealth on March 23, 2016. Stakeholders were asked to identify challenges and opportunities regarding tele-health, and to identify strategies for expanding tele-health. The commonwealth will continue working with the NGA and NCSL to identify a course of action for legislation and “winnable” policies around tele-health through a combination of on-site visits and visits to peer states. The recommendations and insights that came from the work with the NGA are detailed in Appendix 6.

PLANS TO USE STANDARDS-BASED HIT TO ENABLE ELECTRONIC QUALITY REPORTING

HIT has been shown to improve quality by increasing adherence to standards and guidelines, enhancing population health disease surveillance, and tracking and decreasing medical errors. As Pennsylvania moves forward with assessing, enhancing, and integrating new technologies to support interoperability and connectivity, it will be necessary to periodically evaluate technologies to determine effectiveness. Specific metrics and factors for success will be built into these technology implementations. As the basis for evaluation, we intend to utilize both qualitative and quantitative

measures. Measures will be incorporated on three dimensions: data users; data usage; and usefulness of data. This approach has been used in other state and national HIT initiatives and has been helpful in engaging stakeholders in the evaluation process.

PUBLIC HIT SYSTEMS INTEGRATION AND ELECTRONIC DATA TO DRIVE QUALITY IMPROVEMENT AT THE POINT OF CARE

Currently, several state agencies independently collect, store, and analyze data for various public health programs. However, the ability to share data among agencies and to health care providers is limited. A component of the eHealth Authority’s P3N is the creation of a streamlined, uniform way for health care providers and regional HIOs to submit reportable public health information to state agencies. The Public Health Gateway (PHG) will provide a secure, single point of entry for critical public health data, including electronic lab reporting, syndromic (disease) surveillance cancer reporting, immunization registry, and clinical quality measurement.

The PHG is a collaborative effort between DOH, DHS, and the eHealth Authority. The development of the PHG presents an opportunity for health care providers in Pennsylvania to submit their public health reporting data to DOH via the HIE network. Submission of public health messages through the PHG is intended to create reporting efficiencies for providers and the state, as well as support providers’ ability to meet the requirements to demonstrate the meaningful use of certified EHR technology.

HIT TO SUPPORT FRAUD AND ABUSE PREVENTION, DETECTION, AND CORRECTION

As specific payment methodologies are finalized for piloting and implementation in commonwealth health care institutions, DOH will ensure sufficient protections to guard against fraud and abuse. In addition, DHS has planned for oversight of their work in two distinct areas: 1) provider eligibility through pre-payment auditing, and 2) post-payment auditing to ensure proper payment, adoption, implementation, upgrade, and Meaningful Use of certified EHRs. Table 9.8 provides examples of criteria that DHS will use to provide oversight of fraud and abuse. The criteria have been updated based on the lessons learned from the three audit cycles already completed and in response to correspondence with federal partners.

Table 9.8 Sample Provider Review Criteria by Oversight Area

Sample Criteria	
Provider eligibility through pre-payment auditing	<ul style="list-style-type: none"> • Provider is a licensed, enrolled, and participating Medical Assistance provider • Provider is registered in the CMS Registration & Attestation System (R&A) • Provider is choosing the Medical Assistance Program • Provider meets hospital-based provider definition or meets criteria to claim hospital-based exclusion (professionals only) • Provider provides a continuous 90-day Medical Assistance encounter period in the previous hospital fiscal year (hospitals) or previous calendar year (professionals) • Provider meets Medical Assistance patient volume thresholds through comparison to the commonwealth’s claims data and cost reports • Provider follows the Department’s Medical Assistance patient volume methodology, e.g., group practice or individual volume calculations

Sample Criteria	
	<ul style="list-style-type: none"> • Any provider practicing predominantly in federally qualified health centers (FQHCs) and rural health centers (RHCs) meets relevant patient volume thresholds and rules • Eligible Professional (EP) is not participating in another state’s Medical Assistance EHR incentive program or the Medicare EHR Incentive Program • Provider meets non-sanctioned requirements • Provider attests to multiple program eligibility requirements including that there was no coercion when assigning payments, if relevant • Provider attests to adopt, implement, and/or upgrade Meaningful Use
Post-payment auditing of high-risk areas to ensure adoption, implementation, upgrade, and Meaningful Use of certified EHRs	<ul style="list-style-type: none"> • Provider has significant out-of-state Medical Assistance patient volume • Provider has Medical Assistance sanctions from date of payment to at least one year prior • Provider has Medical Assistance volume slightly above the minimum threshold • Provider meets requirements for adopt, implementation, or upgrade, where applicable • Provider meets the criteria for the appropriate stage of Meaningful Use, where applicable • Pediatricians must meet the Department’s EHR Incentive Program definition of a pediatrician due to their ability to qualify for an incentive payment at a lower patient volume threshold • Dentists; due to limited options for certified EHR systems • Physician Assistants in a Physician Assistant-led FQHC/RHCs • Meaningful Use report outliers

9.2.4 TECHNICAL ASSISTANCE

Because Pennsylvania is still in the process of defining the details of its HIT approach, specifics on technical assistance needs to providers has not yet been fully identified. However, it is anticipated that it will be similar to other states in that it may include assistance to providers through their managed care organizations (MCOs) or other service delivery models (ACOs, CCOs, etc.) as a requirement by the purchaser onto their contractors (the plan/service delivery model) to provide TA to their providers; and/or direct assistance through dissemination of information.



Chapter 10: Workforce Development Strategy

Pennsylvania is known nationally for producing a high-quality and diverse health care workforce; however, retention and recruitment across the commonwealth, particularly in underserved areas, has proved challenging, thus leaving many Pennsylvanians without access to the care they need. In an evolving health care landscape, Pennsylvania must ensure that there is an adequately sized and competently trained workforce so that Pennsylvanians are not disadvantaged on the basis of where they live. Workforce development strategies are supported by state agencies, the private sector, and Governor Wolf, who announced commitment to helping communities apply for the \$65.8 million available in federal funds for economic and workforce development initiatives in coal-impacted communities.⁹³

10.1 Current Status of Health Care Workforce

PHYSICIANS

In 2012, 52,127 physicians renewed their licenses; 46,715 returned licensure surveys to DOH. Of all respondents, 92% reported being employed in health care, 66% of which practiced direct patient care in Pennsylvania.⁹⁴ Although Pennsylvania has a higher physician-to-patient ratio than the U.S. average (302.1 vs. 260.5 per 100,000 population), the disproportionate distribution of physicians leaves many Pennsylvanians without access to health care services.⁹⁵ This physician shortage is particularly acute for specialty care in rural areas.

As of January 2015, 6,066 primary care Health Professional Shortage Areas (HPSAs) existed nationwide, 155 of those in Pennsylvania. Likewise, Pennsylvania has 142 Medically Underserved Areas and 12 Medically Underserved Populations as of March 2015. An inadequate workforce is a problem that is projected to persist. By 2030, it is predicted that the commonwealth will require an

⁹³ *Wolf Administration Announces \$65.8 Million Available in Federal Funds for Economic and Workforce Development Initiatives in Coal-Impacted Communities*, March 2016, available at <https://www.governor.pa.gov/wolf-administration-announces-65-8-million-available-in-federal-funds-for-economic-and-workforce-development-initiatives-in-coal-impacted-communities/>

⁹⁴ Pennsylvania Department of Health. *2012 Pulse of Pennsylvania's Physician and Physician Assistant Workforce Volume 5*, June 2014, available at <http://www.health.pa.gov/Your-Department-of-Health/Offices%20and%20Bureaus/Health%20Planning/Documents/WR/2012%20Pulse%20of%20PA%20Physician%20and%20Physician%20Assistant%20Workforce%20Report%20Final.pdf>.

⁹⁵ AAMC. *2013 State Physician workforce Data Book*, November 2013, available at <https://www.aamc.org/download/362168/data/2013statephysicianworkforcedatabook.pdf>.

additional 1,039 primary care physicians to maintain the status quo.⁹⁶ Adding to this problem is the aging health care workforce, with the average age being 51 years. Twenty-seven percent of physicians report they anticipate leaving direct patient care within six years. With changing demographics in both the health care workforce and the general population Pennsylvanians are likely to experience inadequate access to care.⁹⁷ The commonwealth will consider workforce predictive analytics across the age spectrum to ensure workforce needs are being addressed.

Pennsylvania is home to seven allopathic medical schools (Thomas Jefferson University, Drexel University, Temple University, University of Pennsylvania, University of Pittsburgh, Pennsylvania State University--College of Medicine, and The Commonwealth Medical College) and two osteopathic medical schools (Lake Erie College of Osteopathic Medicine and Philadelphia College of Osteopathic Medicine). Ranking 3rd in the nation in 2013-2014 for number of programs and total number of residents, Pennsylvania trained 7,937 residents in 610 programs—a growth of 11.1% in number of residents trained and an 8.5% growth in the number of programs since 2007-2008. However, the large number of physicians being trained in the commonwealth has not been reflected in retention rates:⁹⁸

- 33.4% of active physicians who graduated from a medical school in Pennsylvania remain to practice in Pennsylvania (nationally: 38.7%)
- 41.7% of active physicians who completed their residency in Pennsylvania remain to practice in Pennsylvania (nationally: 47.7%)
- 58.1% of active physicians who completed their medical education and residency in Pennsylvania remain to practice in Pennsylvania (nationally: 66.6%)

Innovative programs, such as those at two Teaching Health Centers in Pennsylvania, have been developed to address the shortage of primary care physicians. These Teaching Health Centers utilize a model that reverses the current primary care residency paradigm of residents training in tertiary teaching hospitals and rotating through primary care practices to one where the residency is in an integrated primary care practice with rotations through a tertiary hospital. Initial results have shown an improved retention through this approach.

The inadequate physician workforce has been noted by the Pennsylvania legislature and as a response, in April 2015, the Joint State Government Commission published a report: *The Physician Shortage in Pennsylvania*.⁹⁹ Created in 1937, the Joint State Government Commission is the primary

⁹⁶ Joint State Government Commission General Assembly of the Commonwealth of Pennsylvania. *The Physician Shortage*, April 2015, available at <http://jsg.legis.state.pa.us/resources/documents/ftp/publications/2015-411-physician%20shortage%20report%204-20-2015.pdf>

⁹⁷ Pennsylvania Department of Health. *2012 Pulse of Pennsylvania's Physician and Physician Assistant Workforce Volume 5*, June 2014, available at <http://www.health.pa.gov/Your-Department-of-Health/Offices%20and%20Bureaus/Health%20Planning/Documents/WR/2012%20Pulse%20of%20PA%20Physician%20and%20Physician%20Assistant%20Workforce%20Report%20Final.pdf>

⁹⁸ Joint State Government Commission General Assembly of the Commonwealth of Pennsylvania. *The Physician shortage*, April 2015, available at <http://jsg.legis.state.pa.us/resources/documents/ftp/publications/2015-411-physician%20shortage%20report%204-20-2015.pdf>

⁹⁹ Joint State Government Commission General Assembly of the Commonwealth of Pennsylvania. *The Physician Shortage*, April 2015, available at <http://jsg.legis.state.pa.us/resources/documents/ftp/publications/2015-411-physician%20shortage%20report%204-20-2015.pdf>

non-partisan, bicameral research and policy development agency for the General Assembly of Pennsylvania.¹⁰⁰ The physician shortage report was presented in response to the 2014 House Resolution No. 735, which gave direction to “establish an advisory committee to conduct a comprehensive study of physician shortages, to propose strategies for eliminating physician shortages, and to report to the House of Representatives with its findings and recommendations”.¹⁰¹ Recommendations include:

1. Improve physician workforce data collection and analysis
2. Establish a state pipeline program to prepare students for medical careers
3. Encourage medical schools to implement programs aimed at increasing Pennsylvania’s physician supply
4. Increase the number of residency positions in order to train more physicians in Pennsylvania
5. Increase financial support for the Primary Health Care Practitioners Program within the Department of Health to make the Primary Care Loan Repayment Program a more appealing recruitment tool
6. Ensure that Pennsylvania fully utilizes the tools available to recruit international medical graduates

Pennsylvania will use these recommendations as a framework for planning future physician workforce initiatives that will address physician shortages across specialties and geographies throughout the commonwealth.

DENTISTRY

In 2013, 9,449 dentists renewed their licenses; 8,230 returned licensure surveys to DOH. Of those who responded, 95% were employed in dentistry—80% of which reported providing direct patient care in Pennsylvania.¹⁰² Although it appears that the number of dentists in Pennsylvania is adequate for the needs of the population, Pennsylvanians face limited access to dental care due to the distribution of providers, availability of specialty services, and limited acceptance of Medicaid patients. However, over the past three years, DHS has experienced a 20% increase in the number of dentists enrolling in the Medicaid program.

Similar to the access to care issues with physicians, Pennsylvania has a high saturation of dentists in metropolitan areas. In the commonwealth, there are 66 dental health HPSAs. Twenty-nine of the 30 rural counties in Pennsylvania receive single county designation HPSAs, whereas 14 of the 37 urban

¹⁰⁰ Act of July 1, 1937, P.L.2460, No.459; 46 P.S. § 65; amended by the act of June 26, 1939, P.L.1084, No.380; the act of March 8, 1943, P.L.13, No.4; the act of May 15, 1956 (1955), P.L.1605, No.535; the act of December 8, 1959, P.L.1740, No.646; & the act of November 20, 1969, P.L.301, No.128.

¹⁰¹ The General Assembly of Pennsylvania. *House Resolution No. 735. Session of 2014*, available at <http://www.legis.state.pa.us/cfdocs/legis/PN/Public/btCheck.cfm?txtType=PDF&sessYr=2013&sessInd=0&billBody=H&billTyp=R&billNbr=0735&pn=3230>.

¹⁰² Pennsylvania Department of Health. *2013 Pulse of Pennsylvania’s Dentist and Dental Hygienist Workforce Volume 6, September 2014*, available at <http://www.health.pa.gov/Your-Department-of-Health/Offices%20and%20Bureaus/Health%20Planning/Documents/WR/2013%20Pulse%20of%20PA%20Dentist%20and%20Dental%20Hygienist%20Workforce%20Report%20Final.pdf>

counties receive the same designation. Calculations show that the dentist shortage in Pennsylvania will increase from 301 in 2012 to 832 in 2025.¹⁰³ For Pennsylvanians needing specialized dental care, the projection is even more alarming. With only 10% of dentists certified in a dental specialty in 2013, a decrease of 5% since 2011, and 35% of oral surgeons reporting retirement in the next 6 years, Pennsylvania is likely to experience poor dental health. In addition to the shortage of providers, only 26% of licensure survey respondents who provide direct patient care in Pennsylvania and are accepting new patients were willing to accept Medicaid patients.¹⁰⁴

BEHAVIORAL AND MENTAL HEALTH

Pennsylvania has shortages not only in primary care and oral health, but also in mental and behavioral health. Of the 4,044 mental health HPSAs in the United States, 118 are in the commonwealth—primarily in rural areas.¹⁰⁵ Data from 2010 to 2013 show that more people with serious mental illness and major depressive episodes (MDE) in Pennsylvania receive treatment than the national average (76% of Pennsylvania adults 18 years and older with serious mental illness received treatment compared to 68.5% nationally, while 72.3% with MDE received treatment compared to 71.7% nationally).¹⁰⁶ However, the opioid and heroin overdose epidemic – with a reported seven deaths per day – additionally points to an inadequate treatment landscape.¹⁰⁷

NURSE-LED MODELS

Nurse-led models, such as retail clinics, nurse practitioner-led school-based clinics, and Nurse Managed Health Clinics (NMHC) can help expand health care access in urban medically underserved communities and rural areas, which is a key objective of HIP. Pennsylvania is a national leader in nurse-led care with more than 80 pharmacy-based retail clinics, over 30 nurse-led school-based clinics, and 30 nurse practitioner-led NMHCs.¹⁰⁸ Retail clinics, in particular, have fully embraced telehealth and have implemented several innovative strategies and pilot projects designed to expand access to the technology.

¹⁰³ HRSA. *National and State-Level Projections of Dentists and Dental Hygienists in the U.S., 2012-2025, February 2015*, available at <http://bhpr.hrsa.gov/healthworkforce/supplydemand/dentistry/nationalstatelevelprojectionsdentists.pdf>.

¹⁰⁴ Pennsylvania Department of Health. *2013 Pulse of Pennsylvania's Dentist and Dental Hygienist Workforce Volume 6, September 2014*, available at <http://www.health.pa.gov/Your-Department-of-Health/Offices%20and%20Bureaus/Health%20Planning/Documents/WR/2013%20Pulse%20of%20PA%20Dentist%20and%20Dental%20Hygienist%20Wokforce%20Report%20Final.pdf>

¹⁰⁵ HRSA. *Data warehouse*, available at <http://datawarehouse.hrsa.gov/tools/analyzers/hpsafind.aspx>.

¹⁰⁶ SAMHSA, *National Survey on Drug Use and Health (NSDUH)* available at <http://www.samhsa.gov/data/sites/default/files/NSDUH-FRR1-2014/NSDUH-FRR1-2014.pdf>

¹⁰⁷ Pennsylvania State Coroners Association. *Report on Overdose Death Statistics, 2014*, available at http://www.pacoroners.org/Uploads/Pennsylvania_State_Coroners_Association_Drug_Report_2014.pdf.

¹⁰⁸ Based on membership lists from the Convenient Care Association (CCA) and the National Nurse-Led Care Consortium

10.2 Data Collection and Analysis

The first step in improving the health care workforce in Pennsylvania is to accurately collect data on where the practicing providers are located, what services they provide, and how long they intend to stay in their respective field. This data is crucial to providing an understanding of the current physician landscape and can also be paired with population data to project the future health care needs and demands.

Pennsylvania collects a wealth of health care workforce data across agencies including the Departments of Labor and Industry, Health, and State. The Pennsylvania Department of Labor and Industry maintains a comprehensive set of reports and data sets through its Center for Workforce Information and Analysis. These resources include county workforce profiles, employment statistics by industry, and unemployment rates by geographic region. In collaboration with the Department of Health's Bureau of Health Planning and the Department of State's licensure boards, Pennsylvania collects and reports workforce data for nurses, physicians, physician assistants, dentists, and dental hygienists. Surveys are administered at the same time as licensure and have relatively high response rates (and include the following information):¹⁰⁹

- Demographics
- Degree and certification
- Employment information (setting, status, specialty, intended years of practice)
- Average hours worked
- Services offered
- Job satisfaction

Table 10.1 Department of Health, Bureau of Health Planning—Health Care Workforce Reports

Occupation	Survey Year	Renewals	Survey Responses	Response Rate	Practicing Direct Patient Care in PA
RN	2012/2013	205,040	186,917	91.20%	76%
LPN	2014	52,305	49,802	95.20%	75%
Physician	2012	52,127	46,715	89.60%	66%
Physician Assistant	2012	6,446	5,856	90.80%	85%
Dentist	2013	9,449	8,230	87.10%	78%
Dental Hygienist	2013	8,571	7,908	92.30%	79%

Table 10.1 above shows reports that are being collected by Pennsylvania's Bureau of Health Planning. This data has helped to illustrate the commonwealth's workforce shortages, but the surveys can be strengthened in a number of ways to help the state move toward predictive modeling for

¹⁰⁹ Pennsylvania Department of Health, Bureau of Health Planning. *Health Care Workforce Reports* available at http://www.health.pa.gov/Your-Department-of-Health/Offices%20and%20Bureaus/Health%20Planning/Pages/Health-Care-Workforce-Reports.aspx#.Vv61AaDD_IU

recruitment and retention purposes. In order to achieve this, DOH has begun standardization of variables across different types of surveys. Likewise, exploration of additional professions to track movement toward a minimum data set that matches federal standards will be completed in the future, particularly the Health Resources and Services Administration's (HRSA) National Center for Health Workforce Analysis recommendations.

10.3 Ongoing Workforce Development Efforts

Pennsylvania is engaged in several health care workforce development efforts that will be expanded and enhanced as part of the HIP initiative. DOH's Bureau of Health Planning is leading several initiatives to increase providers in underserved areas. These include: participating in, developing, administering and/or monitoring primary care resources; managing and administering the Pennsylvania primary care loan repayment program; participating in the J-1 and national interest waiver programs for physicians; and administering the Community-Based Health Care Program (CBHCP).

10.4 Future Health Care Workforce Needs

With shortages, an aging workforce, more people seeking care due to increased insurance coverage under the Affordable Care Act, and a changing health care landscape, Pennsylvania must be proactive and innovative in its workforce planning. In 2013, the Association of American Medical Colleges published an article entitled, "Building a Health Care Workforce for the Future: More Physicians, Professional Reforms, and Technological Advances", that addressed the future workforce needs of the U.S. This article shows the magnitude of the physician shortage in the U.S. and acknowledges that increasing the number of physicians trained each year will not fully solve the future health care workforce shortages. Additionally, the authors point out that even though attempts at payment and delivery system reform may help to ease the shortage, meeting health care demands must be achieved through a more efficient health care delivery system.¹¹⁰

Pennsylvania will achieve a more efficient health care system by building and maintaining a workforce that is trained in care coordination, data sharing, value-based payments, inter-professional teamwork, and population health improvements. In order to plan for the health care needs of Pennsylvanians, the commonwealth will utilize federal resources, such as the HRSA regional workforce centers, as well as lessons from other states, to apply workforce development best practices.

10.5 Workforce Redesign and Strategies for Addressing Workforce Needs

As noted in the Health Care Delivery System Transformation Section, issues of supply, composition, geographic distribution, and distribution of work within and across different providers in different

¹¹⁰ Grover, A and Niecko-Jajjum, LM. Analysis & Commentary Building a Health Care Workforce for the Future: More Physicians, Professional Reforms, and Technological Advances. *Health Affairs*. 2013; 32(11): 1922-1927.

practice settings challenges Pennsylvania's health care workforce. In response to these issues, Pennsylvania will transform the current workforce through the following strategies:

- Utilizing community health workers to help facilitate care coordination and to mitigate barriers to patient access to health care services
- Exploring paramedicine opportunities in underserved communities
- Allowing the skilled health care workforce to delegate tasks and practice at the top of their training and licensure
- Exploring and testing regulatory authority regarding oral health providers

Pennsylvania is collaborating with the National Governors Association (NGA) and the National Conference of State Legislatures (NCSL) through a workforce technical assistance program to address future health care workforce needs. Through this partnership, Pennsylvania has convened stakeholders from academic institutions, government, advocacy groups, and the private sector to prioritize strategies in the areas of tele-health, community health workers (CHWs), oral health, and behavioral health. During these meetings, participants discussed shared visions for workforce success, identified barriers and challenges, opportunities, and prioritized strategies for the commonwealth to pursue regarding tele-health, CHWs, and integration of behavioral and mental health with primary care. This work will continue forward with refinement of workforce strategies and involvement of state legislators.

COMMUNITY HEALTH WORKERS

CHWs are a core building block to creating a coordinated and efficient health care system and expanding workforce capacity, especially for high-risk patients that face physical, behavioral, financial, social, and/or age-related challenges. CHWs are playing integral roles in improving quality and reducing costs in new payment reform and health care delivery models. For example, a program achieved a 3:1 return-on-investment when CHWs identified Medicaid-eligible individuals who were at risk of nursing home placement and arranged for those individuals to receive home- and community-based services.¹¹¹ Another investigation analyzed how a CHW program from the Penn Center for Community Health Workers documented improvements in primary care access, post-hospital discharge, and the quality of discharge processes, while also containing readmission rates for patients with low socioeconomic status.¹¹² In response to the growing body of research documenting the promise of CHWs, 18 states have proposed or initiated policy processes for building a CHW infrastructure, and an additional 12 states have established statewide working groups to begin exploring policy options.¹¹³ In Pennsylvania, the Jewish Healthcare Foundation (JHF) is facilitating statewide taskforces on CHW policy, training, and employment with 80 public-private stakeholders

111 Felix H, et.al. (2011 July, Volume 30, Issue 7, pp 1366-1374). The Care Span: Medicaid Savings Resulted When Community Health Workers Matched Those With Needs to Home and Community Care. *Health Affairs*.

112 Kangovi, S., Mitra, N., Grande, D., White, M.L., McCollum, S., Sellman, J,... & Long, J.A. (2014 April). Patient-centered community health worker intervention to improve post hospital outcomes: A randomized clinical trial. *JAMA Internal Medicine*, 174(4): 535-543.

113 Institute for Clinical and Economic Review (2013). *Community Health Workers: A Review of Program Evaluation, Evidence on Effectiveness and Value, and Status of Workforce Development in New England* available at <http://icer-review.org/wp-content/uploads/2011/04/CHW-Draft-Report-05-24-13-MASTER1.pdf>

and partners across the commonwealth in tandem with the HIP and SHIP initiatives, as well as NGA technical assistance.

The collaborative efforts of the JHF have produced the following recommendations for Pennsylvania to consider:

- Develop a policy infrastructure for CHWs at the state level that includes a common definition, competency-based certifications, and sustainable financing methods
- Create certification and training policies that take into account work experience and that are based on standard competencies for communication and interpersonal skills; service coordination, community capacity, advocacy skills; health literacy, health education, and cultural skills
- Create and maintain a registry of certified CHWs to enable continuing education opportunities

These recommendations would bring more awareness and recognition to the profession, support training and development opportunities for CHWs, increase job stability, and enhance opportunities for sustainable financing. Pennsylvania will consider potential regulatory changes to support CHWs by exploring existing regulations and changes in reimbursement policies necessary for increased use of these health care providers. Strategies the commonwealth will evaluate in an effort to operationalize CHWs include improved training for care collaboration, coordination across care providers, and awareness of the full care team to leverage the role of CHWs.

BEHAVIORAL HEALTH AND PRIMARY CARE INTEGRATION

With the NGA and NCSL, the commonwealth convened stakeholders to discuss and strategize behavioral and mental health integration with primary care. Stakeholders expressed that integration of behavioral and mental health with primary care comes with several challenges – most notably regarding infrastructure and capacity building. In Pennsylvania, the existing payment structures, data-sharing constraints, facility licensure, and lack of a common definition of integration pose major problems. Likewise, an understanding of the provider interest, willingness, and ability to integrate services is not widely understood.

Although integration of behavioral health comes with barriers, several opportunities exist in Pennsylvania that the commonwealth can build upon. These include:

- Political will and widespread support to address the heroin and opioid crisis
- Ability to reach and train a magnitude of providers due to Pennsylvania's immense academic medical institutions and training programs
- Movement toward, and support, of value-based payment measures

The following strategies aim to integrate behavioral and mental health with primary care:

- Improve care coordination to ensure that behavioral and mental health providers are ideally located and clinically integrated. Stakeholders and leaders in this area suggest that co-location alone is not enough. Rather, primary care providers must understand who the behavioral and mental health providers are, and where they are located. Likewise, communication among provider types must be improved and referral to treatment must be integrated as a necessary part of clinical workflow

- Adapt reimbursement models so that providers are paid for the care that they deliver; financial sustainability of valuable and successful services must be ensured, and reimbursement of providers must be done appropriately based on their certification and location
- Ensure that regulations are appropriate and support care integration across the commonwealth

ORAL HEALTH

Pennsylvania is interested in exploring and utilizing existing policy levers to leverage the existing oral health workforce to deliver care in underserved areas via the Pennsylvania Health Care Facilities Act and dental extender legislation. Expansion of the existing workforce to meet the oral health needs of Pennsylvanians will also include enabling strategies for the integration and co-location of oral health. The state will also leverage the Older Americans Reauthorization Act of 2016, which for the first time includes provisions for oral health and will provide access to additional funds.

Pennsylvania will also plan for the future needs of its residents by utilizing and expanding existing dental provider data to project the workforce supply over the next decade. Pennsylvania is also interested in applying best practice models in regards to recruitment and retention of providers to underserved areas and will continue to work with organizations across the commonwealth to meet the oral health demands of Pennsylvanians.

TELE-HEALTH

Tele-health in Pennsylvania is an enabling strategy to deploying health care services to areas that are currently facing shortages due to workforce shortages, geographic challenges, and financial barriers. Pennsylvania will develop regulations regarding the use of tele-health services with a focus on patient experience and safety. The commonwealth will focus on expanding tele-health to a diverse array of populations and clinical needs (e.g., gaps in access to behavioral health care).

BUILDING WORKFORCE CAPACITY

With the purpose of mitigating workforce shortages in the commonwealth, Pennsylvania is eager to implement and evaluate education, recruitment, and retention initiatives. One such area of focus will be ensuring that primary care providers receive appropriate behavioral and mental health education so that patients who need these services are appropriately referred and matched with treatment. Likewise, Pennsylvania will explore pathway programs for students who show commitment to working in rural health areas to progress into health professional schools upon graduation of high school and college. One such program is the Pennsylvania Primary Care Career Center which supports statewide recruitment and retention of primary medical, dental and behavioral health providers serving low income and underserved populations. See section 1.4 Current Initiatives for Health Improvement for more details.



SECTION 3: IMPLEMENTATION AND IMPACT OF HEALTH INNOVATION IN PENNSYLVANIA

Chapter 11: Financial Analysis

Spending on health care in Pennsylvania is higher than the U.S. average, with only nine states having higher per capita health care spend. In 2009, health care expenditures as a percent of GDP were 17% for Pennsylvania, compared to 14.5% for the United States overall.

Smarter health care spending is a key objective of the HIP plan. As value-based payment models gain traction through Pennsylvania, these models should change the way that people pay for health care, avoid waste, and decrease the rate of medical inflation, thereby leaving the state in a better position to meet the health care needs of its citizens while improving health outcomes. The latest available data from the National Health Expenditure (NHE) cites Pennsylvania's total health care spending at \$97B in 2009. Based on NHE growth estimates and forecasts, if conditions remain unchanged, Pennsylvania's health care costs could grow to over \$180B by 2021.¹¹⁴

CMS has set the ambitious goal of having 30% of its spending go through value-based or alternative payment models by 2016 and 50% by 2018. As discussed in Chapter 4, Pennsylvania's efforts to meet this target will include advanced primary care initiatives and episode-based payment models, which are in development or underway for some payers and will be further refined and rolled out for others.

The commonwealth has engaged Catalyst for Payment Reform to help better understand the current state of value-based payment in Pennsylvania. Through this process, the commonwealth will determine the existing baseline of value-based payment, identify gaps and opportunities to broaden adoption, and establish goals and targets for adoption and therefore savings. Catalyst will also develop a scorecard that the commonwealth will use to measure future progress.

ADVANCED PRIMARY CARE

Currently, in Pennsylvania there is foundation to build upon for value-based payment and advanced primary care. With the Medicare Shared Saving Program (MSSP) and the HealthChoices Medicaid procurement mandate, government payers are leading the efforts to spur adoption of advanced primary care in Pennsylvania.¹¹⁵ In addition, several commercial payers, such as Highmark, Geisinger, Aetna, Cigna, Independence Blue Cross, Capital Blue Cross, and UPMC, among others, currently have advanced primary care programs (in the form of patient-centered medical homes and other models). These programs create a foundation for adoption of advanced primary care (APC) in Pennsylvania.

Existing APC programs within the state have demonstrated savings of 2-8%¹¹⁶ through reduction in total cost of care. Payer alignment in measures and elements of APC programs often lead to greater

¹¹⁴ Note: Based on applying NHE growth rates to state expenditure from 2009; Center for Medicare and Medicaid Services, *Health Expenditures by State of Residence, 1991-2009* [Data set]

¹¹⁵ See details in Chapter 4

¹¹⁶ Note: As reported by Patient-Centered Primary Care Collaborative (PCPCC) on programs listed in Table 4.3 Advanced Primary Care Programs in Pennsylvania

savings. Depending on the rate of adoption, APC could generate significant savings for the commonwealth.

EPISODE-BASED PAYMENTS

There is an opportunity to expand episode-based payments across the commonwealth. Beginning in 2017, the commonwealth will convene public and private payers to develop the specific strategy for episode-based payments and deployment in Pennsylvania. This strategy includes working towards adopting a common approach (and/or shared analytics/reporting) for episode-based performance measurement, encouraging the use of episode-based reporting to influence referrals for elective care, identifying select regions and/or clinical episodes where payers may shift to episode-based payments, and developing an episode-based payment charter and roadmap to implementation. Pennsylvania will then work with stakeholders to help drive episode implementation according to this defined roadmap.

Implementation of episode-based payments by payers in Pennsylvania will potentially take place over a multi-year timeframe. Existing programs from other states such as Arkansas and North Carolina¹¹⁷ have demonstrated savings of 1.4-10%. Depending on the rate of adoption, episode-based payments could generate significant savings for the commonwealth. Episode-based payments compliment APC and together can address the majority of health care costs.¹¹⁸

POTENTIAL IMPACT

Savings achieved through APC and episode-based payments depend upon not only the speed of adoption by payers and the efficacy of the specific programs, but the costs incurred to achieve these savings. Typically, fees for care coordination and gain sharing must be paid to provide incentives for providers to participate in the programs and to produce desired results. As these costs are incurred, they will reduce the level of savings from value-based payment programs.

These potential savings are an important objective of the HIP initiative. To realize them, the commonwealth will capture data, work to standardize approaches across payers, and support ongoing efforts to scale the underlying programs. Moreover, these programs have benefits beyond cost savings. APC programs allow consumers and providers to work together to better manage patient health, improve health status, and enable more productive lives. Episode-based payments can improve patient outcomes and the overall quality of care. These benefits, along with the potential cost savings, will help the commonwealth achieve better care, smarter spending, and healthier people.

¹¹⁷ Fierce Health Payer, *BCBSNC bundles payments for better coordination, quality, costs* available at <http://www.fiercehealthpayer.com/story/bcbsnc-bundles-payments-better-coordination-quality-costs/2013-03-2> ; Arkansas Center for Health Improvement, *Statewide Tracking Report January 2015* available at <http://www.achi.net/Docs/276/>

¹¹⁸ See Figure 4.2 End State for Value-Based Payments

Chapter 12: Monitoring and Evaluation Plan

For the initiatives in each work group area, the commonwealth will take an approach to monitoring that focuses on the metrics that are most relevant, actionable, and readily available. The programs described in the preceding chapters are at varying stages of development—some are existing programs, with measurable outcomes; other programs are in their conceptual stages. For this reason, evaluation of the HIP initiatives will be tailored to each program. The Health Innovation Center will be responsible for reaching out to the leaders of each program, gathering the information from these stakeholders, synthesizing the data, and serving as the central repository for tracking progress and monitoring innovation across the commonwealth. The approach for ongoing evaluation for each work group area is discussed below:

VALUE-BASED PAYMENT

Catalyst for Payment Reform has been engaged to help the commonwealth better understand the current state of value-based payments in Pennsylvania. Their comprehensive methodology, which involves surveying commercial payers and aggregating their data, will result in the creation of a scorecard that the state will use as the baseline for measuring future progress. The Catalyst value-based payment scorecard will include these metrics:

- Percentage of payments tied to value (designed to boost the quality of care)
- Percentage of payments that place health care providers at financial risk for their performance (i.e., they stand to lose financially if they overspend or do not meet quality targets)
- The most common form of value-oriented payment
- Percentage of payment arrangements that contain "shared risk", which means providers are financially responsible for any financial losses and have the opportunity to gain financially if there are any savings

PRICE AND QUALITY TRANSPARENCY

Similarly, the Catalyst research will also provide baseline data for the current state in Pennsylvania for price and quality transparency. Their metrics will include:

- Number of health plans that offer or support a cost calculator
- Number of health plan tools on hospital choices that have integrated cost calculators
- Number of health plan tools on physician choices that have integrated cost calculators
- Number of plans reporting that cost information provided to members considers the members' benefit design relative to co-pays, cost sharing, and coverage exceptions

When taken together, these metrics will give a clearer picture of the penetration of value-based payment models and transparency data available throughout Pennsylvania. Over time, they should

give an indication of the extent to which the programs discussed, such as MACRA (at the national level) and payer-specific programs (at the state level), have been effective in spurring acceptance by payers and providers.

In addition to the metrics on the scorecard, the state anticipates measuring the progress towards the creation of a “shoppable” commodity transparency tool. Process measures, such as those below, will be used to track progress:

- Release of findings from APCD Council
- Timing and frequency of the work group meetings
- Amount and source of funding
- Draft of the request for proposal and hiring vendor(s)

Once a “shoppable” commodity transparency strategy is set and a tool (or set of tools) has been developed, the Commonwealth will monitor a set of impact measures focused on utilization and satisfaction.

HEALTH CARE DELIVERY SYSTEM TRANSFORMATION

The commonwealth will undertake measuring progress in the subjects that were the focus of the work groups. The metrics for each area are listed in Table 12.1 below.

Table 12.1 Health Care Delivery System Transformation Metrics

Health Care Delivery System Transformation Metrics	
Health Care Workforce	
	Number of CHWs (especially in underserved areas)
	Number of CHW training centers
	CHW workforce (e.g., salary, average length of employment, turnover rate)
Health Care Workforce	
	Physician retention rates in Pennsylvania
	Number of Health Professional Shortage Areas (HPSAs)
	Geographic Distribution of HPSAs
Behavioral health and primary care integration	
	AHRQ and Milliman metrics on co-location and integration
Oral health/dental health access	
	Dental workforce supply and demand (indicating shortages / areas of need)
	Use of any oral health services
	Emergency department visitation because of oral health
Tele-health	
	Percentage of systems equipped for tele-health

Health Care Delivery System Transformation Metrics	
Tele-health	
	Percent of total visits provided through tele-health
	Percentage of providers trained in tele-health

POPULATION HEALTH

The approach to ongoing evaluation for population will be at the tactical level. As additional resources are applied to these programs, the commonwealth will use data that is already being collected and available, as well as look into collecting additional data to support evaluation needs (e.g. update to the State Health Assessment). A full list and description of the metrics can be found in Chapter 7: The Plan for Population Health in Table 7.5 Population Health Priorities.

HEALTH INFORMATION TECHNOLOGY (HIT)

As an enabler of the other work group areas, the success of HIT will be evaluated on the completion and implementation of each supporting program. The approach for monitoring HIT will therefore combine the use of process measures and empirical measures that are summarized in Table 12.2.

Table 12.2 HIT Metrics

HIT Metrics	
Expansion of statewide HIE	
	Centralization/federation of seven regional HIOs
	Rates of EHR adoption
	Rates of EHR use
	Number of providers connected to certified HIOs
Price & Quality Transparency (APCD)	
	Release of APCD Council findings
	Timing and Frequency on APCD work groups
Tele-health	
	Re-convening of the Tele-health Advisory Committee
	Passage of the state Senate bill on tele-health
	Release of new tele-health regulations
Prescription Drug Monitoring Program (PDMP)	
	Launch of PDMP
	PDMP system user enrollment, utilization, and education
	Number of prescribers educated about the PDMP
	Number of dispensers educated about the PDMP
	Decrease in prescription drug related deaths and heroin in PA

HIT Metrics	
	Continuous PDMP data quality improvement
Population Health Dashboard	
	Identifying best practices from other states
	Determining measures for the dashboard
	Pennsylvania population health dashboard official launch
	Rates of utilization of the dashboard (and by who)

The metrics discussed above were selected to allow the commonwealth to address the most important aspects of ongoing implementation. In many of the work group areas, drivers outside state agencies will be responsible for both leading the effort and capturing the information. As the HIP plan design is further refined and the role of varied stakeholders is clarified, additional metrics may emerge to replace or augment the measures described here. In its role as convener, the commonwealth will facilitate the development of new metrics and update the approach to tracking innovation throughout Pennsylvania.

Chapter 13: Operational Plan

13.1 Timeline and Milestones

The commonwealth, in part, will drive forward the HIP initiatives over the next four years. The specific role of the commonwealth will differ by initiative and will include convening stakeholders, leading select initiatives, collaborating with other leaders for various initiatives (e.g. foundations, associations, etc.), evaluating the progress of these initiatives, and ensuring that health care innovation remains top of mind in Governor Wolf's administration. Each initiative, and the role of the commonwealth, is described below and illustrated in a timeline show in Figure 13.1.

VALUE-BASED PAYMENT

In the near term, the state anticipates playing a convening role for value-based payment efforts in Pennsylvania. For advanced primary care, in Q1 2017, the state will convene stakeholders to align on measures using the recently released AHIP/CMS measures as a starting point and to monitor existing initiatives and current trends. Additionally, recommendations from the payment work group include: 1) capturing all the available data from existing programs to create an up-to-date database; and 2) conducting a focus group with hospitals and physicians to understand barriers/incentives for adoption.

Both the state and stakeholders propose a measured approach to episode-based payment adoption across the commonwealth. Accuracy of data analytics and efficacy of reporting have been cited as necessary pre-requisites by payers. In Q1 2017, the state will convene stakeholders to encourage the use of episode-based reporting as a first step towards implementing episode-based payments. As this foundational capability becomes more widespread among payers, it will lay the groundwork for them to more easily adopt episode-based payments in the future. Then, the state will help to accelerate the adoption of episodes by evaluating how payers will benefit from its support in aligning on common approaches, methodology, and metrics. Once a common methodology is developed, the commonwealth may identify select regions or partners most receptive to adoption or clinical episodes that are simple to implement, yet will have high impact, and work to push episode-based payments in those areas.

PRICE AND QUALITY TRANSPARENCY

Initially, the commonwealth will play a convening role for transparency efforts. As stakeholders clarify and align on specific programs, the commonwealth will begin to lead select initiatives. With regard to consumer health literacy and broad primary care transparency, the commonwealth has already begun the process of identifying / soliciting leaders interested in continuing various multi-stakeholder efforts. For health literacy, the focus will be on selecting one key health issue for a Pennsylvania-branded campaign, slated to begin in the first half of 2017.

For broad primary care transparency, the focus will be on choosing the specific metrics and determining how to get payers to start using them. As a first step, the commonwealth will perform a thorough baseline analysis of data that is already being collected. Stakeholders are expected to reconvene in Q1 2017.

The work of the APCD Council will inform the state's immediate approach for "shoppable" care transparency and aggregation of clinical and claims data (specifically with regards to an all-payer claims database or APCD). After the APCD Council has released its findings on the feasibility and utility of an APCD in Pennsylvania, the commonwealth will hold a series of meetings during summer 2016 where it will:

- Lay out the principles of transparency
- Investigate options moving forward on a commodity cost strategy
- Explore the potential for an APCD

In terms of design parameters, stakeholders have articulated several needs to be filled by an APCD. As a transparency tool, an APCD should ensure that providers have the data needed to successfully manage population health and enable consumers to compare costs and quality across providers before making treatment decisions.

Once the cost commodity strategy has been articulated, the commonwealth plans to drive the development of a commodity transparency tool, or work with payers to develop or update payer-hosted tools. Both approaches will require collaboration with Pennsylvania stakeholders and development of a statewide program. Eventually, this commodity transparency tool may become the foundation for a more sophisticated, complex tool to enable transparency for episodes of care.

POPULATION HEALTH

In the area of population health, the state will focus on working with various partners to implement the strategies and tactics described in detail in the population health plan. The five health priority areas defined within the population health plan include:

- Obesity
- Diabetes (prevention and self-management)
- Oral health
- Substance use
- Tobacco use

The commonwealth, and specifically DOH, will have a leading role in working with regional and local communities to implement proposed strategies and tactics which include a focus on policy, programmatic, and clinical initiatives. The population health work will continue to support advancements in integrating population health outcomes with value-based payment methodologies, planning for strategic utilization of resources, and making robust data available for analysis at the local level where many meaningful interventions take place.

DOH will be looking to partner with many organizations that participated in the work group meetings as well as bringing in additional stakeholders to ensure successful implementation of the population health priorities.

HEALTH CARE DELIVERY SYSTEM TRANSFORMATION

The commonwealth has chosen six areas to spur health care delivery system transformation across Pennsylvania. Much like the approach with population health, the state will work with potential partners whenever possible who have been working to generate positive change. However, the state will take a leading role where it is best positioned to do so (i.e., data collection or developing the primary care pathway). The health care delivery system transformation path forward is below:

- **Community health workers (CHWs):** The Jewish Healthcare Foundation is driving the initiative in the near term, but the state may provide support to varying degrees on specific efforts going forward.
- **Behavioral health and primary care integration:** The commonwealth will convene stakeholders to prioritize initiatives detailed in work group and technical assistance sessions.
- **Oral health/ dental health access:** The state will drive access to oral health through the Pennsylvania Health Care Facilities and dental extender legislation, as well through promotion of integrated and co-located oral health and primary care.
- **Tele-health:** The state is expected to enact new regulations regarding the use of tele-health and will reconvene the Tele-health Advisory Committee to continue pushing forward tele-health capacity and capabilities in Pennsylvania.
- **Data analytics:** The state, through DOH, will drive efforts at data collection and analysis by standardizing variables across numerous workforce surveys currently in use.
- **Primary care pathway:** DOH's Bureau of Health Planning is leading several initiatives to increase providers in underserved areas (i.e., administering the primary care loan repayment program, etc.).

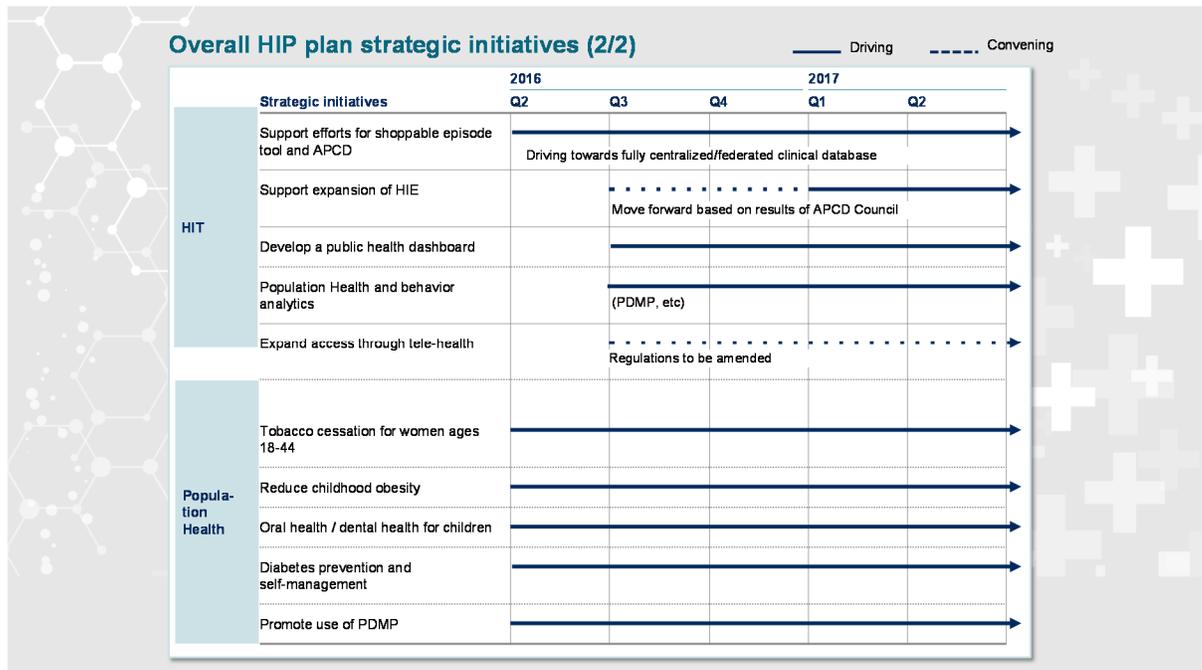
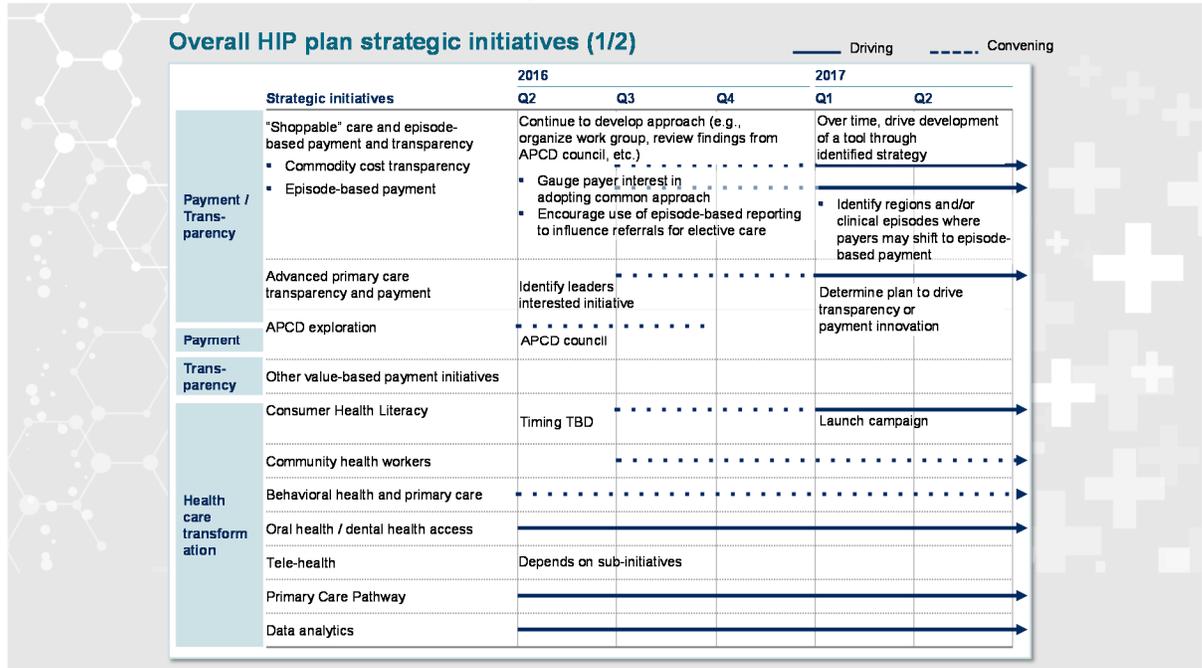
HEALTH INFORMATION TECHNOLOGY (HIT)

For HIT, the commonwealth will focus on specific efforts to support each of the other HIP plan strategies. To support the move to value-based payments and greater transparency, the state will lead the expansion of a statewide HIE, through the work of the Pennsylvania eHealth Partnership Authority. The commonwealth will also continue to investigate the feasibility and utility of an all-payer claims database to support payment and transparency initiatives.

To support health care delivery system transformation, the state will focus on tele-health. As discussed above, tele-health efforts are pending the reconvening of the Tele-health Advisory Committee.

To support population health through HIT, the commonwealth will lead the creation of a public health dashboard to provide ready access to the most important statistics for use by stakeholders. The commonwealth will also promote the use of the prescription drug monitoring program (PDMP). A new PDMP Office has been established within DOH to serve as the driver for launching the PDMP, coordinating its implementation with its oversight board and advisory committee.

Figure 13.1 Health Innovation in Pennsylvania Implementation Timeline



13.2 Governance

DOH will continue to serve as the lead agency coordinating innovation efforts across Pennsylvania. The Secretary of Health will serve as the executive on behalf of the state. The Health Innovation Center, led by the Deputy Secretary for Health Innovation, will provide leadership as the state continues to convene stakeholders and oversee implementation efforts for some initiatives. The Innovation Center team will continue its collaborative efforts with internal and external stakeholders to encourage delivery system transformation. In some instances, the Innovation Center will identify funding streams, follow-up with potential funding sources, and coordinate applications, as necessary. As the design of the HIP plan is further refined, the Innovation Center will serve as an aggregator of best practices and relevant data and research to support health innovation across the commonwealth.

13.3 Organizational and Financial Sustainability

As the state undertakes efforts to transform health care in Pennsylvania, ensuring organizational and financial stability is paramount. For this reason, the commonwealth has committed \$3M for 2016-2017 to supplement the Round 2 Model Design Award from CMS. These funds are slated to support the ongoing operations of the Health Innovation Center (HIC), which will serve as the hub for future activity. The Center will perform a number of functions that will make HIP sustainable, including:

- Providing technical assistance to payers and providers to implement new programs
- Leveraging the unique convening authority of the state to bring together stakeholders who might not otherwise collaborate
- Proactively seek funding from a variety of sources, in particular providers, payers, and CMS
Where appropriate, using the state's regulatory authority as a method to effect change

Pennsylvania will ensure the strategies set forth are financially sustainable by leveraging existing programs that have demonstrated success. Numerous stakeholders have already invested significant time and capital in the efforts detailed in this plan, and throughout the work group sessions, they reiterated their ongoing commitment at the same or increased levels. Additionally, the HIC team will work to supplement the investment that is already in place, with budget neutrality for the state as a clear imperative.

13.4 Drivers of Action for Each Stakeholder

The success of all the HIP plan initiatives will rely heavily on the ongoing participation and commitment of stakeholders throughout Pennsylvania. The commonwealth's Health Innovation Center will work with these stakeholders to keep them engaged in the process and invested in the changes necessary for transformation. Each stakeholder has an important stake in the health care innovation plans:

- **Payers:** Successful health care delivery system transformation will allow payers to better serve consumers and create value. In Pennsylvania, many payers have already launched value-based payment pilot programs, thereby demonstrating their interest and commitment to these new models. Once the programs laid out in HIP plan gain traction, the economic incentives are

compelling. Not only will payers be able to realize gains for themselves, they will be able to share them with providers and consumers, as well.

- **Providers:** Ongoing innovation is of material interest to the provider community. The quality improvements, aligned metrics, and increased transparency anticipated through the HIP initiative will further the mission of health care providers across the spectrum.
- **Employers:** Innovation has the potential for a direct impact on the productivity of employers' workforce, as well as their spending on health care. Employers, therefore, have an incentive to spend less for improved health outcomes, which is aligned with the Triple Aim. As with payers, pilot programs around health innovation have already been launched by some of the state's largest employers, in an effort to stem rising costs, which they recognize as unsustainable.
- **Consumers:** As Pennsylvanians watch health care spending consume an ever-increasing share of their household budgets, health care reform becomes even more meaningful and urgent. In 2013, for employee-sponsored insurance programs, premiums and out-of-pocket health care costs absorbed 37% of household income in the state.¹¹⁹ As transformation is realized, consumers will benefit directly from improved economics and better overall health outcomes.
- **Consumer Advocates:** Advocacy groups whose mission is to expand access to health care or improve patients' rights will benefit from HIP, because many of the initiatives directly address these concerns. In future phases of HIP, the commonwealth will directly engage advocacy groups to ensure that implementation adequately considers the needs of health care consumers.

Although working to achieve the Triple Aim requires investment of time and resources, health care stakeholders are incentivized to participate in the process. The Health Innovation Center, working in partnership with payers, providers, government agencies, employers, and consumers, will drive the initiatives within this plan to make Pennsylvania health care more efficient and sustainable for the long-term.

13.5 Ongoing Stakeholder Engagement

The state will continue to engage a wide range of stakeholders throughout the HIP plan implementation phase. This engagement will be tailored to the specific HIP plan design, moving beyond the work group approach used to solicit stakeholder input for the plan development. In particular, for some strategies, the state's primary role will be as a convener, to bring stakeholders together to advance the initiatives. Similar to the design phase, the commonwealth will create forum(s) in which stakeholders can finalize the plans that have been set forth, identify leadership and supporting resources, and lay out a more specific plan of action.

During implementation, the commonwealth will place deliberate focus on engaging consumers, reaching out to include them in work groups. Under consideration are regional meetings to unveil and

¹¹⁹ Note: The average premium per enrolled employee includes both the employee and employer share of the premium. Estimate based on data for premiums from [Medical Expenditure Panel Survey, Insurance Component](#); for out-of-pocket costs from the [Health Care Cost Institute](#); for Median household income from [Median Household Income by State - Single-Year Estimates](#)

discuss the plan with the public focused on specific topics or initiatives. These may serve as a forum for consumer feedback on value-based payment methodologies or other aspects of the plan.

For other areas (i.e., where there is a more direct policy or regulatory role), the state will more actively drive the initiatives. In these instances, the state may sponsor legislation, develop new programs (such as the health literacy campaign mentioned in Chapter 5), or work to secure funding. The on-going stakeholder engagement approach evolving out of each of the original HIP work groups is described below.

VALUE-BASED PAYMENT

Advanced Primary Care

The commonwealth will work with each payer to identify and maintain key informants that will help to provide quarterly report outs (survey or conference call), so that the commonwealth may support and monitor existing initiatives and current trends. The commonwealth will also convene an annual meeting to discuss trends for the upcoming year and explore interest in aligning on measures.

Episode-based Payments

There is initial interest from stakeholders to continue the planning conversations around episode-based (also referred to as bundled) payments. In the near future, the commonwealth will look to hold a series of meetings to identify regions and/or clinical episodes where payers may shift to episode-based payments. The commonwealth will work with payers and providers to define future involvement in the further development of this effort.

PRICE AND QUALITY TRANSPARENCY

The price and quality work is currently being split up into sub-groups under the following categories:

Consumer Health Literacy

The commonwealth is currently identifying interested stakeholders to further the goals of the Pennsylvania Insurance Department to promote consumer health literacy. Stakeholders will evaluate existing initiatives to identify areas that: (a) are already well supported; (b) require coordination across existing initiatives; or (c) would merit a Pennsylvania-branded campaign. The commonwealth will help establish a working group cadence as needed to execute strategy, including securing funding for any necessary investments.

Broad Primary Care Transparency

The commonwealth will identify/solicit leaders interested in continuing a multi-stakeholder effort to align on measures, and determine a timeline and process by which payers will work to align on common measures. The commonwealth will help establish a working group cadence as needed to execute strategy, including securing funding for any necessary investments.

“Shoppable” Care

The commonwealth will organize a work group to further explore the different options for a commodity transparency tool. The commonwealth will review the findings of the APCD Council and Catalyst for

Payment Reform, lay out the principles of transparency, and then organize a work group from those individuals that have been identified to participate in the APCD work group to further decide next steps.

All-payer Claims Database (APCD)

Following a work group meeting in early May, the state will conduct two in-person stakeholder meetings over the summer, in addition to several stakeholder calls and webinars between these meetings.

POPULATION HEALTH

The population health work will be split by the five health priorities. Work will focus on more local efforts through a hub and spoke model utilizing county or municipal health departments as hubs for spokes (yet to be defined) in communities. This regional approach will bring the HIP plan work back into the local communities. The commonwealth anticipates regular quarterly meetings, in the beginning of implementation eventually progressing to bi-annual or annual meetings.

HEALTH CARE DELIVERY SYSTEM TRANSFORMATION

Community Health Workers

The commonwealth will support the Jewish Healthcare Foundation, who is driving the initiative in the near term. After the Foundation produces its recommendations, the commonwealth will review them and then decide which stakeholders to convene to drive this work forward.

Integration of Behavioral Health and Primary Care

The commonwealth will solicit a group of state and external stakeholders to focus on regulatory changes, inter-professional team training and care delivery, and financing mechanisms that support integrated behavioral health and primary care. These three sub-groups will further inform the overall integration approach.

Oral Health

The commonwealth will drive various strategies forward, including utilizing policy levers to leverage the existing oral health workforce to deliver care in underserved areas via the Pennsylvania Health Care Facilities Act and dental extender legislation. The commonwealth will participate in the efforts of the Pennsylvania Oral Health Coalition to develop an oral health workforce development plan for the commonwealth, an effort that is already underway and will conclude by November 2016.

Tele-health

In late 2014, the Tele-Health Advisory Committee, a diverse, multi-stakeholder group, met to deliberate actions the commonwealth and partner organizations should take to advance tele-health capacity and capability across Pennsylvania. Members of this advisory committee were invited to participate in the HIP HIT work group. Moving forward, DOH plan to re-convene and expand the Tele-Health Advisory Committee to drive forward these initiatives.

HEALTH INFORMATION TECHNOLOGY (HIT)

HIT solutions will support the advancement of other HIP plan priorities and strategies. For example, the HIE expansion will occur under the direction of DHS and the Pennsylvania eHealth Partnership Authority. The Tele-Health Advisory Committee will be reinstated to promote access to care through the use of tele-health services. The work for the population health dashboard and the prescription drug monitoring program will be led by DOH. The dashboard will be discussed through the population health work.

Acronym Glossary

ACL	Administration for Community Living
ACO	Accountable care organization
ADHD	Attention deficit hyperactivity disorder
AHIP	America's Health Insurance Plans
AHRQ	Agency for Healthcare Research and Quality
APC	Advanced primary care
APCD	All-payer claims database
BH	Behavioral Health
BH-MCO	Behavioral Health managed care organization
BIIT	Bureau of Informatics and Information Technology
BPCI	Bundled Payments for Care Improvement
BRFSS	Behavioral Risk Factor Surveillance System
CARE	Coordinating All Resources Effectively
CBHCP	Community-Based Health Care Program
CCJR	Comprehensive Care for Joint Replacement
CCO	Community Care Organization
CDC	Centers for Disease Control and Prevention
CHC	Community HealthChoices
CHC-MCO	CHC Managed Care Organization
CHIP	Community Health Improvement Plan
CHIP	Children's Health Insurance program
CHNA	Community health needs assessment
CHW	Community health workers
CME	Continuing Medical Education
CMMI	Center for Medicare and Medicaid Innovation
CMS	Center for Medicare and Medicaid Services
CHIPRA	Children's Health Insurance Program Reauthorization Act of 2009
COACH	Collaborative Opportunities to Advance Community Health
CPS	Current Population Survey
CREST	Caregiver Resources, Education, and Support
DHPD	Division of Health Professions Development
DHS	Department of Human Services
DHS MAPIR	Department of Human Services Medical Assistance Provider Incentive Repository
DOA	Department of Agriculture
DOH	Department of Health
DPP	Diabetes Prevention Program
DSME	Diabetes Self-Management Education

DSMP	Diabetes Self-Management Program
eCQM	Electronic Clinical Quality Measures
ED	Emergency department
EHR	Electronic health records
EMR	Electronic medical records
EPIC	Evaluation, Treatment and Prevention In Community Settings
FQHC	Federally Qualified Health Center
GDP	Gross Domestic Product
HAP	Hospital and Healthsystem Association of Pennsylvania
HCBS	Home and Community Based Services
HCSI	Healthy Corner Store Initiative
HHS	Health and Human Services
HIC	Health Innovation Center
HIE	Health information exchange
HIO	Health information organization
HIP	Health Innovation in Pennsylvania
HISP	Health information services providers
HIT	Health Information Technology
HPSA	Health Professional Shortage Area
HRSA	Health Resources and Services Administration
IBC	Independence Blue Cross
JAMA	Journal of the American Medical Association
JHF	Jewish Healthcare Foundation
KCMU	The Kaiser Commission on Medicaid and the Uninsured
LPN	Licensed Practical Nurse
LRP	Loan Repayment Program
LTSS	Long Term Services and Supports
MA	Medical Assistance
MA EHR	Medical Assistance Electronic Health Records
MACPAC	Medicaid and CHIP Payment and Access Commission
MACRA	Medicare Access and CHIP Reauthorization Act
MACStats	Medicaid and CHIP Program Statistics
MAPIR	Medical Assistance Provider Incentive Repository
MCO	Managed Care Organization
MDE	Major Depressive Episodes
MITA	Medicaid IT Architecture
MSSP	Medicare Shared Savings Program
MUA	Medically underserved areas
NAHDO	National Association of Health Data Organizations
NCSL	National Conference of State Legislatures
NGA	National Governors Association

NHE	National Health Expenditure
NSDUH	National Survey on Drug Use and Health
OA	Office of Administration
ONC	Office of the National Coordinator
P3N	Pennsylvania Patient & Provider Network
PA NAP SACC	Pennsylvania Nutrition and Physical Activity Self-Assessment for Child Care
PACE	Program of All-Inclusive Care for the Elderly
PAP	Principal Accountable Provider
PCMH	Patient-Centered Medical Home
PCP	Primary care provider
PDA	Pennsylvania Department of Aging
PDMP	Prescription Drug Monitoring Program
PEBTF	Pennsylvania Employees Benefit Trust Fund
PHC4	Pennsylvania Health Care Cost Containment
PHG	Public Health Gateway
PHN	Proven Health Navigator
PID	Pennsylvania Insurance Department
PMPM	Per member per month
R&A	Registration & Attestation System
RFP	Request for proposal
RHC	Rural Health Center
RN	Registered Nurse
SAMHSA	Substance Abuse and Mental Health Services Administration
SCORP	Statewide Comprehensive Outdoor Recreation Plan
SCPA	South Central Pennsylvania Alliance
SHA	State Health Assessment
SHADAC	State Health Access Data Assistance Center
SHIP	State Health Improvement Plan
SIM	State Innovations Models
SMART	Specific, Measurable, Achievable, Realistic and Time-Targeted
SUSTAIN	Supporting Seniors Receiving Treatment and Intervention
tPA	Tissue plasminogen activator
UPMC	University of Pittsburgh Medical Center
VBID	Value-Based Insurance Design
WOMAC	Western Ontario & McMaster Universities Osteoarthritis

Appendices

The Appendices are listed below and can be found in a separate document:

Appendix 1: List of Steering Committee Members

Appendix 2: List of Work Group Participants

Appendix 3: Minutes from Work Group Meetings

Appendix 4: Presentations from Work Group Meetings

Appendix 5: Agendas from National Governors Association Meetings

Appendix 6: Recommendations and Insights from National Governors Association