

*To advance the Health and Well-being of Pennsylvania's
Rural Citizens and Communities*



Status Check **V**

Pennsylvania Rural Health Care

Prepared by

Pennsylvania Rural Health Association

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INTRODUCTION

With the high visibility of Pennsylvania's large urban centers, Philadelphia and Pittsburgh, many would not consider Pennsylvania 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. Rural Pennsylvania's 59,000 farms occupy nearly 8 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-three percent of the state's population lives in areas that are designated as rural and, except for Philadelphia, every county in Pennsylvania has areas classified as rural. Forty-eight 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 presented in 1997, 1999, and 2005, the information presented here is not intended to paint a bleak picture of rural Pennsylvania. Instead, this document is intended to raise awareness and begin dialogue 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, must contend with 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.

"Rural" should not mean less in terms of access to quality health care services across the continuum

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 274 persons per square land mile. Any county that has a population density of 274 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 2008, 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.

Generally speaking, rural Pennsylvania is homogenous. Non-whites make up five percent of the state’s rural population. Persons who are Hispanic or Latino comprise less than two percent of the rural population. According to the U.S. Census Bureau, 21 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 16 percent of the population.

Changes in the rural population can be seen more clearly if the population is grouped by generational cohort. Baby boomers (anyone born between 1945–65) make up close to 27 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.

In rural Pennsylvania, about one-fifth of households can be classified as “middle income” (with incomes between \$40,000–\$59,999). The 2005-07 American Community Survey from the U.S. Census Bureau data shows that half of all rural households had incomes of less than \$50,000. In urban counties, 18 percent of households are middle-income. The average household income in rural Pennsylvania was \$52,688, while in urban counties, the average was \$68,114. The U.S. Bureau of Economic Analysis data show that in 2007, the average wage in rural Pennsylvania was \$32,545; in urban areas the average was \$45,103. Since 1970, this wage gap between urban and rural areas has doubled and each year the gap widens. Lower incomes mean that rural areas have fewer financial resources to address critical educational and infrastructure needs.

Rural areas have fewer financial resources to address critical educational and infrastructure needs.

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

Poverty also is more prevalent in rural areas than in urban areas. According to the U.S. Census Bureau, in 2007, more than 12 percent of Pennsylvania's rural population had incomes below the poverty level. In urban areas, 11 percent fell below this threshold. According to data from the 2005-07 American Community Survey, 33 percent of rural Pennsylvanians had incomes less than 200 percent of the poverty level; in urban areas, 27 percent had incomes in this range. Just because rural poverty is more scenic, does not make it any less difficult.

Although prior to the nation's current economic challenges employment had increased in rural areas, wages and salaries rose very little. Between 2000 and 2007, the number of jobs in the state's rural counties rose five percent. During this period, however, rural wages increased four percent, while urban wages increased six percent.

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 the first five months of 2009 (January to May), the rural unemployment rate was 8.5 percent and the urban rate was 7.5. 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 2007, over one-half of rural Pennsylvanians were employed in manufacturing (18 percent), wholesale or retail (19 percent) or health care and social services (18 percent).

If you work in rural Pennsylvania, chances are that your company employs fewer than 10 workers. Analysis of U.S. Census Bureau's 2006 County Business Patterns for Pennsylvania shows that nearly three-fourths of the establishments in rural counties employ fewer than 10 workers and more than half employ fewer than five. In many rural counties, the largest employers tend to be either hospitals or schools. Only 13 percent of rural establishments employ 20 or more workers.

In Pennsylvania's rural counties, more than 343,000 adults do not have a high school diploma or equivalent. This represents nearly 15 percent of the 2.3 million rural residents who are 25 years old or older. Likewise, just 18 percent of rural residents have a four-year college degree or higher. In urban areas, the figure is 28 percent. Moreover, with a more comprehensive network of community colleges and universities, more than 23 percent of urban adults have an associate's degree or some type of college experience. In rural areas, just 21 percent of adults have degrees or college experience.

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To attract new businesses while retaining existing industry, rural Pennsylvania needs a well-educated workforce.

Access to medical care is limited in many rural areas.

Rural adults are in poorer physical condition and have more health risks than urban adults.

Access to medical care is limited in many rural areas. In 2008, analysis of data from the Pennsylvania Department of Health showed rural Pennsylvania had roughly one physician for every 663 residents, as compared to one for every 382 residents in urban areas of the Commonwealth. According to this data, there are nearly 12,173 primary care physicians in Pennsylvania. Approximately 21 percent of these physicians practice in rural areas.

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 data from the Pennsylvania Department of Insurance, in 2008, an estimated 14 percent of rural adults between 19 and 64 years old lacked health insurance, as compared to less than 11 percent of similarly aged urban adults. Among children (under 19), however, the uninsured rates were identical--five percent.

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 myriad of 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 2007, the rural health care and social assistance industry employed more than 189,000 workers or more than 18 percent of the rural workforce. Here in Pennsylvania, hospitals and medical centers are among the top five employers in more than 77 percent of the state’s 48 rural counties. In 2008, data from the Pennsylvania Health Care Cost Containment Council showed that rural hospitals received more than \$5.2 billion in net patient revenues or nearly \$14 million per day. That year, the average rural county generated more than \$83 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. Using Crawford County as an example, if 75 percent of health care expenditures were made locally, total dollars generated in the community would be \$49,350,000. Once reinvested in the community, total expenditures resulting from local health purchases could be as much as \$74,025,000.

Federally Qualified Community Health Centers (FQHCs) are also 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.

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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.

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 25 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 in order to provide structure to these programs, the federal government has developed definitions of areas of medical underservice. Two such definitions are currently being 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 three 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. All four factors are weighted and combined using a predetermined formula to compute an index of medical underservice.

Eleven percent of Pennsylvania's population resides in an area designated as an HPSA and 17 percent of the state's population resides in areas designated as an MUA. Twenty-two percent of the state's population lives in areas designated as either an HPSA or an MUA. Residents of an area of underservice are more likely to be rural, of minority status, poorly educated, living in poverty and have limited access to transportation.

22 percent of the state's population reside in a federally designated shortage area—either a Primary Care Health Professional Shortage Area (HPSA) or Medically Served Area or Population (MUA or MUP)

Questions to ask and issues to address in ensuring access to health care service in designated medically underserved areas of the Commonwealth include:

What additional kinds of programs could be developed, using federal shortage designation as an eligibility criterion, to enhance access to health care in underserved areas of the Commonwealth?

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

RECRUITMENT AND RETENTION OF PRIMARY CARE PROVIDERS IN RURAL PENNSYLVANIA

Primary care traditionally provides initial access to the health care delivery system. Through primary care, the majority of personal health care needs are integrated, including physical, dental, mental, emotional, social, health promotion and disease prevention. In Pennsylvania, two thirds of the state's primary care clinicians practice in the five most urban counties in the state: Allegheny, Bucks, Delaware, Montgomery and Philadelphia.

There is a shortage as well as misdistribution of primary care practitioners in Pennsylvania. Traditionally, primary care includes physicians who practice general/family, internal, obstetrics and gynecology, or pediatric medicine. Estimates based on data from the Pennsylvania Department of Health's 2009 workforce report on the Commonwealth's physician supply indicate that rural Pennsylvania has roughly one primary care physician for every 663 residents, an improvement from 2006, when the ratio was one primary care physician for every 737 residents. In urban areas, the ratio is one primary care physician for every 382 residents. According to the most recent data, in 2008, there were 12,173 primary care physicians in Pennsylvania.

While some progress is being made in alleviating rural Pennsylvania's critical physician shortage, the problem still remains significant. Primary care access and provider shortages in the state have resulted in areas of 55 of 67 counties being designated as Health Professional Shortage Areas (HPSAs), Medically Underserved Areas (MUAs) or both. These areas contain 21.6 percent of the population of Pennsylvania, or 2.5 million people.

Furthermore, in 2008, nearly 55 percent of primary care physicians in Pennsylvania were age 50 or older, indicating that many may soon retire. Equally troublesome is the lack of affordable malpractice insurance coverage, which strongly influences new physicians to choose training and practice sites in other states and established physicians to relocate their practices from Pennsylvania to other states. This is especially disturbing when we consider that most physicians choose to practice within a 20-mile radius of where they completed their residency training.

There are also an increasing number of Pennsylvania born and trained physicians leaving the state to practice elsewhere. Furthermore, documentation indicates that as many as 20 percent will leave primary care practice in Pennsylvania. Additional factors affecting access to primary care physicians in rural areas are lack of continuing medical education opportunities, lack of time for self and family, long work hours, professional isolation, undesirable community factors, inferior rural educational systems, lack of practice

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coverage, and lack of technology and trained personnel. These factors pose a great challenge to the Commonwealth and must be addressed through collaborative efforts of health care providers, educators, business leaders, managed care organizations, community leaders, state officials, legislators and others.

The Pennsylvania Department of Health, through its Bureau of Health Planning, coordinates a variety of programs directed at recruitment and retention of primary care practitioners and oral health providers. These include the provision of technical assistance in obtaining shortage area designation, primary care community challenge grants, J-1 visa waivers for primary care physicians, a loan repayment program and the development of a recruitment clearinghouse. Many of these programs extend beyond primary care physicians to include non-physician practitioners—that is, certified registered nurse practitioners, nurse midwives and physician assistants. These clinicians present another option to extend quality primary care to those who need it.

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 Bureau of Health Planning of the Pennsylvania Department of Health that have proven effectiveness in enhancing access to health care in designated shortage areas—for example, the Pennsylvania Primary Care Practitioner Loan Forgiveness Program; the J-1 Visa program and the Challenge Grant 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 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?

USE OF NON-PHYSICIAN PROVIDERS TO ENHANCE PRIMARY CARE ACCESS IN RURAL AREAS OF THE COMMONWEALTH

Physician assistant (PA) and certified registered nurse practitioner (CRNP) professionals have been in existence for over four 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. Research indicates that PAs, CRNPs and CNMs are efficient, cost effective and competent practitioners and are highly accepted by patients. Research also demonstrates that these non-physician practitioners can manage 60–80 percent of patients' primary health care needs.

However, 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 contribution they make, particularly in underserved areas of the Commonwealth.

PAs, CRNPs and CNMs 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 physician, a PA or CRNP is often a more feasible option. In communities unable to support two physicians, a PA or CRNP working in a collaborative relationship with the physician can help prevent burnout and increase productivity.

PAs and CRNPs are educated in primary care, health promotion and disease prevention. They take health histories, perform physical exams, diagnose and make decisions for appropriate management and treatment of common illnesses and injuries, manage chronic health problems, order and interpret lab tests and x-rays, and provide preventive service and education. They practice in public and private health centers, hospital clinics and emergency rooms, physician's offices, migrant health centers, public housing clinics, mobile clinics, and a variety of other sites where primary health care is delivered.

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

Pennsylvania is the third largest employer of non-physician providers and the majority of these individuals work in primary care. Traditionally, they also are more likely than physicians to work in rural and other underserved areas. Unfortunately, practice barriers still exist that limit the most effective and efficient use of these professionals. Removing these barriers could have a significant impact on improving primary care access in rural areas of the Commonwealth.

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 third largest employer of non-physician clinicians, and the majority of these individuals work in primary care. Traditionally, they also are more likely to work in rural and other underserved areas than physicians. 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 non-physician practitioners. Likewise, physicians may not be well informed about the education, competencies and licensure of PAs, CRNPs and CNMs. One study has shown that the physicians most resistant to these professionals have not had the experience of practicing with them.

Two other barriers that effectively prohibit non-physician practitioners from practicing and subsequently from providing services to clients include restrictive state regulations controlling scope of practice and policies by third party payers that limit or exclude reimbursement for primary care services. Some success can be claimed on the regulatory front with the Rendell administration's *Prescription for Pennsylvania* reforms, but more needs to be done.

For example, nurse midwives continue to struggle to change state regulations that will give them authority to write prescriptions and to directly admit laboring women into hospitals. Secondly, although PAs, CRNPs and CNMs are reimbursed for their services by Medical Assistance and Medicare, 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 assures 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 the Rendell administration's Prescription for Pennsylvania legislation; others remain to be addressed.

Questions to ask and issues to address when evaluating how primary care access might be enhanced with use of non-physician providers include:

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

What process is necessary to create job opportunities in health centers, hospitals and other institutional settings to increase patient access to nurse practitioners, physician assistants and certified nurse midwives?

What incentives can be provided to physicians practicing in communities that cannot support two physicians to encourage collaboration with non-physician practitioners 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 (RHC) 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 and are generally open very limited hours. **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, 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 furnishing services. There are 43 RHCs in Pennsylvania. **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 Health Center Program, which means an FQHC, unlike the other primary care providers:

- Must provide a full range of primary care services for all age groups
- Must be open at least 32 hours per week
- Must use a sliding fee scale with discounts based on family size and income
- Must have a “community-majority” board
- Must collect and submit data through the Uniform Data System
- Must be non-profit
- Must provide emergency care on a 24-hour basis
- Must be open to all residents of their service area, regardless of ability to pay
- Must have an ongoing quality assurance program
- Must submit an annual independent audit as well as regular financial reports

FQHCs are supported in meeting these requirements through several benefits, including an annual grant, which generally comprises about 25 percent of their revenue, and like the RHC, special Medicare and Medicaid reimbursement. In addition, FQHC clinicians are,

There are currently FQHC sites in 43 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 600,000 people annually through more than 2 million visits each year.

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 43 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 600,000 people annually through more than 2 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 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. In addition, primary care providers are more likely to locate in a community that has easy access to a hospital. Hospitals also attract nurses and other health care specialists. Rural hospitals act 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 services and hospice. In many rural counties, these services are only available because the local hospital has developed them in response to local need.

Hospitals are major contributors to a local economy. In many rural communities, hospitals are 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.

A 1992 report by the Center for Rural Pennsylvania, *Critical Access Hospitals: Hospitals Pennsylvania Cannot Afford to Lose*, identified those institutions that provide vital inpatient medical care not readily available to a community from other hospitals. Closure of these facilities would leave the largest gaps in access to health care. All but one of the 25 counties dependent on these hospitals is rural. The report also found that the financial condition of many of these hospitals is tenuous and that the long-term viability of these important organizations is uncertain. And while this report may seem dated, the data and implications for rural communities remain current.

National response to the tenuous financial condition of small rural hospitals, the Balanced Budget Act of 1997, also used the term “Critical Access Hospital” and authorized federal designation of certain small rural hospitals. The “Critical Access Hospital” designation permits these facilities to receive cost-based reimbursement from Medicare to enhance their financial situation. Additionally, these hospitals have received operational support through the Medicare Rural Hospital Flexibility (FLEX) Grant Program.

Rural hospitals act as anchors for a broad range of health and human services in the communities they serve.

In Pennsylvania, 13 rural hospitals have been designated as Critical Access Hospitals (CAHs). Since 2001, the state's CAHs have worked together to share best practices through a performance management system; improved quality outcomes with the assistance of Quality Insights of Pennsylvania, Inc., the Commonwealth's Quality Improvement Organization; improved rural emergency and trauma systems; and addressed health improvement in their communities. The CAH workforce has been strengthened through the assistance of the FLEX Program. However, although the FLEX Program and CAH designation have improved the financial condition and quality measures of these hospitals, much work remains. In fiscal year 2009, Pennsylvania CAHs received cost-based reimbursement for inpatient and outpatient services provided to the state's Medicaid (Medical Assistance) population. Unfortunately this appears to be a one-year benefit. The current economic downturn will likely result in more Medicaid enrollment. Without adequate reimbursement, the Pennsylvania CAHs could experience a worsening financial position.

While not all small rural hospitals must survive to meet community needs, a new paradigm for ensuring the future of small rural hospitals that serve the public interest through access to health care services is needed. 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. Many small rural hospitals play a critical role in ensuring access to basic health care services across the continuum, and it is in the public interest for these hospitals to receive the necessary support to revitalize their capabilities of meeting those basic health care needs that are not met through public health, community health centers or the private practice of medicine.

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 the significant linkages and interdependency of each element of the rural health care system to every other element of the system, as well as 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 rural citizens of Pennsylvania.

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 of and quality of care delivered?

Should supplemental funding for technical assistance (financial, technology, human resource 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?

ACCESS TO EMERGENCY SERVICES IN RURAL AREAS

Many small and rural hospitals in Pennsylvania are experiencing increasing difficulty in securing physician coverage of their emergency departments. These facilities are also generally the primary point of access to health care services in economically depressed, rural communities.

The option of closing rural hospital emergency departments is not a viable one.

Discontinuing emergency service does not alleviate the need for immediate medical attention. If a rural hospital were to cease the service, ambulance trips would need to be diverted elsewhere. This would take ambulances out of the community for an average of two hours per patient, leaving a rural community without ambulance or emergency coverage much of the time.

In addition, the beautiful topography of rural Pennsylvania and the winding two-lane secondary roads which contribute to its charm, when coupled with the unpredictability of Pennsylvania weather mean that transfer of individuals with emergency medical conditions to a trauma center or other acute care hospital is often not an option. Air ambulance flights in inclement weather have too often led to crashes and death instead of lives saved.

Guidelines approved by the American Medical Association and a policy statement from the American College of Emergency Physicians acknowledge off-site supervision of the physician assistant in the emergency department. Neighboring New York State has allowed physician assistants to work in emergency departments without onsite supervision with positive results in rural communities. Clearly, many believe that this role is within the scope of training and practice of non-physician providers and that quality of care is not being compromised.

Current regulations inhibit flexibility of care delivery models, inhibit maximizing use of telemedicine and create artificial barriers to emergency care. There is deepening concern that these continued restrictions will jeopardize access to emergency medical care to federally designated underserved areas in the Commonwealth.

The option of closing rural hospital emergency departments is not a viable one. Discontinuing emergency service does not alleviate the need for immediate medical attention

Questions to ask and issues to address in ensuring continued access to emergency services in rural areas of the Commonwealth include:

How can access to quality emergency services for rural residents of Pennsylvania be ensured?

How can current regulations regarding non-physician provider practice be changed to facilitate emergency services without compromising patient care?

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.

Pennsylvania's rural areas have a lower rate of teenage pregnancy than urban areas of the state. In 2008, Pennsylvania had 148,934 total births, with 24 percent of those births occurring in the Commonwealth's rural counties. Nine percent of all state births were to patients 19 years of age and younger: 77 percent in urban areas and 23 percent in rural areas.

In 2008, Pennsylvania mothers delivered 12,301 babies weighing less than 2500 grams, 8 percent of all births. Seventy-eight percent of these low birth weight babies were born in urban counties; 22 percent were born in rural counties. There were a total of 59,244 unwed mothers in the state accounting for 40 percent of all live births. Thirteen percent of these were in rural communities.

About 16 percent of the rural babies born in 2006, were to mothers who do not have a high school diploma. In urban areas, 16 percent of births were to mothers who did not graduate from high school. And in 2006, 35 percent of all rural births were to unwed mothers while in urban areas, 39 percent of new mothers were unwed. Among unwed rural mothers, 23 percent were under 19 years old.

In 2006, 26 percent of rural births were to mothers who did not receive any prenatal care or did not receive it until after the first trimester. In urban areas, 34 percent of the births were to mothers who received little or no prenatal care. Nearly the same percentage of rural and urban babies were born in a hospital in 2006 (97 percent and 98 percent, respectively). Also, 16 percent of births in rural areas were not attended by a physician, while only 10 percent of the urban births occurred without an attending physician.

According to a 2007 report of The Hospital & Healthsystem Association of Pennsylvania, *Pennsylvania Obstetrical Services In Crisis*, the challenges that affect obstetrical services in the Commonwealth demonstrate a growing trend of diminished access to care for pregnant women and signal the need for statewide strategic solutions to address the problem. The report attributes part of the mounting pressure on access to obstetrical

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.

services in many areas in Pennsylvania to the closing of 33 hospital obstetrical units in the decade of 1997-2007. Many of these closures were in rural counties of the Commonwealth.

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. For example, in some regions Federally Qualified Community Health Centers (FQHCs) have stepped up to the plate to meet community need by expanding their services to offer deliveries, but payment policy is impacting this alternative as well. FQHCs delivering 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 Public Welfare has made strides to adjust payment to encourage more clinicians to provide OB services with development of the Healthy Beginnings Plus program, however, a reassessment of barriers to OB 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/retain more clinicians who provide OB/GYN 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 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 third in the percent of elderly residents, behind only Florida and West Virginia.

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. 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. 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. Unfortunately, even if these alternatives are available, nursing home placement is often inevitable for the poor elderly because of the lack of government subsidy for options like personal care or assisted living.

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.

A radical transformation of the health care delivery system will be needed to meet the challenges of an aging 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 growing 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, approximately 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 2007, the nearly 300 million pounds of apples produced in Adams County had an estimated value of \$42.6 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 excludes them because they do not plan to seek permanent employment in Pennsylvania. Ironically, 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 phones or 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 eight 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.

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 the requirement that migrant farm workers seek permanent employment before qualifying?

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.

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 mandated Medical Assistance managed care include specific provisions for migrant farm worker coverage?

HEALTH INSURANCE IN RURAL PENNSYLVANIA

In 2008, data from the Pennsylvania Department of Insurance showed that nearly 14 percent of rural Pennsylvania's working age adults (19 to 64 years old) were uninsured. In urban areas, 12 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 have primarily been responsible for providing health insurance for rural Pennsylvanians and particularly for the expansion of managed health care to those residents.

Nationally, more than 3.1 million rural children (27.9 percent of rural children) are uninsured. When compared to urban children, rural children are more likely to be uninsured than their urban counterparts. Twenty-one percent of rural children are uninsured, while 14 percent of urban children are uninsured. In addition, rural children are more likely to need, but not receive, necessary dental 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.

The free CHIP program covers families who earn up to 200 percent of the federal poverty level or \$44,100 for a family of four. The subsidized CHIP program covers families who earn between 200 percent and 235 percent of the poverty level between \$44,101 and

In 2008, 14 percent of Pennsylvania's rural adults under 65 years old had no health insurance.

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.

\$55,125 for a family of four. The subsidized program offers health insurance for a small deductible per month. In March 2009, seven percent of rural children were enrolled in the CHIP program, while six percent of urban children were enrolled.

According to data from a 2008 Pennsylvania Department of Insurance survey, the uninsured rate for rural and urban children was identical--five percent. However, for rural adults between the ages of 18 to 64 years old the uninsured rate was 14 percent while the rate for similarly aged urban adults was 11 percent.

Pennsylvania's Adult Basic Insurance Program offers limited health benefits to adults between the ages of 19 and 64. Enrollment in the program is limited by the state budget. The program has historically been funded at a level that permits coverage of between 40,000 and 50,000 qualifying individuals. However, the number of openings for enrollees is limited compared to the need, and there is a waiting list of more than 350,000 individuals to obtain coverage. While individuals on the waiting list are permitted to purchase the Adult Basic insurance while they wait, many cannot afford to especially since the premium more than doubled in March 2010.

In May 2009, 16 percent of the rural population or 559,696 rural residents were eligible for Pennsylvania's Medical Assistance program (MA). In urban areas, 1.47 million residents, also 16 percent of the population, were MA eligible. The greatest managed care enrollment is in the southeast and western portions of the state. The lowest is in the rural counties of northcentral Pennsylvania.

In 2008, data from the Pennsylvania Department of Health showed that there were 621,000 rural residents, or 18 percent of the population, enrolled in a health maintenance organization (HMO). In urban areas, 3.08 million residents, 34 percent of the population, was enrolled in an HMO. From 1998 to 2008, rural HMO enrollment declined 42 percent while in urban areas there was a 23 percent decline.

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 76 per 1,000 compared

to 154 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?

THE EFFECT OF MALPRACTICE ISSUES ON THE DELIVERY OF RURAL HEALTHCARE SERVICES

As stated in other sections of this document, access to health care for many rural residents is limited by a number of critical issues. Rural health care in Pennsylvania has been confronting another challenge that has also affected access for many residents—malpractice insurance rates.

Soaring medical malpractice liability insurance rates are driving physicians out of Pennsylvania. According to a 2007 survey by the Pennsylvania Department of Health, physicians are retiring early, closing practices, limiting the types of patients they see or moving out of the state. In regions where there may only be a handful of practitioners, the malpractice issue is creating a legitimate health care crisis. According to this survey, malpractice premiums more than doubled this decade.

Rising malpractice insurance premiums threaten access to quality care by:

- Increasing the practice of “defensive medicine” to ward off potential lawsuits and exposing patients to additional risks and increasing costs;
- Reducing the reporting of adverse events and potential errors to quality improvement groups out of fear of litigation. This lessens identification and correction of such events before anyone is hurt; and
- Avoiding practicing high risk specialties due to cost such as trauma care, obstetrics and orthopedics.
- Creating a less than optimal environment for physicians who have a choice as to where they locate.

The rising costs of malpractice insurance for doctors and hospitals is raising the cost of health care for all residents through taxes, insurance premiums, and out of pocket expenses and is an important topic in national healthcare reform.

The medical malpractice insurance crisis did not originate overnight and does not have a simple solution. The issue is multifaceted and has been building for years. Huge jury awards, the current economic downturn, flaws in the insurance industry, current legal policies and rapidly increasing medical malpractice premiums all contribute to the current threat to Pennsylvania’s health care system. Fortunately, certain legal reforms undertaken in 2002 have resulted in a 40 percent decline in filed medical liability claims according to the Pennsylvania Supreme Court, and Pennsylvania medical liability rates seem to have stabilized. Unfortunately, the stabilized rates are high leaving Pennsylvania at a competitive disadvantage when trying to attract and retain physicians.

According to a 2007 survey by the Pennsylvania Department of Health, Pennsylvania faces the potential of a significant shortage of physicians due to retiring early, closing practices, limiting the types of patients they see, or moving out of state.

In rural regions where there may only be a handful of practitioners, the malpractice issue is contributing to a legitimate health care access issue.

The malpractice crisis affects not only the availability of health care, but also the economy of the Commonwealth since employers want to locate in a state that has good health care at a reasonable cost to assure healthy, productive employees.

Questions to ask and issues to address regarding the medical malpractice issue and its affect on rural health care include:

Should the effect of medical malpractice insurance premium rates on rural health care services be assessed?

Are rural areas more adversely affected by the rising costs of medical malpractice than other regions of the Commonwealth?

Are there special measures that can be implemented in rural areas to mitigate the medical malpractice crisis and its impact?

BEHAVIORAL HEALTH SERVICES IN RURAL PENNSYLVANIA

“Behavioral health” includes both mental health and substance abuse services. In any given year, mental disorders affect 22 percent of American adults. It is estimated that more than a quarter of a million Pennsylvanians annually struggle with an illicit drug addiction or drug abuse problem each year.

The rate of mental disorders is comparable to rates for physical disorders. Severe and persistent mental disorders—i.e., schizophrenia, manic depressive illness, and severe forms of depression, panic disorder, and obsessive compulsive disorder—affect 2.8 percent of the adult population or approximately five million people. Conservative estimates indicate that about 12 percent of the nation’s children (or nearly eight million) under the age of 18 are in need of mental health services. At least three million children are seriously mentally ill.

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.

In Pennsylvania, 23 of the state’s 45 county mental health programs have been designated as rural. 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. In Pennsylvania, it is estimated that the total number of individuals with an illicit drug addiction or drug abuse problem over a one year period was 268,000 (Annual Averages Based on 2002 and 2003 National Survey on Drug Use and Health). Illicit drugs include marijuana/hashish, cocaine (including crack), heroin, hallucinogens, inhalants, or any prescription-type psychotherapeutic used nonmedically.

Lack of access to behavioral health services results in increased hospitalization, emergency room use, homelessness and isolation, rates of family violence and child abuse, physical illnesses, and crime and incarceration with their associated costs.

Most alarming is the dramatic increase in 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.

Substance abuse has a significant impact on healthcare costs, the economy and employers. According to DrugFree Pennsylvania, employee substance abuse can create safety hazards for employers, co-workers and the public as well as lost business opportunities. For example:

- Problem drinkers are absent from work four to eight times more often than normal. Drug users are absent from work an average of five days per month due to substance abuse.
- When they do show up, substance abusers are 33 percent less productive and cost their employers \$7,000 annually.
- 47 percent of industrial injuries can be linked to alcohol abuse.
- Drug using employees are four times more likely to be involved in workplace accidents and five times more likely to file a workers' compensation claim.
- 38-50 percent of all workers' compensation claims are related to substance abuse.
- Substance abusers are three times more likely to use medical benefits than other employees.
- 80 percent of drug users steal from their workplaces to support their habits.
- Substance abuse is the third leading cause of workplace violence.

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, 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 healthcare 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 Medicaid 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 statewide development of integration models?

RURAL HEALTH DISPARITIES

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.

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.

A review of the Centers for Disease Control and Prevention's (CDC) Health Status Indicators showed several areas with statistically significant differences between urban and rural areas. The average age-adjusted death rates per 100,000 population due to heart disease, cardiovascular disease, motor vehicle crashes, suicide and work-related injuries are significantly higher in rural areas. The percentage of births occurring to mothers receiving no prenatal care in the first trimester of pregnancy (2000) was notably higher in rural areas.

Based on an analysis of rural/non-rural differences in responses to questions asked in the Pennsylvania Department of Health's Behavioral Risk Factor Surveillance System (BRFSS), three disparities between rural and urban health status are evident: 1) in rural areas, current smokeless tobacco use is higher, 2) a higher number of residents did not graduate from high school and 3) a much higher percentage of residents keep firearms in or around the home. This last statistic also correlated with the higher suicide rate in rural areas. Firearms were involved in more suicides than in non-rural areas.

Review of data from other state agencies, such as 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

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

mental health services as important differences in the health status of rural and urban residents.

Questions to ask and issues to address in ensuring that Pennsylvanians have equitable access to health care service and that health status disparities are eliminated, include:

How can awareness of the causes of poor health and what individuals can do to protect their health and/or that of their families increase among populations at risk for various health conditions?

What can local systems do to address both individual health and population health?

In what ways can rural advocates better articulate the unique needs and issues related to rural health care and quality of life? How can the message be communicated that rural Pennsylvanians are in many ways a disparate population?

THE USE OF TELEHEALTH SERVICES IN RURAL AREAS

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 improving access to primary and specialty care.

Evaluation of the cost savings from telehealth show it can be substantial. For example, data from a large telehealth project in Georgia indicate that 81 percent of the patients who receive care through telehealth services did not require a transfer to secondary or tertiary centers. Given that the average cost of a bed per day is generally much less in a rural hospital, the findings suggest that substantial savings could be made by providing quality health care through the rural hospital. In addition, the study's authors estimate that an increase of a single patient per day to the rural hospital census represents a net cash flow of \$150,000 per year for the hospital. This is revenue that is staying in the rural community, enhancing not only the fiscal stability of the rural hospital, but also the socioeconomic fabric of the community.

Telehealth holds promise as a tool for improving the rural health care system but will require adequate telecommunications and human infrastructures to be effective. 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.

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.

Telehealth holds promise as a tool for improving the rural health care system but will require adequate telecommunications and human infrastructures to be effective.

Questions to ask and issues to address relative to 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 phone charges be distance insensitive for essential services like health care?

Should Medical Assistance consider paying for telehealth consultations for rural beneficiaries? If so, under what circumstances?

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?

HEALTH INFORMATION TECHNOLOGY

Health information technology (HIT) is becoming increasingly essential for healthcare 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 adequate human and financial resources for HIT acquisition, training, implementation and utilization to optimize the HIT potential.

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, healthcare 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 umbrella framework to describe the comprehensive management of health information and the secure exchange of that information between consumers, healthcare providers, government, healthcare 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 healthcare delivery system, regardless of geographic location.

The configuration of healthcare 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. On the flip side, 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 even performance of surgical procedures using robotic assistance.

HIT is increasingly viewed as the most promising tool for improving the overall quality, safety, and efficiency of the healthcare delivery system, regardless of geographic location.

Rural hospitals and healthcare 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.

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 healthcare 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 Pennsylvania eHealth Initiative (PAeHI) is an organization that was formed by multiple stakeholders to help lead and coordinate activities within the Commonwealth for HIT adoption and assist providers in meeting the federal “meaningful use” criteria. PAeHI, along with other stakeholders, is supporting Quality Insights of Pennsylvania, Inc. (the state’s Quality Improvement Organization) as the HIT Extension Center for Pennsylvania which brings valuable federal financial support to the Commonwealth. The Regional HIT Extension Centers will be mandated to provide much-needed outreach to rural primary care providers.

Creating the roadmap for the exchange of health information is the Pennsylvania Health Information Exchange (PHIX). Part of Governor Rendell’s health reform plan for the Commonwealth, *Prescription for Pennsylvania*, PHIX is an approach designed to align state activities with the federal Health Information Technology Strategic Plan, to support information exchange between authorized healthcare providers. Rural providers must be an integral part of this and all state HIT strategic planning.

Rural hospitals and healthcare 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.

Note: A portion of this text was adapted from "Roadmap for the Adoption of Health Information Technology in Rural Communities," and "Small, Stand-Alone, and Struggling: The Adoption of Health Information Technology by Rural Hospitals." NORC Walsh Center for Rural Health Analysis

Questions to Ask and Points to Consider When Evaluating the Implications of Health Information Technology for Rural Healthcare Providers:

- 1. How can costs be lowered to make HIT adoption and sustainability affordable for rural providers, especially Critical Access Hospitals?*
- 2. What regulatory barriers to HIT adoption and utilization exist in Pennsylvania?*
- 3. What models can be deployed to help rural hospitals secure the necessary technical expertise in an affordable and sustainable manner?*

BROADBAND ACCESS

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 and 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 their technology.

The May 2009 FCC report, *Bringing Broadband to Rural America: A Report on Rural Broadband Strategy* begins, “As long as a grade-school child living on a farm cannot research a science project, or a high school student living on a remote Indian reservation cannot submit a college application, or an entrepreneur in a rural hamlet cannot order spare parts, or a local law enforcement officer cannot download pictures of a missing child without traveling to a city or town that has broadband Internet access, we cannot turn back from these challenges.” “Infrastructure deployment is something Americans do well; it plays to our national strengths,” the report notes. “We have built out canals, bridges, electricity, telephone service, roads and highways. Now, with much history to learn from and with an array of technological resources at our disposal, we can and will do it again.”

The report shares that the FCC and other federal agencies have not collected comprehensive and reliable data on the state of broadband access. It cites a 2008 Pew Broadband Adoption Study which found that between 57 to 60 percent of urban/suburban

“Broadband penetration” is now treated as a key economic indicator.

“As long as a grade-school child living on a farm cannot research a science project, or a high school student living on a remote Indian reservation cannot submit a college application, or an entrepreneur in a rural hamlet cannot order spare parts, or a local law enforcement officer cannot download pictures of a missing child without traveling to a city or town that has broadband Internet access, we cannot turn back from these challenges.”

consumers have broadband, compared to 38 percent of rural residents. That last number is pretty close to a National Telecommunications Information Administration estimate of 39 percent. The report calls for all levels of government to explore ways to help overcome the high costs of rural broadband deployment. The report concludes, “A complementary government role in broadband deployment can yield advantages that a free market solution cannot achieve alone.”

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 address this growing “digital divide” before it serves to exponentially increase the present disparities between those who live in rural and those who live in urbanized 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.

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

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:”

What is the state of rural broadband?

How can the government help overcome obstacles to its expansion?

How can key government agencies cooperate in doing this?

ORAL HEALTH ISSUES IN RURAL PENNSYLVANIA

Great disparities in oral health care delivery, services and 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. The Pennsylvania Department of Health and the U.S. Health Resources and Services Administration have identified oral health as a root cause and contributor to chronic diseases. The Pennsylvania Department of Health's Special Report and Plan to Improve Rural Health Status identified lack of access to oral health services as a critical health issue for rural areas of Pennsylvania. This report indicated that just as disparities exist in certain disease categories of physical health, similar disparities exist for oral health. In addition, good oral health may improve the quality of life by freeing an individual from chronic pain or facial disfigurement.

According to the 2007 Pennsylvania Dentist/Dental Hygienist Department of Health workforce report, 19.4 percent of dentists participate in the Medical Assistance program and 38.4 percent in the Children's Health Insurance Program (CHIP). Participation rates in the Medical Assistance program by rural dentists is a bit higher at 24 percent, but only 32 percent of the rural dentists responding to the survey participate in CHIP.

According to the Pennsylvania Oral Health Needs Assessment, dental caries remain a significant condition among Pennsylvania's children in both urban and rural areas. Caries (decay) rates show a steady increase with age; there is also significant variation among health districts. Untreated dental caries remain a serious problem for many children. The percentage of Pennsylvania's six to eight year olds with untreated decay was, on a statewide average, six percent (+three) higher than the Healthy People 2010 objectives. Regionally, the northwest district in particular, especially among the six to eight year olds, has significantly higher rates of both caries and untreated caries.

Statewide, according to the *Pennsylvania Oral Health Needs Assessment*, the rate of children's annual dental visits was quite high (87 percent), but those children who did not visit the dentist had much higher rates of untreated dental disease than those children who had a dental visit in the previous 12 months (39 percent versus 18 percent, respectively). Children from disadvantaged economic backgrounds had the highest rates of dental disease and the most untreated dental disease. The most troubling finding from this study

The Pennsylvania Department of Health's Special Report and Plan to Improve Rural Health Status identified lack of access to oral health services as a critical health issue for rural areas of Pennsylvania.

was the significant economic gradient that seemed to exist for dental caries. Children from the poorest families are two times more likely to experience dental caries (58 percent vs. 27 percent) and three times more likely to have any untreated dental caries (33 percent vs. 10 percent) than children from the wealthiest families. This strongly suggests that access to preventive and restorative dental care, as well as effective preventive oral health education, is lacking for these poor children and their families, in both urban and rural areas.

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 September 2002, there were 67 DHPSAs designated in Pennsylvania, involving nearly 1,521,000 people. Forty-nine of these were special population DHPSAs, meaning that the problem was not in the number of dentists, but in the number of dentists per area willing to see low-income patients, especially those on Medicaid.

There currently are 44 Federally Qualified Community Health Center (FQHC) dental sites in Pennsylvania and another 30 freestanding community clinics, many which started with the help of Challenge Grant funds from the Pennsylvania Department of Health. Most of these clinics now have long waiting lists indicating that there are not enough of them, and many areas don't have a clinic. According to a WWAMI (Washington, Wyoming, Alaska, Montana and Idaho regional medical education program) Rural Research Center 2009 report, *Crisis in Rural Dentistry*, in 2004, dentists working at rural FQHCs were in high demand and short supply with nearly half of rural FQHCs reporting vacant dentist positions for over seven months.

Without significant change, expected retirement rates will exacerbate access issues over the next 10-15 years as there are currently 1,000 more Pennsylvania dentists in the 40-50 age cohort than in the 30-40 cohort. This developing workforce shortage could be a very serious issue in the near future and is one that the legislature and administration attempted to address through legislation creating a more independent category of dental hygienist—the Public Health Dental Hygiene Practitioner (PHDHP). While by law PHDHPs are permitted to do oral health screenings, cleaning and diagnostic x-rays without the direct supervision of a dentist, malpractice coverage policy by the State Board of Dentistry and Department of Public Welfare payment policy have limited utilization of these healthcare professionals to extend access.

The Centers for Disease Control and Prevention (CDC) along with the independent Task Force on Community Preventive Services recently recommended two community-based

oral health preventive efforts that are proven to be most effective in preventing tooth decay: community water fluoridation and school sealant preventive programs. Both of these efforts have a large beneficial oral health effect on low-income children, and both of these efforts are lagging behind the Healthy People 2010 (HP 2010) objectives in Pennsylvania, where only 53 percent of people receiving community water are currently receiving fluoridated water (HP 2010 objective, 75 percent) and only about 25 percent of Pennsylvania schoolchildren have sealants (HP 2010 objective, 50 percent).

Effective oral care in rural Pennsylvania requires enhanced access to prevention, screening and treatment services as well as education.

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

How can access to dental services in rural areas be expanded? For example, perhaps through partnerships with local dental societies and dental hygiene associations? Through expansion of the Primary Care Practitioner Loan Repayment Program administered by the Department of Health? Through allocation of state dollars to support hiring of school-based dental hygienists to provide preventive care and identify dental problems?

What programs can be put in place at the state level to increase dental providers' participation in the Medical Assistance program?

How can effective dental health programs be established or enhanced in rural areas?

Does payment policy support the new level of dental practitioners—Public Health Dental Hygienists—working at their full scope of practice to enhance access?

Should legislation requiring fluoridation of public water be considered?

EMERGENCY SERVICES IN RURAL PENNSYLVANIA

Effective emergency services in rural areas of Pennsylvania require collaboration between two systems—prehospital emergency medical services (EMS) and hospital emergency departments—that are both currently experiencing considerable stress.

Both systems are suffering from workforce shortages. Most rural EMS units rely on volunteer attendants, and their low volume and profit potential lead to an inability to attract 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 on another community or service.

Injury-related mortality is 40 percent higher for rural residents. These excess deaths are due primarily to motor vehicle accidents and while they do not occur more frequently in rural areas, they are more likely to be fatal. A lack of adequate EMS systems is a contributing factor in the death rate from motor vehicle accidents and other forms of trauma.

Resources have been allocated for rural emergency services from the Pennsylvania Department of Health (DOH) through the Pennsylvania Emergency Medical Services Act (Act 45) with additional support committed from DOH, in collaboration with the Pennsylvania Office of Rural Health, through the Medicare Rural Hospital Flexibility Program. However, more resources are required to ensure that the level of rural emergency services is consistent with those provided in urban areas.

The use of telemedicine and electronic medical records are two technological developments that can help improve EMS systems in rural areas. Flexibility in the use of non-physician providers (physician assistants and nurse practitioners) is another potential solution to the workforce issue. From a systems perspective, including rural hospitals in the state-wide trauma system, as the Pennsylvania Trauma Systems Foundation is considering, offers the potential of improved trauma care in rural communities.

While emergency service problems 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

Injury-related mortality is 40 percent higher for rural residents.

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. And 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 policies be developed that support enhancing the quality of care given, yet that allow for flexibility in rural areas in meeting the intent of regulation and law is met?

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?

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 assuring 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 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 its related costs to residents of the Commonwealth, continue to 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 their public health infrastructure independently, thus creating dramatically different systems. Current best estimates, however, place the number of public health workers nationally at 448,254, or 156 public health workers per 100,000 community members.

Pennsylvania’s public health worker per capita ratio is the lowest among states, with 37 public health professionals per 100,000 community members. In part, this can be traced to historical decisions regarding infrastructure development that have led to Pennsylvania

A more clearly delineated system that is capable of assessing public health needs and events will be critical.

having only ten independent health departments, all located in urban areas. The remainder of the state lacks a locally-based governmental public health infrastructure. Therefore, the organizational mechanisms to support and develop additional public health workers in an expedient fashion are, by and large, absent.

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 the 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 assure that essential public health services are being provided to all of Pennsylvania's 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 assuring that the following challenges are addressed:

- Pennsylvania prevalence of obesity increased by 16 percent this past year and by 122 percent since 1990;
- Pennsylvania ranks in the top 90 percent among states for air pollution (micrograms of fine particles per cubic meter);
- Pennsylvania ranks poorly among states for high rates of infectious disease, poor physical health, infant mortality, preventable hospitalizations, cardiovascular deaths and cancer deaths; and
- Pennsylvania ranks among those with the largest proportion of women who smoke and has some of the highest rates of death among females due to breast and colorectal cancers.

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 the 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 in this country and could be targeted in order 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 requires 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 towards 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 a myriad of additional agencies, organizations and individuals including county emergency management coordinators, community hospitals and medical providers, local police and fire departments, etc., all of

Terrorism, particularly bioterrorism, should be a serious concern to rural communities.

which are integral to rural safety. A key to assuring an adequate response among these entities will be a coordination of efforts, which is made difficult by the sheer number of partners, many of which 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 to rely upon, the rural response network in Pennsylvania has to identify what organization(s) in a given community have 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? And, 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?

RURAL HEALTH RESOURCE DIRECTORY

Primary Contacts:

Pennsylvania Rural Health Association, P.O. Box 8600, Harrisburg, PA 17105-8600, (717) 705-0985; Contact: Ellen Krajewski, President; www.paruralhealth.org.

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 Office of Rural Health, 202 Beecher-Dock House, University Park, PA 16802, (814) 863-8214; Contact: Lisa Davis, Director; <http://porh.psu.edu>.

The Pennsylvania Office of Rural Health (PORH) is a joint effort of Penn State Outreach and Cooperative Extension and Penn State's College of Health and Human Development. PORH is supported by the Federal Office of Rural Health Policy, the Pennsylvania Department of Health, and Penn State. The goal of PORH is to improve rural residents' access to quality health care through the coordination of rural health programs and activities; creation of a networked information clearinghouse; and technical assistance.

Additional Resources:

Center for Public Health Practice, University of Pittsburgh at Bradford, Hamsher House Suite 16, 116 Interstate Parkway, Bradford, PA 16701, (814)-362-8656; Contact: Margaret A. Potter, JD, Interim Director; <http://www.upb.pitt.edu/crhp.aspx>

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.

Center for Rural Pennsylvania, 200 North Third Street, Suite 600, Harrisburg, PA 17101, (717) 787-9555; Contact: Barry Denk, Director; <http://www.ruralpa.org>.

The Center for Rural Pennsylvania's mission is to preserve and enhance the Commonwealth's rural communities by serving as the focal point for rural policy development within the Pennsylvania General Assembly.

The Hospital & Healthsystem Association of Pennsylvania, 4750 Lindle Road, Harrisburg, PA 17111, (717) 564-9200; Contact: Kelly Hoover Thompson, Senior Director, Regulatory Advocacy; <http://www.haponline.org>

The mission of The Hospital & Healthsystem Association of Pennsylvania (HAP) is to advance the health of individuals and communities and to advocate for and provide services to members who are accountable to the patients and communities they serve. HAP believes that health care in Pennsylvania must focus on patients and the communities in which they live.

Pennsylvania Academy of Family Physicians, 5201 Jamestown Road, Suite 200, P.O. Box 6685, Harrisburg, PA 17112, (717) 564-5365; Contact: John Jordan, Executive Vice President; <http://www.pafp.com>

The mission of the Pennsylvania Academy of Family Physicians is to promote improved health of Pennsylvanians; to advance the specialty of family practice through education, advocacy, and communication; and to serve the unique needs of members with professionalism and creativity.

Pennsylvania Area Health Education Center (AHEC) Program, The Milton S. Hershey Medical Center, P.O. Box 850, Mail Code H154, Hershey, PA 17033, (717) 531-4327; Contact: Linda Kanzleiter, Associate Project Director; <http://www.paahec.org>.

The mission of the Pennsylvania AHEC Program is to help communities meet their primary health care needs by creating a statewide infrastructure bridging community and academic resources to facilitate the recruitment and retention of primary care providers in underserved communities through educational and training programs; develop an information and communication network to provide consultation, technical assistance, education and other professional support for community-based primary care practitioners; increase the number of individuals from minority and underserved communities and populations who enter primary care and allied health professions; and evaluate and address public health needs of communities within and among the regions, and provide innovative multi-disciplinary responses to those needs.

Pennsylvania Farm Bureau, 510 S. 31st Street, P.O. Box 8736, Camp Hill, PA 17001-8736, (717) 761-2740; Contact: Joel Rotz, Director, National Legislative Programs; <http://www.pfb.com>.

The Pennsylvania Farm Bureau (PFB) is a non-profit lobbying organization for farmers in Pennsylvania. It is affiliated with the American Farm Bureau at the national level. There are 54 county farm bureaus located in 61 counties, with over 26,000 family members. The PFB is concerned about accessibility to primary care in rural areas, as well as emergency care and is interested in working with others with the same concerns.

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

The Pennsylvania Association of Community Health Centers (PACHC) is the state's primary care association. PACHC represents Pennsylvania's more than 200 Community Health Centers (FQHC), rural health clinics (RHC) and other like-mission provider sites. These community health centers provide comprehensive quality primary medical, dental and behavioral health care to more than 600,000 Pennsylvanians annually. PACHC also works collaboratively with communities and its state and federal partners to evaluate which primary care delivery system model will work best for individual communities.

Pennsylvania Medical Society, 777 East Park Drive, P.O. Box 8820, Harrisburg, PA 17105-8820, (717) 558-7750, Contact: Denise Zimmerman, President; <http://www.pamedsoc.org>

The purpose of the Pennsylvania Medical Society is to represent physicians in the Commonwealth. The society promotes the availability of quality care and programs for the health of the public, supports the advancement of medical science, maintains high standards of medical education, develops programs and services to enhance medical practice, upholds the ethics, integrity, and dignity of the medical profession, and advocates for the interests of the medical profession in matters having to do with legislation, regulation, and reimbursement.

The Pennsylvania State Nurses Association, 2578 Interstate Drive, P.O. Box 68525, Harrisburg PA 17106-8525, (717) 657-1222; Contact: Betsy Snook, CEO; <http://www.panurses.org/2008/>.

The purpose of the Pennsylvania State Nurses Association is to preserve and advance the identity, the integrity, and the continuity of the profession of nursing and to serve as the professional organization and the official voice for registered professional nurses in the Commonwealth of Pennsylvania.

Pennsylvania Public Health Association, c/o Temple University Office of Research, 406 University Services Building, 1601 North Broad Street, Philadelphia, PA 19122-6099, (215) 204-7467; <http://www.ppha.org/>.

The mission of the Pennsylvania Public Health Association is to improve the health status of the citizens of the Commonwealth of Pennsylvania through the advancement of the practice of public health. This is achieved by providing leadership and expertise on public health issues, educating policy makers, legislators and the public, developing partnerships and promoting collaborations, providing forums for discussions and discourse, providing mechanisms for knowledge exchange and networking, promoting standards for public health practice, and promoting the provision of public health services in all Pennsylvania counties.

Governor's Advisory Council on Rural Affairs, 506 Finance Building, Harrisburg, PA 17120 (717) 787-1954; Contact: William Sturgis, Executive Director; <http://www.ruralpa.state.pa.us>.

The Pennsylvania Rural Development Council (PRDC) is a federal/state program comprised of over 150 members from federal, state, and local government, private enterprise, and non-profit organizations. The Council's mission is to promote economic development through task forces on health, education and training, economic development, communications, and transportation. Preserving a rural quality of life, removing barriers, promoting cooperation, and enhancing communication are also part of the mission statement. The Pennsylvania Rural Development Council meets quarterly across the state.

Pennsylvania Rural Electric Association, 212 Locust St., P.O. Box 1266, Harrisburg, PA 17108-1266, (717) 233-5704; Contact: Russell Biggica, Economic Development Specialist; <http://www.prea.com/Content/default.asp>.

The Pennsylvania Rural Electric Association (PREA) is the service organization for electric cooperatives in Pennsylvania and New Jersey. Together, these non-profit, locally controlled cooperatives provide reliable and affordable electric service to more than 600,000 rural homes and businesses. In addition to supplying power, PREA and its member cooperatives are aggressively involved in numerous economic and community development initiatives which will help to ensure an improved economic vitality and quality of life in rural communities.

Pennsylvania Society of Physician Assistants, P.O. Box 128, Greensburg, PA 15601, (412) 836-6411; Contact: Ronald B. Mezick, Jr.; <http://www.pspa.net/index.html>.

The Pennsylvania Society of Physician Assistants (PSPA) represents all physician assistants within the Commonwealth of Pennsylvania. The goals and objectives of the PSPA are to enhance quality of medical care to the people of Pennsylvania through a process of continuing medical education, both to the membership and the public, to provide loyal and honest service to the medical profession and to the public, to promote professionalism among its membership, and to promote the physician assistant concept.

Pennsylvania Dental Hygiene Association (PDHA), Central Office, PO Box 606, Mechanicsburg, Pa 17055, (717) 766-0334; Contact: Margie Mengle; <http://www.padentalassistants.org/>.

To improve the public's total health, the mission of the PDHA is to advance the art and science of dental hygiene by ensuring access to quality oral health care, increasing awareness of the cost-effective benefits of prevention, promoting the highest standards of dental hygiene education, licensure, practice and research and representing and promoting the interests of dental hygienists.

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