Status Check VI

Pennsylvania Rural Health Care

Prepared by
Pennsylvania Rural Health Association
November 2016
Acknowledgements

The Pennsylvania Rural Health Association (PRHA) would like to thank several organizations and individuals for their time and effort to develop Status Check VI.

- Barry Denk, Director, Jonathan Johnson, Senior Policy Analyst, and Christine Caldara Piatos, Communications Manager, the Center for Rural Pennsylvania.

- Joseph Robare, Associate Professor and Director of the Public Health Program, Public Health and Social Work Department; Jamie Hammond, Assistant Professor and Special Needs Population Coordinator, Department of Biology, Physician Assistant Studies; and former undergraduate students, Rachel Good and Himani Jadeja, Slippery Rock University.

- Lisa Davis, Director and Outreach Associate Professor of Health Policy and Administration, Pennsylvania Office of Rural Health; Curran Johnson, graduate student; and Kara Martin, undergraduate student, Penn State.

Through the dedicated work of these individuals and the contributions from their organizations, the data, content, and outline of the document was revised to reflect current information and chart a course for the future. PRHA is indebted to each of them.
# Table of Contents

Acknowledgements..................................................................................................................1
Introduction.....................................................................................................................................1
An Overview of Rural Pennsylvania ..............................................................................................3
The Role of Health Care in Economic Development ...................................................................8
Areas of Medical Underservice in Rural Pennsylvania ...............................................................11
Recruitment and Retention of Primary Care Practitioners in Rural Pennsylvania ....................15
Use of Advanced Practice Providers to Enhance Primary Care ..................................................18
Access in Rural Areas of the Commonwealth
Primary Care Practices in Rural Pennsylvania ...........................................................................22
Rural Hospitals and Rural Health Care Across the Continuum .................................................25
Emergency Services in Rural Areas ...........................................................................................29
Perinatal Care in Rural Pennsylvania ..........................................................................................33
The Rural Elderly ..........................................................................................................................36
Migrant Farm Worker Health Needs ............................................................................................40
Health Insurance in Rural Pennsylvania ......................................................................................42
Behavioral Health Services in Rural Areas ..................................................................................46
Oral Health Issues in Rural Pennsylvania ....................................................................................51
The Status of Public Health in Rural Pennsylvania .....................................................................56
Bioterrorism and Emergency Preparedness in Rural Pennsylvania .............................................59
The Use of Telehealth Services in Rural Areas ............................................................................62
Health Information Technology ....................................................................................................64
Broadband Access ......................................................................................................................64
References .....................................................................................................................................71
Rural Health Resource Directory ..................................................................................................76
Introduction

With the high visibility of Pennsylvania’s large urban centers, Philadelphia and Pittsburgh, many would not consider Pennsylvania to be a largely “rural state.” However, anyone who has had the pleasure of extensive travel in the commonwealth would not doubt that fact for a minute. Pennsylvania’s 59,300 farms occupy nearly 7.7 million acres. Rural Pennsylvania possesses abundant natural resources, beautiful scenery, a strong work ethic, and proud communities. This document outlines the health care challenges and opportunities citizens of this large and important part of Pennsylvania face and offers questions for policymakers to use as the foundation for thoughtful discussion in the development of meaningful and informed policy.

Twenty-seven percent of the state’s population live in areas that are designated as rural and, except for Philadelphia, every county in Pennsylvania has areas classified as rural. Forty-eight (48) of Pennsylvania’s 67 counties are considered to be rural based on population density and four counties are 100 percent rural. These distinctions bring with them some significant challenges that must first be recognized and acknowledged and then addressed through visionary leadership and collaboration.

The following issue briefs characterize some of those unique challenges across the health care continuum in the delivery of quality health care services in rural areas of the commonwealth. While some of the issues are larger than others, all are significant. All impact the health and well-being of a significant portion of Pennsylvania’s population as well as the future of vulnerable local economies.

Like the previous issues of this status report, which were presented in 1997, 1999, 2005, and 2010, the information presented here is not intended to paint a bleak picture of rural Pennsylvania. Instead, this

“Rural” should not mean less in terms of access to high quality health care services across the continuum.
document is intended to raise awareness and begin discussions among those who can make a difference in the availability of quality health care in rural areas of Pennsylvania through policy, regulation, legislation, activism or involvement.

The economic, cultural, social, geographic and demographic characteristics of rural communities are sufficiently different from those of urban and suburban communities to require special consideration in both state planning and legislation. Rural areas, by definition, are characterized by sparse populations and geographic barriers and must also contend with significant health professional shortages to address populations that are generally older, sicker, and poorer. Because of these factors, rural providers and rural health care delivery systems have less ability to reduce fixed and variable costs and absorb or spread losses and have a greater reliance on—and thus, vulnerability to—government programs such as Medicare and Medicaid.

Many positive things are happening despite the challenges, but much more needs to occur to ensure access to quality health services for all rural Pennsylvanians. “Rural” should not mean “less” in terms of access to quality health care services across the continuum.
An Overview of Rural Pennsylvania

Note: There are many different definitions of the term “rural” used at the federal and state levels. For the purposes of this report, the definition of “rural” is the definition established by the Center for Rural Pennsylvania, which defines any county as rural if the county has a population density of less than the statewide density of 284 persons per square land mile. Any county that has a population density of 284 or more per square land mile is considered to be urban. All data, regardless of their origin, have been analyzed using this definition.

Rural Pennsylvania is quite large and its characteristics are quite diverse. In 2015, it was estimated that the commonwealth had over 3.4 million rural residents. Except for Philadelphia and Delaware counties, every county in Pennsylvania has areas classified as rural. Forty-eight of Pennsylvania’s 67 counties are classified as rural based on population density. The demographic, geographic, economic, and quality of life issues unique to rural areas can have a significant impact on the health status of rural Pennsylvanians. For example, mountainous terrain and winding roads create issues for rural health systems. Ready access to referral facilities and ambulance transportation is critical, but become especially significant when ice and snow make driving hazardous. Travel time to all types of health care providers is generally longer in rural areas. Unlike the public transit systems that serve most urban areas, public transportation is either sporadic or non-existent in rural Pennsylvania.

Generally speaking, rural Pennsylvania is homogenous. Non-whites make up 6 percent of the state’s rural population. Persons who are Hispanic or Latino comprise less than 3 percent of the rural population. According to the U.S. Census Bureau, 20 percent of the state’s rural population is under 18 years of age and the
percentage of senior citizens age 65 and older in rural areas is about 18 percent.

Changes in the rural population can be seen more clearly if the population is grouped by generational cohort. Baby boomers (anyone born between 1946 - 64) make up close to 28 percent of the rural population. This generation is the economic dynamo of most communities. People in this age bracket are primarily the ones buying homes and having children. They also are the state’s largest tax paying group.

The average household income in rural Pennsylvania was $60,986, while in urban counties, the average was $76,428.

Data from the U.S. Bureau of Economic Analysis show that in 2014, the per capita personal income in rural Pennsylvania was $39,000; in urban areas the per capita personal income was $50,873. Since 1970, the per capita income gap in rural Pennsylvania has doubled (after adjusting for inflation) and each year the gap has widened. Lower incomes mean that rural areas have fewer financial resources to address critical educational and infrastructure needs.

Poverty also is more prevalent in rural areas than in urban areas. According to the U.S. Census Bureau, in 2014, more than 14 percent of Pennsylvania’s rural population had incomes below the poverty level. In urban areas, 13 percent fell below this threshold. According to data from the 2010-14 American Community Survey, 33 percent of rural Pennsylvanians had incomes less than 200 percent of the poverty level; in urban areas, 30 percent had incomes in this range. Just because rural poverty is more scenic, does not make it any less difficult.

The growing proportion of elderly rural Pennsylvanians prompts a discussion on the ever-changing demands on the rural health system to provide services to a changing population. The economic base of rural Pennsylvania is such that resources may or
may not be available in the same proportion as elsewhere in the state. Disparities in educational status, employment, and income may require the development of specialized approaches to health improvement. The rapid population growth in some rural communities may have an impact on available services as well as creating a mix of established residents and new arrivals with varying expectations on local health and human service delivery systems. Additional review of state agency data, such as from the Department of Aging, Department of Transportation, and others, revealed a higher instance of elder abuse and neglect, alcohol related automobile deaths, poor dental access for low-income residents, and access to mental health services as important differences in the health status of rural and urban residents.

Although prior to the nation’s current economic challenges employment had increased in rural areas, wages and salaries rose very little. Between 2010 and 2015, the number of jobs in the state’s rural counties increased 2 percent while the number of jobs in urban counties increased 4 percent. During this period, however, rural wages increased 6 percent, while urban wages increased 4 percent (after adjusting for inflation).

The impact of a struggling economy on manufacturing and industry is evident in rural Pennsylvania. According to data from the Pennsylvania Department of Labor and Industry, during 2015, the rural unemployment rate was 5.6 percent and the urban rate was 5.0 percent. In addition, during this period, eight rural counties had unemployment rates above 10 percent.

The rural workforce has a different makeup than the rest of the state. Lower percentages of workers have professional and management jobs and a higher percentage are employed in the service industry. A much higher percentage is employed in manufacturing and industry positions. In 2010-14, almost one-half of rural Pennsylvanians were employed in manufacturing (14

If you work in rural Pennsylvania, chances are that your company employs fewer than 10 workers.

In Pennsylvania’s rural counties, 277,800 adults do not have a high school diploma or equivalent.
percent), wholesale or retail (15 percent) or health care and social services (16 percent).

If you work in rural Pennsylvania, chances are that your company employs fewer than 10 workers. An analysis of the U.S. Census Bureau’s 2014 County Business Patterns for Pennsylvania shows that nearly 73 percent of business establishments in rural counties employ fewer than 10 workers. In many rural counties, the largest employers tend to be health care providers and educational institutions. Only 14 percent of rural business establishments employ 20 or more workers.

In Pennsylvania’s rural counties, more than 277,800 adults do not have a high school diploma or equivalent. This represents nearly 12 percent of the 2.4 million rural residents who are 25 years old or older. Likewise, just 20 percent of rural residents have a bachelor’s degree or higher. In urban areas the figure is 31 percent. Additionally in urban areas, the number of adults without a high school diploma is 688,981, which represents 11 percent. Moreover, with a more comprehensive network of community colleges and universities, more than 24 percent of urban adults have an associate’s degree or some college experience. In rural areas, 23 percent of adults have an associate’s degree or some college experience.

Access to medical care is limited in many rural areas. In 2013, data from the U.S. Department of Health and Human Services’ Health Resource and Service Administration showed rural Pennsylvania had roughly one physician for every 586 residents, as compared to one for every 267 residents in urban Pennsylvania. According to these data, 44 percent of physicians in rural areas and 34 percent of physicians in urban areas are primary care.

Analysis of behavioral survey data suggests that rural residents are less healthy than their urban counterparts. According to the Behavioral Risk Factor Surveillance System (BRFSS) surveys,
fewer rural residents regularly exercise, a third are overweight, and nearly 60 percent are at risk for having a sedentary lifestyle. In general, the results show that rural adults are in poorer physical condition and have more health risks than urban adults.

Traditional market forces have not been very effective in making health care both available and affordable to rural residents. According to 2014 data from the U.S. Census Bureau, an estimated 10.4 percent of rural adults under 65 years old lacked health insurance, as compared to 10.2 percent of similarly aged urban adults. Among children (under 18 years of age), the uninsured rates were 5.6 percent for rural areas and 5.0 percent for urban areas.

Despite these challenges, rural Pennsylvania remains a beautiful and varied landscape, populated by residents committed to small town life. People who live there choose to do so because they enjoy the strong sense of community, the sense of security, the slower pace, the open spaces and the many other benefits of the rural way of life. Choosing “rural,” however, should not mean choosing “less” in terms of access to quality health care.
The Role of Health Care in Economic Development

Most rural development and health care experts agree with the hypothesis that a rural area needs a quality health care sector if it is to expand and prosper. Businesses need a dependable, productive labor force that is healthy and has access to readily available health care services. A quality health care sector can be very important in helping communities attract and retain job-creating businesses. Employees and management may offer strong resistance to relocate if they are asked to move into a community with substandard services.

Data show the importance of the health care industry to rural areas. The hospital is one of the largest employers in a rural community. Each health care dollar generally “rolls over” about 1.5 times in a rural community. Every five jobs in health care generate four jobs in the local economy. In general, because rural health care is usually provided at a lower cost, rural health care dollars spent in rural communities will go further.

Health care is big business. In 2015, the rural health care and social assistance industry employed more than 218,000 workers or more than 17 percent of the rural workforce. Hospitals and medical centers make up over one-fifth of the top employers in the state’s 48 rural counties. In 2015, data from the Pennsylvania Health Care Cost Containment Council showed that rural hospitals received more than $7.1 billion in net patient revenues or roughly $19.5 million per day. That year, the average rural county generated more than $103 million from health care. Unfortunately, more than 50 percent of these health care dollars leave rural areas to be spent in metropolitan markets.

Pennsylvania’s rural residents often head for the city for their health care because there are not enough services locally, their health insurance penalizes them unless certain physicians or...
hospitals are used, the individual believes that bigger is better or the person needs the specialized services provided by subspecialists at tertiary care institutions. This exodus of health care dollars means that there is less money to reinvest in local, rural health care systems.

Federally Qualified Community Health Centers (FQHCs) are key economic drivers in their local communities. They provide $370 million to local economies and provide more than 2,600 full-time equivalent jobs in the commonwealth. The average independent Rural Health Clinic (RHC) may provide over 12 local jobs and over $1 million in wages, salaries, and benefits annually.

It is incumbent on rural providers and rural communities to work together to build local economies that support and are supported by local health care. Closure of a local hospital significantly affects a community’s ability to attract and retain business. It often also results in “brain drain,” where the more highly educated and trained individuals—often a rural community’s most valuable resource—leave.

The sustainability of rural hospitals and rural health care is threatened for many reasons including new and expensive technology, limited opportunities for economies of scale, limited numbers of local primary care physicians, discriminatory payment schedules, the ever-increasing costs of regulatory compliance and accreditation, and the increasing costs of a highly educated work force.
Questions to ask and issues to address as we look to promote economic vitality in rural areas include:

- What can be done to increase the percentage of health care delivered locally in rural communities?
- What can be done to improve access to training and education in rural communities?
- What does it take to attract investment to sustain locally available access to high quality health care?
- How can quality be ensured while allowing flexibility in how regulations are met and care is delivered?
Areas of Medical Underservice in Rural Pennsylvania

In the past 30 years the United States has experienced a significant increase in the number of health professionals such as physicians, certified registered nurse practitioners, and physician assistants. Despite this trend, many rural and inner city areas have been and continue to be medically underserved. The federal government has instituted a variety of programs to address this situation. As part of that response, and to provide structure to these programs, the federal government has developed definitions of areas of medical underservice. Two such definitions are used: the Health Professional Shortage Area (HPSA) and the Medically Underserved Area or Population (MUA and MUP) designations.

The initial purpose of the HPSA was to delineate practice sites for participants in the National Health Service Corps (NHSC) but it is now used for a number of programs. Criteria for HPSA designation require that a rational health care service delivery area exhibit 1) a lack of provider access in surrounding service areas and 2) less than one primary care physician per 3,500 residents or, in special circumstances, less than one primary care physician per 3,000 residents. Designations are granted for 3 years and are not permanent. Benefits of designation include NHSC participation, improved Medicare reimbursement, Rural Health Clinic eligibility, eligibility for the Pennsylvania Primary Care Provider Loan Repayment Program, and enhanced federal grant eligibility.

Like the HPSA designation, the MUA designation is used for a variety of programs, but unlike the HPSA designation, the MUA designation considers three factors in addition to the ratio of population-to-primary care physician. The additional factors are: 1) the percent of population over age 65; 2) the infant mortality rate; and 3) the percentage of population below the poverty level.

22 percent of the state’s population reside in a federally designated shortage area—either a Primary Care Health Professional Shortage Area (HPSA) or a Medically Underserved Area or Population (MUA or MUP).
All four factors are weighted and combined using a predetermined formula to compute an index of medical underservice.

Fourteen percent of Pennsylvania’s population reside in an area designated as a HPSA and 14 percent of the state’s population reside in areas designated as a MUA. Twenty-two (22) percent of the state’s population live in areas designated as either a HPSA or a MUA. Residents of an area of underservice are more likely to be rural, of minority status, poorly educated, living in poverty, and to have limited access to transportation.

The following Pennsylvania county maps provide geographic locations of MUAs, and profession-specific HPSAs.
Health Professional Shortage Areas (HPSA):
Primary Care by County, 2015

Map prepared by the Center for Rural Pennsylvania
Data source: HRSA

Health Professional Shortage Areas (HPSA):
Dental Care by County, 2015

Map prepared by the Center for Rural Pennsylvania
Data source: HRSA
Questions to ask and issues to address in ensuring access to health care services in designated medically underserved areas of the commonwealth include:

- What additional kinds of programs could be developed, using federal shortage designations as eligibility criteria, to enhance access to health care in underserved areas of the commonwealth?

- How can we preserve and enhance the programs administered by the Pennsylvania Department of Health’s Bureau of Health Planning that have proven to be effective in enhancing access to health care in designated shortage areas—for example, the Pennsylvania Primary Care Practitioner Loan Forgiveness Program and the J-1 Visa program?
Recruitment and Retention of Primary Care Practitioners in Rural Pennsylvania

Primary care provides initial access to the health care delivery system. Through primary care, the majority of physical, mental, emotional, and social health care needs are integrated as well as health promotion and disease prevention services. Traditionally, primary care includes those physicians who practice general/family, internal, obstetrics and gynecology or pediatric medicine.

There is a shortage as well as a maldistribution of primary care practitioners in Pennsylvania. Two thirds of the state’s primary care clinicians practice in the five most populated counties in the state: Allegheny, Bucks, Delaware, Montgomery, and Philadelphia. According to 2013 data from the U.S. Department of Health’s Health Resources and Services Administration, 40,875 physicians are practicing patient care in Pennsylvania and 14,620 are engaged in primary care. The data indicate that rural Pennsylvania has 74.5 primary care physicians per 100,000 residents, while in urban areas, there are 129.1 primary care physicians per 100,000 residents.

Thirty percent of physicians practicing in rural counties anticipate leaving direct patient care in Pennsylvania in less than 6 years, compared to 26 percent of physicians practicing in urban counties. As of 2014, 51 percent of practicing physicians in Pennsylvania are age 50 or older, indicating that many may soon retire.

Several inter-related factors pose challenges to physician recruitment and retention and to access to the services that they provide. These factors include professional isolation, reduced options for practice coverage, challenges with technology and trained personnel, barriers to continuing medical education, and spousal and family considerations. Although state medical liability issues, which severely impacted physician recruitment and
retention in the early 1990s, have greatly improved. Pennsylvania’s liability climate continues to be challenging. Affordable malpractice insurance coverage strongly influences where a physician may decide to practice and may discourage physicians from choosing training and practice sites in Pennsylvania. This is especially disturbing when we consider the fact that most physicians choose to practice within a 20-mile radius of where they completed their residency training.

Primary care access and provider shortages in the state have been well documented. In fact, based on 2015 estimates, portions of 65 of the state’s 67 counties, both rural and urban, are designated as Health Professional Shortage Areas (HPSAs), Medically Underserved Areas (MUAs) or both. According to federal 2010 data, HPSAs are home to 26 percent of the rural population, or 913,000 rural residents, while more than 1.1 million, or 32 percent of rural residents, live in MUAs. These far exceed the number of urban residents who live in HPSAs or MUAS, at 1.7 percent and 16 percent, respectively.

While progress has been made in alleviating rural Pennsylvania’s critical physician shortage, the issue of equitable access to primary care continues to persist. The Pennsylvania Department of Health, through its Bureau of Health Planning, coordinates programs focused on the recruitment and retention of primary care practitioners and oral health providers. These include the provision of technical assistance in obtaining shortage area designation, community-based grants to increase access to primary care, J-1 visa waivers for primary care physicians, a primary care loan repayment program, and support for a primary care career center administered by the Pennsylvania Association of Community Health Centers. Many of these programs extend beyond primary care physicians to include certified registered
nurse practitioners, nurse midwives, physician assistants, and dentists.

Recruitment and retention of primary care providers poses a great challenge to the commonwealth and must be addressed through the collaborative efforts of health care providers, educators, business leaders, managed care organizations, community leaders, state officials, legislators, and others.

Questions to ask and issues to address in ensuring that Pennsylvania has an adequate primary care practitioner base to meet the needs of its residents include:

- **How can we preserve and enhance the programs administered by the Pennsylvania Department of Health’s Bureau of Health Planning that have proven effective in enhancing access to health care in designated shortage areas—for example, the Pennsylvania Primary Care Practitioner Loan Forgiveness Program and the J-1 Visa program?**

- **How can Pennsylvania improve its competitiveness with other states in recruiting and retaining primary care practitioners?**

- **What changes can be made to medical education to enhance the selection of candidates with an interest in serving underserved areas and underserved populations of the commonwealth?**

- **How can the state’s loan repayment program be enhanced to be competitive with the programs in neighboring states?**

- **What steps need to be taken to address Pennsylvania’s medical malpractice issues?**
Use of Advanced Practice Providers to Enhance Primary Care Access in Rural Areas of the Commonwealth

Advanced Practice Providers (APPs) in Pennsylvania include Physician Assistants (PAs), Certified Registered Nurse Practitioners (CRNPs) and Certified Nurse Midwives (CMNs). PAs and CRNPs have been in existence for over six decades. The profession of nurse midwifery (CNMs) has an even longer history in the provision of health care to women. The role these professionals play in improving patient access to quality medical care has been recognized throughout the country. Primary care PAs and CRNPs can be an important component of collaborative primary care practice due to their salary structure, patient visit protocols, and liability costs. APPs are highly competent practitioners with patient satisfaction levels equal to those of physicians. Research demonstrates that PAs and CRNPs can perform 85-90 percent of the services that a primary care physician provides.

Despite these proven attributes, recognition by policy makers and inclusion as primary health care practitioners in legislation, regulation, and policy in Pennsylvania has not always demonstrated the important contributions they make, particularly in underserved areas of the commonwealth.

PAs, CRNPs, and CMNs are a vital asset to rural health systems and many rural communities are increasingly exploring their use for primary health care services. For example, in communities where the population base is too small to support a full-time physician, a PA or CRNP, working in a collaborative relationship with the physician, is often a more feasible option to help prevent burnout and increase productivity.

PAs and CRNPs are educated in primary care, health promotion, and disease prevention. Responsibilities include obtaining health
histories, performing physical exams, diagnosing and making decisions for appropriate management and treatment of common illnesses and injuries, management of chronic health problems, writing prescriptions, ordering and interpreting lab tests and x-rays, and providing preventive services and education. PAs and CRNPs practice in public and private health centers, hospital clinics and emergency rooms, physician’s offices, migrant health centers, public housing clinics, mobile clinics, administrative settings and educational institutions.

CNMs are skilled health care professionals who provide primary health care to women. This includes assessment, treatment, and, if required, referral to a specialist. Services include preconception counseling, care during pregnancy and childbirth, routine gynecological services, and care of peri-and post-menopausal woman. CNMs may co-manage, with physicians, the care of women with high-risk pregnancies. CNMs may deliver babies in hospitals, birth centers, or in the home for women with low-risk pregnancies.

PAs, CRNPs, and CNMs meet required educational criteria for their profession and are licensed to practice by their respective licensing board in Pennsylvania: PAs and CNMs by the State Board of Medicine and CRNPs by the State Board of Nursing. PAs are licensed to practice medicine with physician supervision, which includes a written agreement for practice responsibilities. CRNPs and CNMs practice autonomously but must have a written collaborative agreement with physicians including availability for consultation and emergencies, referrals, drug protocols, and other mutually agreed upon assistance.

Pennsylvania is the fourth and fifth largest employer of PAs and CRNPs in the United States, respectively. In 2013, there were 49 PAs for every 100,000 people living in rural Pennsylvania counties, which is slightly higher than the ratio in urban counties.
In contrast, the ratio of CRNPs per 100,000 rural residents in 2014 was 33 while the ratio in urban counties was 59. Traditionally, both of these professionals are more likely to work in rural and other underserved areas than other primary care providers. Researchers predict that by 2020 there will be a 58 percent increase in primary care PAs and a 30 percent increase in primary care CRNPs. Removing the barriers to the most effective and efficient use of these professionals could have a significant impact on improving primary care access in rural areas of the commonwealth. Some barriers are attitudinal—many individuals and communities are unaware of, or misunderstand, the capabilities of APPs. Likewise, physicians may not be well informed about the education, competencies, and licensure of PAs, CRNPs, and CNMs.

Two other barriers that effectively prohibit AAPs from practicing and, subsequently, from providing services to clients include state regulations that control the scope of practice and policies by third-party payers that limit or exclude reimbursement for primary care services. However, some success can be claimed on the regulatory front with the passage of the *Prescription for Pennsylvania* reforms in 2007. Additionally, in 2016, the Pennsylvania General Assembly considered legislation to allow CRNPs with 3 years and 3,600 hours of physician collaboration practice to obtain full practice authority.

CNMs continue to advocate for state regulations that will give them authority to write prescriptions and to directly admit laboring women into hospitals. Additionally, PAs and CRNPs are reimbursed at 85 percent of the physician fee schedule by Medicare and negotiation for inclusion as providers of care, as well as reasonable levels of reimbursement in managed care organizations and other commercial health insurance companies, continues to be problematic and at the option of the individual insuring company.
It is essential to expand the inclusion of PAs, CRNPs, and CNMs in the continued development of an effective primary care infrastructure that ensures access to quality health care for all populations, especially those in rural underserved areas. Removal of legislation, regulations, policies and institutional barriers to practice will result in the creation of more job opportunities. While some of these barriers were removed with the passage of recent legislation, others remain to be addressed.

**Questions to ask and issues to address for fully integrating Advance Practice Providers in primary care in rural areas:**

- What state statutes, regulations, and policies limit the use of these professionals as primary care clinicians?

- What process is necessary to create job opportunities in health centers, hospitals, and other settings to increase patient access to Advanced Practice Providers?

- What incentives can be provided to physicians practicing in communities that cannot support two physicians to encourage collaboration with Advanced Practice Providers to increase patient access and productivity?
Primary Care Practices in Rural Pennsylvania

There are four major types of primary care practices serving rural Pennsylvania: private physician practices, free clinics, Rural Health Clinics (RHCs) and Federally Qualified Community Health Centers (FQHCs). Each of these providers plays an important role in expanding access to primary care to avoid more costly emergency and hospital care, but there are significant differences in these models of care which are important to be aware of when making-policy decisions.

Private physician practices, for the most part, serve individuals with insurance such as private insurance or Medicare. Free clinics, as their name implies, do not charge for services. They generally rely on volunteer clinicians and benefactors like the local community hospital to support the cost of care provided. Rural Health Clinics (RHCs) are rural primary care practices certified to receive special Medicare and Medicaid reimbursement. RHCs can be for-profit or not-for-profit, public or private entities. RHCs must be located in federally-designated health professional shortage areas and must employ “midlevel practitioners” (for example, a nurse practitioner, nurse midwife or physician assistant) who are available to provide services at least 50 percent of the time the RHC is open and providing services. In 2016, there were 74 RHCs in Pennsylvania.

Federally Qualified Health Centers (FQHCs) are full-service primary care centers as defined by Section 330 of the Public Health Service Act. The provider most different from the others is the FQHC because it is subject to the requirements of the federal Health Center Program, which means an FQHC, unlike the other primary care providers, must adhere to a set of federal clinical, managerial, and administrative mandates.

Pennsylvania has 74 Rural Health Clinic sites and 274 Federally Qualified Health Centers. These primary care sites, in addition to free clinics, are the “safety net” providers in the commonwealth.
FQHCs are supported in meeting these requirements through several benefits, including an annual grant and like the RHC, special Medicare and Medicaid reimbursement. In addition, FQHC clinicians are, for purposes of medical liability only, considered federal employees and are therefore covered for medical malpractice by the Federal Tort Claims Act (FTCA).

FQHCs are located in both rural and urban areas of Pennsylvania. There are currently FQHC sites in 49 of Pennsylvania’s 67 counties providing health care to medically underserved rural and urban regions of the commonwealth. Pennsylvania’s more than 200 FQHC sites serve more than 700,000 people annually through more than 2.5 million visits each year.

Private practices, free clinics, RHCs, and FQHCs are important components of an effective reformed health care system. They help reduce the crowding in hospital emergency departments and are the safety net of the ailing U.S. health system. Which model(s) of care is best for an individual rural community varies depending on the population, clinical resources, unmet needs, other health care resources that are available across the continuum, and other factors. The model is best determined after a thorough assessment of the alternatives.
Questions to ask and issues to address relative to models of primary care in rural areas:

- *Free clinics provide care to many who would not have access to it otherwise but have shortcomings such as: sustainability, limited hours, limited oversight, lack of resources for implementation of electronic health records to promote information exchange between providers, no quality assurance or data collection requirements. Is this a model Pennsylvania should financially support?*

- *How can community assessments be supported to help individual communities evaluate the options and determine the best model of care for that community?*
Rural Hospitals and Rural Health Care Across the Continuum

Hospitals are key providers of health care in rural areas. Rural hospitals provide inpatient and outpatient services vital to the health and well-being of residents in isolated communities. In crisis situations, the time it takes to reach a hospital can mean the difference between life and death.

The role of rural hospitals extends beyond emergency assistance. Local hospitals provide general acute care services close to home and family. Primary care providers are more likely to locate in a community that has easy access to a hospital. These hospitals also attract nurses and other health care specialists and serve as anchors for a broad range of health and human services in the communities they serve.

Rural hospitals also serve as the anchor for access to care across the health care continuum, a continuum which includes ambulatory care services, rehabilitation, home care, long-term care, behavioral health, hospice, and other services. In many rural counties, these services are available because the local hospital has developed them in response to local need.

Hospitals are major contributors to the local economy and in many rural communities serve as one of the largest employers. Hospitals also are important consumers of local goods and services. In addition, the availability of quality local health care is an important factor in attracting new businesses to the area.

Although rural hospitals serve as major providers of health care and employment, they are under increased financial stress. Between January 2010 and January 2016, 66 rural hospitals across the nation closed, including two in Pennsylvania. Closures of rural hospitals are increasing at a faster pace than ever before. In 2015, the National Rural Health Association reported that the number of
rural hospital closures in 2014 was more than in the previous 15 years combined.

To help improve financial performance, certain small rural hospitals are able to be designated as a “Critical Access Hospital” (CAH). A CAH is a hospital that has met certain requirements and has been certified by the Centers for Medicare and Medicaid Services (CMS). Requirements for CAH certification include having no more than 25 inpatient beds; maintaining an annual average length of stay of no more than 96 hours for acute inpatient care; offering 24-hour, 7-day-a-week emergency care; and being located in a rural area (at least 35 miles away from any other hospital or CAH). The smaller hospital size and short length of stay allow CAHs to focus on providing care for acute in-patient conditions and outpatient care, while referring complex conditions to larger hospitals. Certification allows CAHs to receive cost-based reimbursement from Medicare, instead of standard fixed rates. This reimbursement enhances the financial performance of small rural hospitals that were financially challenged prior to CAH conversion. This type of reimbursement also ensures that rural populations have access to essential preventive and acute health care services.

As of 2016, fourteen rural hospitals in Pennsylvania have been designated as CAHs. As members of the Pennsylvania Critical Access Hospital Consortium, the hospitals collaborate and share best practices to improve quality outcomes, strengthen workforce, improve rural emergency and trauma systems, and enhance population health improvement in their communities.

The hospital is the anchor of the rural health care delivery system. A new paradigm is needed to ensure that small rural hospitals remain financially viable and can continue to serve the needs of their communities. It is in the public’s interest for these hospitals to receive the support necessary for them to provide the health care
services that are not met through public health, community health centers, or the private practice of medicine. The question is not whether government should be involved, but how it should be involved. The marketplace needs adjustments and assistance from the public sector to sustain health care access in rural areas.

In rural areas, the loss of any provider across the continuum is felt more profoundly. Diminishing access to any element of the health care continuum can have a devastating impact on other components of the health care system. Historically, changes to payment or delivery policy for one element of the continuum have frequently been made with little regard for the “unintended consequences” to the rest of the health care system. Because of interdependency of each element of the rural health care system and to the economy, it is essential that policy decisions not be made without a critical analysis of what the overall impact will be on the health of rural Pennsylvanians.

Questions to ask and issues to address in ensuring access to health care services across the continuum include:

- Should the state determine which hospitals are necessary for geographic or economic access? If so, how?

- Could a state capital funding program be developed for these safety net facilities for renovation, expansion of outpatient space, needed equipment, and to develop technology linkages with larger institutions and health systems?

- Is it possible to base financial assistance to small rural hospitals on their ability to address the health care needs of the communities they serve and outcomes and quality of care delivered?
• Should supplemental funding for technical assistance (financial, technology, human resources and other) be developed to promote the viability of rural hospitals?

• How might payment and regulatory policy in one area of the continuum impact other areas of the continuum?

• Should Pennsylvania, when evaluating proposed policy, regulation, and legislation, routinely analyze the potentially disproportionate impact of the proposals on rural areas, particularly because of the significant interdependence of all elements of the health care continuum and all areas of the rural economy on one another? That is, should a rural impact analysis be required on proposed legislation and regulation?
Emergency Services in Rural Pennsylvania

Access to effective emergency services in rural Pennsylvania requires collaboration between two systems—prehospital emergency medical services (EMS) and hospital emergency departments. Both systems are currently under considerable stress, in large part due to workforce shortages.

Most rural EMS units rely on volunteer attendants and their low volume and profit potential lead to an inability to attract and retain private sector EMS services. Many rural hospitals, likewise, have difficulty attracting physicians to staff their emergency departments. Inconsistent volumes of patients make it difficult for rural hospitals to attract board-certified emergency medicine physicians, resulting in a reliance on primary care physicians to staff the emergency department. Discontinuing emergency services or closing a hospital emergency department does not solve the problem for a rural community; it just shifts the burden to another community or service.

Injury-related mortality is 40 percent higher for rural residents. This higher mortality rate is due, in large part, to motor vehicle crashes. In rural areas, these are more likely to be fatal due to delays in discovery of the crash and longer transport times. The average transport time in Pennsylvania for a patient injured in a rural county to arrival to a trauma center is 113 minutes. This is beyond the 60-minute “Golden Hour” time period during which mortality is at its lowest.

To help alleviate this issue, the Pennsylvania Trauma Systems Foundation followed the lead of other rural states in the country in creating standards of trauma center accreditation for Level IV Trauma Centers. Level IV Trauma Center accreditation enhances care of injured patients within the emergency department through a hospital’s implementation of clinical management guidelines for
trauma patients and strict policies on timeliness of care from the time of arrival to treatment and, if necessary, to transport to a higher level trauma center. This, coupled with rigorous performance improvement efforts and a strong mentoring partnership with a higher level trauma center, enhances care in Pennsylvania’s most rural regions. Pennsylvania’s trauma centers also are reaching out to non-trauma centers by offering the Rural Trauma Team Development Course to hospital staff on-site. This course, taught by trauma surgeons and nurses, teaches principles of trauma care that support rapid diagnosis and transport to a trauma center. Multiple studies done on the effectiveness of the course have shown significant drops in inter-facility transfer times after the course was conducted.

Currently there are two accredited Level IV Trauma Centers in Pennsylvania and 11 hospitals are pursuing Level IV accreditation. Three of the pursuing hospitals are Critical Access Hospitals, which are located in Pennsylvania’s most rural areas.

The following map shows the locations of the accredited trauma centers in Pennsylvania, as of March 2016, noted by red roman numerals and those pursuing accreditation denoted by gold, yellow, and white boxes. Gaps in trauma center access are most clearly noted in the rural counties in the north-central part of the state.
Support of Critical Access Hospitals in becoming Level IV Trauma Centers is occurring through funds disseminated through the Medicare Rural Hospital Flexibility Program administered by the Pennsylvania Office of Rural Health. Even with the funding, Critical Access Hospitals find it difficult to achieve accreditation due to financial challenges and workforce issues. More resources are required to ensure that the level of rural emergency services is consistent with those provided in urban areas.

Potential solutions to enhance care in rural areas include the enhanced use of telemedicine and electronic medical records. Other solutions from a workforce perspective include the use of Physician Assistants, Nurse Practitioners, and Community Paramedics who could be instrumental in enhancing care in medically underserved rural areas.

While emergency service issues are formidable, many of the difficulties can be alleviated with a commitment from both state and local government to provide additional resources, innovative legislation, and system-wide planning. Adequate pre-hospital care
in rural communities requires the development of integrated and cooperative systems of care. It requires a fair exceptions process to provide flexibility to local communities in meeting the intent of regulation and law. It requires sufficient reimbursement to support EMS system development and health professional recruitment, retention, and education. Finally, it requires awareness, acknowledgment, and attention to the inherent differences between service delivery issues in metropolitan versus rural areas.

Questions to ask and issues to discuss in developing initiatives to improve the state’s rural emergency medical services delivery system include:

- How can access to quality emergency services for rural residents of Pennsylvania be ensured?
- How can EMS policies be developed that support enhancing the quality of care given, yet allow for flexibility in rural areas in meeting the intent of regulations?
- How can current regulations regarding non-physician provider practice be changed to facilitate emergency services without compromising patient care?
- How can we be sure that statewide policy recognizes the inherent differences between urban and rural areas of the commonwealth?
- How can we encourage improved outcomes and enhanced quality while recognizing and supporting the large volunteer component of our rural EMS delivery system?
- How can we leverage technology to both improve care and reduce costs for rural emergency services?
Perinatal Care in Rural Pennsylvania

The future of any community depends on the health and well-being of all of its citizens, especially children. Providing quality prenatal and post-delivery care to mothers and ongoing care to infants and children should be an intrinsic goal of any community. Efforts need to be directed toward addressing the issues of low birth weight babies, lack of early prenatal care, births to single teens, infant mortality, child deaths, health insurance for children, and immunizations. Since Medical Assistance funds one of every three births each year in Pennsylvania and is the most important source of financing for cost of care for premature infants, changes in the program to help address this growing crisis are needed.

Pennsylvania’s rural areas have a lower rate of teenage pregnancy than urban areas of the state. From 2010 to 2014, Pennsylvania had 423,410 total births, with 19.6 percent of those births occurring in the commonwealth’s rural counties. Roughly 6 percent of all state births were to mothers 19 years of age and younger, with 41.6 percent of all births to unmarried mothers. Additionally, from 2012-2014, 41 percent of births in rural areas were to mothers receiving Women, Infants, and Children (WIC) services compared to 37 percent in urban counties, with over 70 percent of the mothers receiving prenatal care in the first trimester for both rural and urban areas. Less than 1 percent of mothers in rural counties did not receive prenatal care, with approximately 2 percent not receiving prenatal care in urban counties.

From 2012 to 2014, Pennsylvania mothers delivered 34,142 low birth weight babies (less than 2,500 grams), down from 58,011 low birth weight babies born from 2009-2013. Seven percent of low birth weight deliveries were in rural counties, with 8 percent occurring in urban counties. Over 75 percent of mothers reported initiating breastfeeding after birth from 2012-2014.
Since Medical Assistance funds one of every three births each year in Pennsylvania and is the most important source of financing for the cost of care for premature infants, changes in the program to help address this growing crisis are needed. For example, in some regions, Federally Qualified Health Centers (FQHCs) have stepped up to meet community need by expanding their services to offer deliveries, but payment policy is impacting this alternative as well. FQHCs that deliver babies are finding that they are losing money and are reevaluating whether they can continue to offer the service, which is not required within the FQHC scope of services.

The Department of Human Services has made strides to adjust payment to encourage more clinicians to provide obstetrical services with development of the Healthy Beginnings Plus program; however, a reassessment of barriers to those services is indicated.

Questions that need to be asked when examining perinatal care in Pennsylvania include:

- How can access to maternal and child health services for rural Pennsylvanians be ensured?
- What payment policy changes could be made to support increased access to perinatal services in rural areas of the commonwealth?
- How do we ensure that rural families are educated about the need for regular, preventive medical care, including prenatal care?
- Should hospital regulatory changes be considered to expand nurse midwife privileges?
• What incentives could be offered to attract and retain more clinicians who provide obstetrical and gynecological services in underserved areas of the commonwealth?

• What payment policy changes might encourage more FQHCs to offer delivery as providers who work for FQHCs already have the incentive of the Federal Tort Claims Act (FTCA) medical malpractice coverage for their clinicians?
The Rural Elderly

In addition to having one of the largest rural populations in the nation, Pennsylvania has the added distinction of ranking sixth in the percent of elderly residents nationwide.

Rural elderly face the same challenges of age as their urban counterparts, but these challenges are often compounded by greater isolation that exists in rural living. Lack of public transportation translates into a greater reliance on others for access to basic supplies and services. Data from 2010-2014 show that over 350,000 adults age 65 and older, or 63 percent, in rural Pennsylvania counties had a difficulty that made completing activities of daily living arduous. Roughly 17 percent were deaf or had a serious difficulty hearing; 6.2 percent were blind or had difficulty seeing, even when wearing glasses; 22 percent had ambulatory issues such as walking or climbing stairs; and 7.4 percent had difficulty bathing or dressing.

A shortage of health professionals translates into undiagnosed and untreated conditions. Inadequate financial resources translate into delays in care until expensive emergency care becomes a necessity. And geographic isolation often translates into malnutrition, loneliness and depression. For many rural elderly, we can also add poverty to the list of challenges. Often, rural poverty goes unnoticed and disguises itself in the cloak of the scenic rural countryside.

Any of these challenges can compromise the ability of the rural elderly to maintain their independence and remain in their own homes. In Pennsylvania, from 2010-2014, approximately 23 percent, or 134,079, rural residents age 65 or older had cognitive difficulties or difficulties with independent living. These difficulties ranged from difficulty with remembering, concentrating or making decisions to having difficulty doing errands, such as visiting a doctor’s office or shopping. If the need for care and support arises, rural areas often lack many of the alternatives, such as adult day care, personal care homes, and low-income group housing, offered by their urban counterparts.

A radical transformation of the health care delivery system will be needed to meet the challenges of an aging rural population.
Unfortunately, even if these alternatives are available, nursing home placement is often inevitable for the elderly poor because of the lack of government subsidy for options like personal care or assisted living.

According to 2015 U.S. Census Bureau estimates, there were approximately 647,500 rural residents 65 years old or older. These senior citizens comprise 19 percent of rural Pennsylvania’s 3.43 million residents. In urban Pennsylvania, senior citizens comprise 16 percent of the population.

Between 2010 and 2015, the number of rural and urban senior citizens increased by 11 percent. This increase is due to the aging of the Baby Boomers (persons born between 1946 and 1964).

According to population projections developed by the Pennsylvania State Data Center, over the next 25 years (2015 to 2040), the number of rural senior citizens is projected to increase by 39 percent. In urban areas, there is projected to be a 54 percent increase.

In 2040, it is projected that one-in-four (25 percent) rural Pennsylvanians will be 65 years old or older. In urban Pennsylvania, it is projected that 22 percent of the population will be 65 years old or older.

The first map on Page 38 shows the projected population of those age 65 years and older in Pennsylvania by 2040 and the second shows the percent change in that population from 2015-2040.
The question that confronts rural advocates is how to address the health care needs of a burgeoning elderly population. This is critical not just for
rural Pennsylvania, but also for the state and nation as a whole. We are already beginning to see a demographic revolution or “age wave,” which is expected to reach tidal wave proportions within a handful of generations. A radical transformation of the health care delivery system is needed to meet the challenges of an aging population. Anyone who doubts this should look at the impact of the growing elderly population on rural Pennsylvania.

Rural health care providers are struggling financially, largely because they serve a disproportionately elderly population and rely heavily on Medicare and Medical Assistance. In addition, many of the struggles of rural providers to meet their staffing needs are a reflection of demographics that include a growing elderly population coupled with a declining younger population base. This results in an inverted pyramid of low resources and low populations struggling to meet the significant and escalating needs of a growing elderly population.

Questions to ask and issues to address in meeting the needs of rural elderly:

- In what ways could the options available to rural elderly requiring supportive care be enhanced?
- How can the needs of a growing elderly population be adequately addressed with declining resources?
- What innovations to the organization and delivery of care should be considered?
Migrant Farm Worker Health Needs

Each year, an estimated 14,000 to 15,000 migrant farm workers enter Pennsylvania to assist in harvesting the commonwealth’s fruit, vegetable, mushroom and other crops. The crops harvested make a significant contribution to the commonwealth’s economy. As an example, in 2012, the nearly 305 million pounds of apples produced in Adams County had an estimated value of $85.8 million.

Migrant farm workers work where few other Americans will. Their jobs carry no promotions, raises, perks or returned benefits. The cost of health insurance is too expensive to make it feasible for most farm owners to insure their farm workers and Medical Assistance, the state’s Medicaid program, excludes them because they do not plan to seek permanent employment in Pennsylvania. Medical Assistance will only cover the migrant farm worker when emergency care is needed. Emergency care is also the most expensive type of health care.

Most migrant farm workers do not have transportation and few have money to pay a doctor or a hospital. Without resources, migrant farm workers are forced to rely on the migrant health program funded by government grants. In Pennsylvania, the migrant farm worker grant is managed by Keystone Health in Franklin County. Keystone uses grant funds to contract with providers across the state to provide primary care to the migrant farm worker population.

Due to limited funds, the services offered do not include hospital care, visits to specialists, pharmaceuticals, dental care, and non-routine laboratory or x-ray procedures. Although the state benefits from the income generated by migrant farm worker labor, Pennsylvania, unlike other states, has not provided supplemental funding to the federally supported migrant farm worker health program.

Although the state benefits from the income generated by migrant farm worker labor, the workers must rely on the federally funded migrant health program for their health care.
Questions to ask and issues to address in considering access to health care for migrant farm workers in the commonwealth include:

- Should programs for the poor that are designed to expand access to health care programs or services specifically include migrant farm workers?

- Should Medical Assistance coverage be granted to migrant farm workers through a waiver of residency requirements or through a requirement that migrant farm workers seek permanent employment before qualifying?

- Should the Pennsylvania Department of Health contribute supplemental funds to existing statewide migrant farm worker programs to expand access and services at existing migrant farm worker provider sites?

- Should Medical Assistance managed care plans include specific provisions for migrant farm worker coverage?
Health Insurance in Rural Pennsylvania

In 2014, data from the U.S. Census Bureau showed that nearly 12.0 percent of rural Pennsylvania’s working age adults (18 to 64 years old) were uninsured. In urban areas, 11.8 percent of working age adults were uninsured.

The likelihood that one is uninsured is based on a number of factors including poverty and ethnicity. Adults are more likely to be uninsured than children. Compared to their urban counterparts, rural residents are older, poorer, and more likely to be uninsured and stay uninsured for longer periods of time.

Employer-sponsored insurance is less common in rural areas, in part because of the greater prevalence of small businesses, lower wages and self-employment. As a result, government-sponsored programs and public policies primarily have been responsible for providing health insurance for rural Pennsylvanians and particularly for the expansion of managed health care to those residents.

On March 23, 2010, President Barack Obama signed comprehensive health reform, the Patient Protection and Affordable Care Act (ACA), into law. The goals of the ACA are to expand coverage, control health care costs, and improve the health care delivery system. Through the ACA, Health Insurance Marketplaces were developed, where individuals can compare health plans, get answers to questions, and determine eligibility for lower out-of-pocket costs. Pennsylvania uses the federal health insurance exchange rather than a state-run exchange. With the implementation of the ACA, more Pennsylvania residents are able to receive coverage with premium and cost-sharing subsidies on the Health Insurance Marketplace, however, rural residents are enrolled at lower rates than urban residents. Through March 2016, there were 36.6 per 1,000 urban residents enrolled in health plans
through the Marketplace, compared to only 28.9 per 1,000 rural residents enrolled. Smaller, more rural counties often have fewer insurers and health plan options. Given these factors, rural Pennsylvanians may have higher out-of-pocket costs and a reduced ability to pay for care.

The Children’s Health Insurance Program (CHIP) is a health insurance program designed to provide insurance coverage to children whose parents do not have health insurance provided, either privately or through an employer, and who are not eligible for Medical Assistance. CHIP provides access to health care including regular check-ups and immunizations; prescription drugs; emergency care; diagnostic testing; certain dental, vision, hearing and mental health services; and up to 90 days of hospitalization in any year. CHIP also covers durable medical equipment, rehabilitative therapies, drug- and alcohol-abuse treatment, and home health care. Children are covered by CHIP regardless of any pre-existing medical conditions and can be covered from birth through their 19th birthday. To be eligible, children must be U.S. citizens or lawful aliens and, except for newborns, must have resided in Pennsylvania for at least 30 days. In addition, families must meet certain income guidelines to qualify for CHIP.

CHIP is free for families who earn up to 200 percent of the federal poverty level or $49,143 for a family of four. CHIP is subsidized for families with incomes of $50,544-76,302 for a family of four. The subsidized program offers health insurance for a small deductible per month. In 2015, approximately 300,000 children in Pennsylvania were enrolled in CHIP.

According to data from the 2014 U.S. Census Bureau, the uninsured rate for rural and urban children was similar with roughly 6 percent rural and 5 percent of urban children in Pennsylvania. However, for rural adults between the ages of 18
and 64 years old, the uninsured rate was 12 percent while the rate for similarly aged urban adults was 11.8 percent.

In May 2013, 19 percent of the rural population, or 661,135 rural residents, were eligible for Pennsylvania’s Medical Assistance (MA) program. In urban areas, 1.9 million residents, or 20.3 percent, were MA-eligible. The greatest managed care enrollment occurred in the southeast and western portions of the state. The lowest occurred in the rural counties of northcentral Pennsylvania.

Most elderly are covered by Medicare. However, Medicare is limited in its coverage and requires considerable out-of-pocket payments—a burden for many of the elderly in or near poverty. HMO options for the elderly are scarce in rural Pennsylvania.

Managed care plans face several challenges when expanding to rural areas. There are smaller risk pools due to lower population density. Providers may be resistant to managed care or may not have the capacity to expand their patient base. Longer distance is required to obtain tertiary and specialty care and public transportation is almost non-existent. Although there are fewer providers with whom the plans can contract to become part of their network—primary care providers in rural areas have a ratio of 75 per 1,000 compared to 129 per 1,000 in urban areas—it is more of an administrative burden to contract with one physician rather than with an organization that represents a network of providers.

In addition to the financial burden that may result from a lack of health insurance, the uninsured are less likely to have a regular source of health care and are more likely to delay or not seek treatment.
Questions to ask and issues to address regarding health insurance coverage in rural Pennsylvania include:

- How do we ensure that the health care infrastructure, including critical access and safety net providers, is not damaged by managed care expansion?
- What role can telehealth play to increase access to specialty care?
- What can be done to encourage preventive health care for the uninsured to avoid costly emergency treatment and hospital admissions?
- Does the state’s CHIP program have an adequate provider network to ensure that newly insured children can receive adequate preventive care in a timely manner?
Behavioral Health Services in Rural Areas

Behavioral health includes both mental health and substance abuse services. In any given year, mental disorders affect 22 percent of American adults. According to the National Survey on Drug Use and Health 2012-2014 from the Center for Behavioral Health Statistics and Quality (CBHSQ), it was estimated that more than 8 percent of Pennsylvanians annually struggle with an illicit drug or alcohol dependence or abuse.

In Pennsylvania, 4 percent of the population aged 18 and older have had a serious mental illness, defined as having a diagnosable mental, behavioral, or emotional disorder, other than a developmental or substance use disorder in the past year, with 17.7 percent having had a mental illness, defined as having a diagnosable mental, behavioral, or emotional disorder, other than a developmental or substance use disorder. Additionally, roughly 4 percent of the population over the age of 18 had serious thoughts of suicide and approximately 7 percent had a major depressive episode.

The human costs of mental illness—pain, grief, and lives disrupted and lost—cannot be calculated in purely economic terms. These illnesses affect not only individuals, but employers, co-workers, families, friends, and communities.

Mental illness is the third most limiting, in terms of ability to perform a major daily activity, of all disabling diseases behind cancer and stroke. When disability is considered in the context of the ability to work, mental illness is the most limiting disease. More than three-quarters of those whose disability is attributed solely to mental illness are unable to work.

The U.S. Census Bureau reports that, in 2014, there were 153 outpatient mental health and substance abuse centers in rural Pennsylvania counties. Urban counties consisted of 416 outpatient mental health and substance abuse centers. Additionally, in 2014, there were only five designated
psychiatric and substance abuse hospitals in rural Pennsylvania and 30 in urban areas. County mental health programs coordinate the provision of mental health services at the county level through various combinations of direct service provision and subcontracts with local providers. Pennsylvania has also implemented a statewide Medical Assistance managed care behavioral health care system.

Drug and alcohol abuse are major problems confronting America. Illicit drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or any prescription-type psychotherapeutic used non-medically.

Most alarming is the dramatic increase in illicit drug use, especially heroin, among Pennsylvania’s rural youth. Generally, treatment services include diagnostic assessment, detoxification, and counseling for people who have abused alcohol, other drugs or both. Prevention activities focus on individuals who may be at risk for alcohol or other drug problems. These activities include providing information and education about alternatives to and consequences of alcohol abuse and illicit drug use.


The key findings, pertinent to rural counties, of this report are staggering. In 2015, 12 rural Pennsylvania counties were among the top 20 counties with the highest rate of drug-related overdose deaths. In addition, 14 rural counties were among the top 20 counties with the largest increase in the rate of drug-related overdose deaths from 2014.

In 2015, heroin was the most frequently identified drug in toxicology test results, as approximately 55 percent of drug-related overdose decedents showed heroin presence.
Additionally African Americans were the most common group of illicit drug-related deaths at 14 percent. The following map shows 2015 Pennsylvania county overdose death rates per 100,000.

Several issues have been identified that affect the delivery of behavioral health services to Pennsylvania’s rural population. Major issues affecting the provision of appropriate and necessary services include:

- shortages in appropriately trained and credentialed treatment professionals;
- inadequately developed continuums of care that fail to offer a range of treatment options and levels of care;
- insufficient transportation systems to permit access to services;
- the ability for a county mental health/substance abuse program to serve as the managed care organization and to assume financial risk in the statewide expansion of Medical Assistance behavioral health managed care;
- lack of knowledge on how to obtain treatment;
- the “stigma” associated with having a mental illness, especially in small communities;
• inadequate medical treatment compliance because of the cost of medication;

• limited authorizations for both outpatient services and inpatient admissions by managed healthcare organizations; and

• lack of choice in choosing a provider due to providers not accepting all major health plans (Medical Assistance, HMO plans, etc.).

Fiscal challenges have resulted in significant cuts to state and federal behavioral health budgets, and subsequently, significant cuts to service impacting many Pennsylvanians. Lack of access to stabilizing psychiatric medications and therapy and support services results in hospitalizations, an increased use of emergency room services, increased homelessness and isolation, higher rates of family violence and child abuse, an increase in physical health illnesses, and an increase in crime and incarceration. These consequences come at a significant cost to individuals, families, communities, employers, the health care system, and the state.

Questions to ask and issues to address regarding the provision of behavioral health services in rural Pennsylvania include:

• How can incentives be introduced into the system to recruit and retain qualified behavioral health care practitioners to rural areas?

• How can current regulatory barriers be altered to allow flexibility in how behavioral health treatment options are structured while maintaining quality and achieving positive outcomes in the provision of behavioral health services?

• How can public and private partnership models be employed to address the financial concerns relating to the provision of managed behavioral health care services to the Medical Assistance population?
• How can transportation systems be improved to enhance needed access to services?

• How can the community be educated on obtaining mental health treatment and what measures are to be taken to be effective?

• Integration of behavioral health services with primary medical services has proven to be effective in many demonstrations across the country. What can Pennsylvania do to support the statewide development of integration models?
Oral Health Issues in Rural Pennsylvania

Great disparities in oral health care delivery, services, and oral health status exist among rural Pennsylvanians. Significant barriers to care include financial, geographic, social, and cultural components, as well as a serious oral health provider shortage and misdistribution, as demonstrated by the high numbers of Dental Health Professional Shortage Areas identified in the state.

Research has demonstrated the important role of oral health in overall physical health. A U.S. Department of Health and Human Services Secretary noted, “Oral health is an important part of our overall physical health and well-being.” Poor oral health is often linked to other systemic conditions. Furthermore, a lack of access to preventive and routine dental care for underserved populations can result in dental conditions requiring costly emergency dental treatment. A lack of access to oral health services is a critical health issue for rural areas of Pennsylvania and just as disparities exist in certain disease categories of physical health, similar disparities exist for oral health. Good oral health can improve an individual’s quality of life. Being free from chronic pain and facial disfigurement can decrease the number of school or work days missed and increase adequate/proper nutrition.

According to the 2015 Pennsylvania Oral Health Needs Assessment, dental caries (cavities) remain significant among Pennsylvania’s children in both urban and rural areas. Childhood dental caries are the number one chronic childhood disease, five times more prevalent than asthma. Caries rates show a steady increase with age. There is also a significant variation across geographic areas in the state. Untreated dental caries remain a serious problem for many children. The percentage of Pennsylvania’s 6 to 8 year olds with untreated dental caries was, on a statewide average, 6 percent higher than the Healthy People
2010 objectives. Regionally, the northwest region of the state has significantly higher rates of both dental caries and untreated dental caries, particularly among those age 6 to 8 years old.

Statewide, the rate of children’s annual dental visits was 87 percent. Children who did not visit the dentist had higher rates of untreated dental caries than children who had a dental visit in the previous 12 months (39 percent versus 18 percent, respectively). Children in households with an annual income of less than $20,000 are three times more likely to have untreated dental caries than children in households with an annual income of more than $100,000. This statistic is particularly troubling as a significant economic gradient seems to exist for dental caries, suggesting that access to preventive and restorative dental care, as well as effective preventive oral health education, is lacking for children from low-income families in both urban and rural areas.

According to the 2014 Pulse of Pennsylvania’s Dentist and Dental Hygienist Workforce report, 23 percent of practicing dentists accept Medical Assistance (MA) insurance, the state’s Medicaid program. This participation rate is the same for both rural and urban counties. Participation rates in the MA program have increased from 19 percent in 2007. According to the 2011 Pew Center on the States report, only 37.3 percent of the children with MA insurance received dental treatment in 2009. Nationally, 43.8 percent of children with Medicaid received care, while 58 percent of children with commercial insurance received treatment.

Other examples of oral health access disparities can be seen by the number of Dental Health Professional Shortage Areas (DHPSAs) in the state. As of June 2016, there were 164 DHPSAs designated in Pennsylvania. All but four Pennsylvania counties contained at least one designation.

According to 2010 U.S. Census data, there are 48 rural counties in Pennsylvania that are home to 27 percent of the state’s residents.
While over one-quarter of the state’s population resides in rural areas, only about 20 percent of practicing dentists practice in rural areas. This further compounds workforce shortages in rural communities. Potter, Cameron, Juniata, and Fulton counties suffer from the greatest shortage of dentists. While rural counties average about 36 dentists per 100,000 residents, these counties have less than 20 dentists per 100,000 residents. This is compared to the average of 55 dentists per 100,000 residents in urban counties.

Without significant change, expected retirement rates will exacerbate access issues over the next several years. As reported in the 2014 Pulse Workforce Survey, nationally, 24 percent of practicing dentists planned to leave direct patient care within six years, largely due to retirement. In 2013, 48 percent of the practicing dental workforce was 55 years old or older. An additional 23 percent of practicing dentists were 45-54 years old. This developing workforce shortage could be a very serious issue.

This noted shortage is one that the legislature anticipated and attempted to address through legislation that created a more independent category of the dental hygienist; the Public Health Dental Hygiene Practitioner (PHDHP). Approved by the legislature in late 2009, dental hygienists can apply for additional licensure to become a PHDHP. In addition to carrying their own professional liability insurance, registered dental hygienists must also provide documentation from a dentist that certifies a minimum of 3,600 practice hours under the direct supervision of a dentist. While by law PHDHPs are permitted to complete oral health screenings, dental prophylaxis and diagnostic radiographs without the direct supervision of a dentist, a PHDHP is ineligible to receive direct reimbursement. The inability to receive reimbursement from insurance companies means that PHDHPs are under-used as few are able to self-sustain their services. In 2013, 395 practicing registered dental hygienists in Pennsylvania were also licensed as
PHDHPs. Of those credentialed, only 28 percent reported practicing as a PHDHP. It was reported that Federally Qualified Health Centers (FQHCs) were the primary practice site for these PHDHPs. It is important to note that in an FQHC, the PHDHP can receive reimbursement when billing for services using the NPI number of the center.

In addition to the anticipated rate of retirement, a continued shift in the demographics of practicing dentists can be seen. The 2013 Pulse Workforce Survey revealed that the number of practicing female dentists continues to climb. The data demonstrate that female providers tend to work fewer than 40 hours per week, which can further limit access to dental care.

The 2011 Pew Center on the States report card gave Pennsylvania a rating of “D” for oral health, which was an improvement from the 2010 failing grade. Areas where the state could continue to improve include increasing the number of school-based dental programs (for high-risk areas), increasing the number of children on MA receiving dental care, and increasing access to fluoridated water supplies.

Preventive services are important. Sealants are low-cost preventive coatings that are placed on permanent molars and reduce the risk of dental caries. Dental sealants can be applied in public health settings and they may be applied by a dental hygienist without the supervision of a dentist. Increasing the number of Medicaid participating providers and increasing the number of general dentists who will see children at age 1 as recommended by the American Academy of Pediatric Dentistry could help. Finally, Pennsylvania lags behind other states in water fluoridation. While about 85 percent of the state’s residents receive their water from a community water source, only about 50 percent of the state’s residents have access to fluoridated water. Counties and municipalities continue to remove the fluoride from
their water systems citing cost and infrastructure as rationale.

Effective oral care in rural Pennsylvania requires enhanced access to prevention, screening, and treatment services in dental offices, primary care medical offices, and in public health settings. Additional education of communities and patients, medical, and dental providers will be key in reducing oral health disparities.

Questions to ask and issues to address in considering access to oral health care for rural children and adults include:

- How can access to oral health services in rural areas be expanded?
- How might we increase dental providers' participation in accepting Medical Assistance insurance plans?
- How can effective dental health programs be established or enhanced in rural areas?
- How would recognition of a PHDHP’s NPI number help to enable PHDHPs to work at their full scope of practice and enhance access?
- What can be done to increase access to fluoridated community water supplies?
The Status of Public Health in Rural Pennsylvania

Public health has been called a system of “organized community efforts aimed at the prevention of disease and promotion of health.” Its work is often described as having three core functions: assessing the health needs of a population; developing policies to meet these needs; and ensuring that services are always available and organized to meet the challenges at the individual and community levels. Different aspects of the core functions may be delegated to, or voluntarily carried out by, private-sector professionals and organizations. Ideally, however, final responsibility and accountability for them rests with governments at the local, state and federal levels.

Ultimately, a healthy population needs clean air and water, safe food and housing, access to accurate and timely information regarding health and safety, and an adequate supply and distribution of competent health professionals. These conditions for a healthy community depend upon a strong public health infrastructure, which includes a well-trained and accessible public health workforce. Such a workforce is comprised of a complex network of individuals possessing a variety of technical backgrounds including nursing, health education, sanitation, medicine, public administration and epidemiology among others. The common thread that ties these individuals to the public health workforce is their commitment to addressing the health needs of the population, as opposed to individual health needs.

In addition, it is the responsibility of the public health infrastructure to provide a ”safety net” of health care services for those with an inability to pay. Without a basic level of health care guaranteed to all Pennsylvanians, preventable illnesses, as well as their related costs to residents of the commonwealth, continue to

A more clearly delineated system that is capable of assessing public health needs and events will be critical.
climb, and improvements in overall health status and quality of life are impossible to obtain.

Because of the broadly defined nature of the public health workforce, it is difficult to determine exact numbers of workers engaged in public health activities in the United States. Compounding the difficulties in determining precise numbers is the fact that each state has developed its public health infrastructure independently, thus creating dramatically different systems.

It should be noted that this does not necessarily mean that public health services are entirely lacking in rural areas. Rather, hospitals, state department of health district offices and county clinics, Community Health Centers, voluntary service organizations and other community-level entities have assumed a number of public health functions over time. However, this has created a lack of uniformity in public health services across communities. Further, there is little coordination among state-level agencies, the few independent health departments and the organizations delivering public health services in rural areas. Without a coordinating entity, it is difficult to assess these organizations’ efforts, coordinate policy developments and ensure that essential public health services are being provided to all Pennsylvania citizens.

A number of public health problems that Pennsylvania faces may be exacerbated because of this lack of organizational coordination. At the very least, it is safe to say that a more clearly delineated system that is capable of assessing public health needs and events will be critical in ensuring that the following challenges are addressed:

- From 2004 to 2013, the number of obese rural adults increased by 26 percent. During this same period, the number of obese urban adults also increased by 26 percent.
• In 2013, 32 percent of rural adults were estimated to be obese, an increase of 6 percentage points from 2004. Among urban adults, 28 percent were estimated to be obese, an increase of 4 percentage points from 2004.

• Compared to the statewide average, 27 of Pennsylvania’s 48 rural counties had higher air pollution rates (as measured by fine particular matter). Among the state’s 19 urban counties, eight counties had higher air pollution rates.

• Compared to urban counties, rural counties had higher rates of three infectious diseases: campylobacter, giardiasis, and Lyme disease. In addition, rural counties had higher death rates from cancer and cardiovascular disease than urban counties.

• New rural mothers were more likely to receive Medicaid and to smoke during their pregnancy than new urban mothers. Rural new mothers also were less likely to breastfeed than new urban mothers. However, rural new mothers were more likely to receive prenatal care during the first trimester.

Questions to ask and issues to address as we look to strengthen our rural public health infrastructure include:

• Communities with independent health departments have access to qualitatively different services than those that lack these entities. Does this contribute to the health inequities faced by our rural citizens?

• How can we build an effective local public health infrastructure in communities that lack independent health departments?
Bioterrorism and Emergency Preparedness in Rural Pennsylvania

While many consider rural communities to be at low risk for terrorist attacks, they are home to a number of targets considered desirable to potential terrorists—both foreign and domestic. Rural targets are attractive because of their perceived vulnerability, part of which stems from the sense of security felt by many rural residents. However, terrorism, particularly bioterrorism, should be a serious concern to rural communities for the following reasons:

- Rural areas are the center of agricultural production and could be targeted to contaminate the nation’s food supply;
- The headwaters for much of the urban water supply are found in rural areas;
- Rural communities are home to many high-profile terrorist targets including nuclear power facilities, uranium and plutonium storage facilities, U.S. Air Force missile silos, chemical manufacturing plants, and petroleum refineries, among others;
- A mass exodus from urban communities in response to terrorist attacks or other emergency situations would require a strong rural response capacity. Few, if any, rural hospitals have the capacity to handle large numbers of individuals seeking care and rural communities often lack HAZMAT units and decontamination equipment and facilities;
- The proliferation of hate groups in rural areas is a concern in terms of “home grown” terrorism. Early identification of terrorist threats will require a strong rural preparedness infrastructure, including training, to recognize early signs of biological and chemical experimentation;
- Infectious disease agents may be targeted toward smaller
communities with less ability to recognize and track bioterrorist threats. To prevent the spread of these agents, a strong public health infrastructure and adequate training will be necessary; and

- Many interstate transport companies are located in rural communities and provide transit of hazardous materials via routes that intersect rural areas.

The bioterrorism and emergency response network in rural Pennsylvania involves numerous state, regional, and local organizations. Among these are nine regional counter-terrorism task forces, 16 regional Emergency Medical Service councils, six Pennsylvania Department of Health district offices, and three regional offices of the Pennsylvania Emergency Management Agency. At the local level are myriad additional agencies, organizations and individuals including county emergency management coordinators, community hospitals and medical providers, and local police and fire departments which are integral to rural safety. A key to ensuring an adequate response among these entities will be a coordination of efforts, which is made difficult by the sheer number of partners that may have responsibility for overlapping regions.

Rural Pennsylvania’s lack of local governmental public health infrastructure creates additional emergency preparedness challenges by reducing local access to public health professionals including epidemiologists and health educators. Many of the models and tools that have been designed to address issues of local preparedness rely on the existence of a local public health agency. In lieu of having a local public health agency, the rural response network in Pennsylvania has to identify what organization(s) in a given community has the responsibility for emergency preparedness planning, public health surveillance and epidemiological investigation, laboratory testing, communications
and information dissemination, risk communication, and education and training.

Questions to ask and issues to address relative to bioterrorism and emergency preparedness in rural Pennsylvania:

- What are the implications of overlapping coordinating entities and the diversity of partners at the community level for public health and emergency planning efforts?

- Who is ultimately responsible for public health and emergency planning efforts at the local level? Do they understand and welcome this responsibility? What resources at the state and regional levels can they access for local planning efforts?

- How do rural communities access public health professionals for community planning efforts in the areas of preparedness planning, public health surveillance, risk communication, etc.?

- Would a stronger local public health infrastructure better enable rural communities to protect their citizens in the event of a bioterrorism threat or other health-related emergencies?
The Use Of Telehealth Services in Rural Pennsylvania

Too few primary care practitioners and the need to travel long distances for specialty care make it difficult for many rural residents to receive the care they need when they need it. One tool for improving rural health care is telemedicine. Telecommunications technology provides an opportunity for rural patients to have consultations with distant specialists without leaving their communities, thereby improving access to primary and specialty care.

A comprehensive study conducted by the Center for Rural Pennsylvania indicated that, over time, billions of dollars could be saved by implementing telehealth services more broadly in Pennsylvania. By utilizing telehealth technology, electronic health records (EHRs), and distance prevention and wellness programs, the Pennsylvania health care system could save $70 billion annually by the 5th year of implementation, and over $215 billion annually by the 20th year of implementation. This revenue would enhance the fiscal stability of rural hospitals and the socioeconomic fabric of each community. Collaboration between health care professionals and policymakers—along with high rates of patient participation—will be necessary to produce the best results.

Telehealth holds promise as a tool for improving the rural health care system. Telehealth can foster the growth of integrated health care systems that serve both rural patients and rural providers. It can provide rural patients with access to comprehensive health care services, both in their community and from distant providers. And, rural practitioners could find their practices less isolated because telemedicine facilitates frequent contact with distant colleagues. However, the full implementation of telehealth will require adequate telecommunications, payment, and policy infrastructures.
As is often the case, however, technological capabilities have outpaced the ability of providers to position themselves for their use. In addition, the rate of technologic progress has surpassed the ability of policymakers to address regulatory and payment issues that affect the development of rural telemedicine systems. Resolution of these issues must occur before we can tap telemedicine’s full potential.

Questions to ask and issues to address relative to the use of telehealth in rural areas:

- **How can the costs of transmission be lowered to make telemedicine more economically feasible for rural providers?** For example, should telephone charges be distance insensitive for essential services like health care?

- **Should Medical Assistance expand payment for telehealth consultations for rural beneficiaries?**

- **Could telehealth be used to enhance access for rural Medical Assistance beneficiaries in other ways?**

- **How can the licensure issues be addressed when a patient resides in one state and the physician in another?**

- **Should the state adopt credentialing policies that address inter-state practice?**
Health Information Technology

Health information technology (HIT) is becoming increasingly essential for health care providers across the continuum. HIT presents many opportunities to reduce duplication and its subsequent cost, improve coordination of care, identify and implement best practices and improve quality of care and outcomes. HIT also presents many challenges, particularly for rural providers who may not have the resources needed for HIT acquisition, training, implementation, and utilization to optimize the potential of HIT.

The 21st Century is the century of information, a time when technology has created opportunities for exchanging vast amounts of data with the click of a button. Like many sectors of our society, health care providers, from the small primary care office to the large tertiary care hospital, are being pushed to integrate technology into every facet of their practice through the adoption of HIT. HIT provides the framework to describe the comprehensive management of health information and the secure exchange of that information between consumers, health care providers, government, health care quality entities, and insurers through technology. HIT is increasingly viewed as the most promising tool for improving the overall quality, safety and efficiency of the health care delivery system, regardless of geographic location.

The configuration of health care systems in rural areas has implications for the adoption of HIT. Almost by definition, rural health systems are less complex. There are fewer providers and these providers operate on a much smaller scale than their urban counterparts. This smaller scale makes it conceptually easier to engage all community providers in a joint effort to bring technological advances to the area. However, fewer resources, greater distances between providers, low population density,
limited technology infrastructure, few opportunities for economies of scale, and other factors make adoption of HIT in rural Pennsylvania a greater challenge.

Advances in information technology hold great promise for helping rural residents and rural providers overcome some of the problems of distance and personnel shortages. Paramount among these advances are a variety of telemedicine applications that enable care to be given without the patient and provider being in the same physical space. These applications include opportunities such as remote monitoring of patients’ vital signs, video consultations with off-site providers, Picture Archiving and Communications Systems (PACS), and other teleradiology applications, distribution of prescription drugs and oversight by remote pharmacists, and surgical procedures performed using robotic assistance.

In addition to the patient benefits through improved access to care, these applications can reduce the burden on rural practitioners by providing support from specialists and linkages to a larger health care system. Internet technology also offers the possibility of delivering interactive continuing medical education opportunities directly to rural clinicians’ locations, which can help providers remain current with medical advances without having to travel to distant conferences and training sessions.

While progress continues to promote HIT adoption and health information exchange, rural providers have relatively few resources—financial and people—to support efforts to implement new HIT applications. Lacking technical expertise and capital for investment, many providers may find it difficult to sustain any motivation to learn about or pursue HIT. This situation may be especially true for the “stand-alone” providers typically found in rural settings.
Limited availability of in-house staff with the requisite HIT expertise is an additional challenge faced by rural providers where smaller hospitals and stand-alone facilities are less likely to have a health information technology strategic plan or a full-time Chief Information Officer. Also, despite the potential relative ease of developing community-wide HIT projects in rural areas, laws against physician self-referral and other anti-kickback statutes have created barriers to rural HIT implementation.

Moving beyond the exchange of data within a hospital or health system, Pennsylvania has moved to create an environment for the exchange of health information between providers across the health care continuum. The purpose of the Pennsylvania eHealth Partnership Program—formerly called the Pennsylvania eHealth Partnership Authority—is to improve health care delivery and health care outcomes by establishing a health information exchange (HIE) in the commonwealth. HIE is the ability for doctors, hospitals, medical labs, pharmacies, and other medical providers to securely exchange health information electronically. Connecting rural providers to HIE is particularly beneficial due to the common need for rural citizens to travel for their specialized care. The Pennsylvania eHealth Partnership Program has found that HIE enhances the patient experience, reduces unnecessary tests and procedures, enables better patient care, and saves patients time and money.

Rural hospitals and health care delivery systems must ensure that they will have the infrastructure in place to respond to today’s and tomorrow’s information technology needs, and support must be provided to these facilities to help them achieve this goal.
Questions to ask and points to consider when evaluating the implications of health information technology for rural health care providers:

- *How can costs be lowered to make HIT adoption and sustainability affordable for rural providers, especially Critical Access Hospitals and other small rural hospitals?*

- *What regulatory barriers to HIT adoption and utilization exist in Pennsylvania?*

- *What models can be deployed to help rural hospitals secure the necessary technical expertise in an affordable and sustainable manner?*

- *What financial support can be provided to encourage rural providers to use the health information exchange?*
Broadband Access

The effective use of telehealth and health information technology for rural areas currently depends on sufficient broadband access. Broadband Internet access, often shortened to just broadband, is a high data rate Internet access—typically contrasted with dial-up access using a 56k modem. Dial-up modems are limited to a bit rate of less than 56 kbit/s (kilobits per second) and require the full use of a telephone line, whereas broadband technologies supply more than double this rate, generally without disrupting telephone use.

Although various minimum bandwidths have been used in definitions of broadband, the Federal Communications Commission (FCC) as of 2009 defines “Basic Broadband” as data transmission speeds exceeding 768 kbit/s, or 768,000 bits per second, in at least one direction: downstream (from the Internet to the user’s computer) or upstream (from the user’s computer to the Internet). “Broadband penetration” is now treated as a key economic indicator.

One of the great challenges of broadband is to provide service to potential customers in areas of low population density, such as to farmers, ranchers and small towns. In cities where the population density is high, it is easy for a service provider to recover equipment costs, but each rural customer may require expensive equipment to get connected. Several rural broadband solutions exist, though each has its own pitfalls and limitations. Some choices are better than others, but all are dependent on how proactive the local phone company is about upgrading its technology.

On June 22, 2011 the FCC released an update and evaluation of the 2009 report: Bringing Broadband to Rural America: A Report on Rural Broadband Strategy. The report emphasized the hardships rural citizens face due to the lack of access to basic broadband and

“Broadband penetration” is now treated as a key economic indicator.
called for all levels of government to explore ways to help overcome the high costs of rural broadband deployment. According to the update, “the nation has made significant progress in implementing policies and programs to facilitate broadband deployment across the nation in the 2 years since the report was released.”

Data collected by the Center for Rural Pennsylvania show that 76 percent of rural households had Internet access by 2014—a significant increase from before the FCC report was released. However, as mentioned in the update, “more needs to be done to fulfill the objective for widespread deployment of affordable, quality broadband services to every community.” While approximately one quarter of citizens lack Internet access in rural areas, only one fifth lack access in urban areas.

Without high speed Internet access, people living in rural areas, rural health care providers, and rural businesses will be at a disadvantage—a disadvantage in adopting and implementing electronic health records and other new technologies, a disadvantage in attracting and retaining quality health care practitioners, a disadvantage in having access to the latest research, and a disadvantage in engaging patients as partners to promote health and control chronic illness. Policymakers need to continue addressing this “digital divide” to minimize the present disparities between those who live in rural areas and those who live in urban areas.

While providing broadband to rural and underserved communities is challenging and costly, it is also essential. Pennsylvania’s broadband plan envisions that “All citizens, businesses and institutions in Pennsylvania should have access to high-capacity, affordable, reliable and sustainable broadband services.” The plan recognizes the impact broadband has on health care through
telemedicine and the secure seamless sharing of electronic health records.

PRHA recommends that Pennsylvania address the same questions the FCC was charged with answering through the 2008 Farm Bill that required the Commission to develop “a comprehensive rural broadband strategy.”

Questions to ask and issues to address to ensure access to high-speed Internet for rural residents of Pennsylvania:

- What is the state of rural broadband?
- How can government help overcome obstacles to its expansion? How can key government agencies cooperate in doing this?
References


Rural Health Resource Directory

Center for Public Health Practice, University of Pittsburgh at Bradford, Seneca Building, Marilyn Horn Way, Bradford, PA 16701, (814) 362-7646; Contact: Lisa Fiorentino, Ph.D., Director; www.upb.pitt.edu/crhp/

The Center for Rural Health Practice identifies and articulates rural health issues and engages the University of Pittsburgh colleges and schools, including those for the health sciences, in addressing those issues and formulating policy recommendations for the improvement of rural health systems. It is recognized that a systems approach to improving health includes partners in government, academia, private-sector organizations, professionals, and communities.

The Center for Rural Pennsylvania
625 Forster Street, Room 902, Harrisburg, PA 17101, (717) 787-9555; Contact: Barry Denk, Director; www.rural.palegislature.us/.

The Center for Rural Pennsylvania is a bipartisan, bicameral legislative agency that serves as a resource for rural policy within the Pennsylvania General Assembly. The Center works with the legislature, educators, state and federal executive branch agencies, and national, statewide, regional and local organizations to maximize resources and strategies that can better serve Pennsylvania's nearly 3.5 million rural residents.

Hospital & Healthsystem Association of Pennsylvania
30 North Third Street, Suite 600, Harrisburg, PA 17101, (717) 564-9200; Contact: Jennifer Jordan, Vice President, Regulatory Advocacy; www.haponline.org

The vision of the Hospital & Healthsystem Association of Pennsylvania (HAP) and its members is for a healthy Pennsylvania; recognizing economic and societal factors; the physical environment in which Pennsylvanians live and work; and individual heredity, behaviors, and dimensions of needs across the lifespan.

Pennsylvania Academy of Family Physicians
2704 Commerce Drive, Harrisburg, PA 17112, (717) 564-5365; Contact: John Jordan, Executive Vice President; www.pafp.com

The Academy and its Foundation supports its members through advocacy and education to ensure a physician-coordinated, patient-centered medical home for every Pennsylvanian.
Pennsylvania Area Health Education Center Program
The Milton S. Hershey Medical Center, P.O. Box 850, Mail Code G210, Hershey, PA 17033, (717) 531-4327; Contact: Linda Kanzleiter-Keister, M.P.Sc, D.Ed., Director; www.paahec.org

The mission of the Pennsylvania Area Health Education Center (AHEC) program is to help communities meet their primary health care needs by creating a statewide infrastructure bridging community and academic resources in order to facilitate the recruitment and retention of primary care providers in underserved communities.

Pennsylvania Association of Community Centers
1035 Mumma Road, Suite 1, Wormleysburg, PA 17043, (717) 761-6443, Contact: Cheri Rinehart, President & CEO; www.pachc.com

As the state primary care association, the Pennsylvania Association of Community Health Centers (PACHC) represents and supports the largest network of primary health care providers in the Commonwealth. Our network of health centers includes Community Health Centers (FQHCs and FQHC Look-Alikes) Rural Health Clinics (RHCs), and other like-mission providers serving more than 700,000 people at more than 200 sites in underserved rural and urban areas throughout the commonwealth. Since 1981, PACHC programs and services have supported health centers in their mission to improve access to affordable, quality primary care for all.

Pennsylvania Dental Hygiene Association
Central Office, P.O. Box 606, Mechanicsburg, PA 17055, (717) 766-0334; Contact: Margie Mengle, Executive Secretary; www.padentalassistants.org/

The Pennsylvania Dental Assistants Association is an active group of dedicated dental professionals with the desire to gain more knowledge and promote dental assisting as a profession.

Pennsylvania Department of Health, Bureau of Health Planning
Room 1033, Health and Welfare Building, 625 Forster Street, Harrisburg, PA 17120, (717) 772-5298; Contact: Robert Richardson, Director; www.health.pa.gov/Your-Department-of-Health/Offices%20and%20Bureaus/Bureaus/Pages/Bureau-of-Health-Planning.aspx#.V8hvETWw4YE

The Bureau of Health Planning’s Division of Plan Development (DPD) develops and promotes strategies to improve the public’s health, support the Department of Health in accreditation readiness, and provide comprehensive reports on population health status and health care workforce. The Bureau’s Division of Health Professions Development (DHPD) improves primary medical and dental care service delivery and the distribution of the health care workforce in Pennsylvania to meet the needs of medically underserved populations.
Pennsylvania eHealth Partnership Program
402-A Finance Building, 613 North Street, Harrisburg, PA 17120, ra-paehealth@pa.gov; Contact: Kelly Hoover Thompson, Executive Director; www.paehealth.org/

The purpose of the Pennsylvania eHealth Partnership Program is to improve health care by delivery and health care outcomes in Pennsylvania by enabling the secure exchange of health information.

Pennsylvania Farm Bureau
510 South 31st Street, P.O. Box 8736, Camp Hill, PA 17001-8736, (717) 761-2740; Contact: Sam Kieffer, Government Affairs and Communications Division; www.pfb.com

As a grassroots organization and leader for the agriculture industry, the Pennsylvania Farm Bureau advances the economic and educational interests of our members through advocacy before government and relationship building, while offering high value programs and services to sustain membership growth and remain financially secure.

Pennsylvania Medical Society
777 East Park Drive, P.O. Box 8820, Harrisburg, PA 17105-8820, (717) 558-7750, Contact: Caryl Schmitz, President; www.pamedsoc.org

The Pennsylvania Medical Society is the voice of Pennsylvania's physicians, advancing quality patient care, the ethical practice of medicine, and advocating for the patients they serve. We promote physician leadership, education, professional satisfaction, practice sustainability, and the public's health.

Pennsylvania Office of Rural Health
310 Nursing Sciences Building, University Park, PA 16802, (814) 863-8214; Contact: Lisa Davis, MHA, Director; www.porh.psu.edu

The Pennsylvania Office of Rural Health (PORH) is one of 50 state offices of rural health in the nation and is charged with being a source of coordination, technical assistance, and networking; partnership development; and assisting in the recruitment and retention of health care providers. PORH is dedicated to enhancing the health status of rural Pennsylvanians through outreach, education, advocacy, applied research, and special projects focused on small rural health care organizations and the communities they serve. PORH provides expertise in the areas of rural health, agricultural health and safety, and community and economic development.
The Pennsylvania Public Health Association (PPHA) is an all-membership organization working to promote the health of Pennsylvania residents. PPHA does this through the advancement of sound public health policies and practice.

The Pennsylvania Rural Electric Association (PREA) serves as a resource center for the member cooperatives. By taking advantage of economies of scale, PREA is able to offer member cooperatives cost-effective services. On behalf of our member cooperatives, we are advocates in the state capital and in Washington, D.C. Our state and federal relations staff members work closely with elected officials and regulatory bodies to ensure that the concerns of rural citizens are clearly heard in the legislative process.

The Pennsylvania Rural Health Association is dedicated to enhancing the health and well-being of Pennsylvania’s rural citizens and communities. Through the combined efforts of individuals, organizations, professionals, and community leaders, the association is a collective voice for rural health issues and a conduit for information and resources.

Pennsylvania Rural Partners (PRP) is an independent, non-profit organization that brings together viewpoints from every sector of the economy to improve the quality of life for rural Pennsylvanians with the goal to establish sustainable economic, community, and human development.
Pennsylvania Society of Physician Assistants
P.O. Box 128, Greensburg, PA  15601, (724) 836-6411; Contact:
Cathy Gillespie, President; www.pspa.net

The vision of the Pennsylvania Society of Physician Assistants is to be
the leading force for all physician assistants in the commonwealth of
Pennsylvania by advocating for the physician assistant profession,
for excellence in health care and for access to quality care for our
patients.

Pennsylvania State Nurses Association
3605 Vartan Way, Suite 204, Harrisburg PA  17106-8525, (717) 657-1222; Contact: Betsy Snook, CEO; www.panurses.org

The Pennsylvania State Nurses Association (PSNA) is the respected
voice for a tradition of care that serves nearly every Pennsylvania
family. We’re trusted by public policy decision makers and the
wider medical community because we represent the values of our
members with passion and integrity in the public square.

Pennsylvania Trauma Systems Foundation
Rossmoyne Corporate Center, 4999 Louise Drive, Suite 104,
Mechanicsburg, PA  17055, (717) 697-5512; Contact: Juliet
Altenberg, Executive Director; http://www.ptsf.org/

The Pennsylvania Trauma Systems Foundation (PTSF) is the
accrediting body for trauma programs throughout the
Commonwealth of Pennsylvania. PTSF promotes the advancement
of trauma services and is committed to the reduction of death and
disability caused by trauma and the provision of expeditious,
evidence-based, quality health care.

USDA Rural Development-Pennsylvania
359 East Park Drive, Suite 4, Harrisburg, PA  17111-2747,
(717) 237-2299; Contact: Tom Williams, State Director;
http://www.rd.usda.gov/pa

USDA Rural Development is committed to helping improve the
economy and quality of life in rural America. Through our
programs, we help rural Americans in many ways.
Mission

The Pennsylvania Rural Health Association is dedicated to enhancing the health and well-being of Pennsylvania's rural citizens and communities. Through the combined efforts of individuals, organizations, professionals, and community leaders, the Association is a collective voice for rural health issues and a conduit for information and resources.

Goals

The goals of the Pennsylvania Rural Health Association are to:

- Serve as an advocate for rural health development at the local, state, and federal levels;
- Maintain a coordinated rural health emphasis in federal, state, and local health policy development and implementation;
- Promote improved rural health services;
- Provide continuing education opportunities for rural health professionals;
- Improve awareness and public education of rural health issues;
- Foster cooperative partnerships to improve rural health;
- Provide opportunities for leadership development through active membership involvement;
- Promote regulatory flexibility and effectiveness for rural health care providers;
- Promote the maintenance and enhancement of Pennsylvania's rural health infrastructure.