Pennsylvania Health Disparities Report 2012

pennsylvania
DEPARTMENT OF HEALTH

A letter from the Office of Health Equity

We are very excited to present to Pennsylvania residents the 2012 Health Disparities Report highlighting the status of health equity in the commonwealth.

The mission of the Office of Health Equity (OHE) is to create awareness of health inequities, advocate for the development of programs and collaborate with community-based organizations to address health inequities. One of the goals of the Pennsylvania Department of Health (PADOH), OHE, is to raise awareness of health disparities and social determinants of health in the PADOH and with stakeholders throughout the commonwealth.

Our initial focus involves continuously assessing PADOH policies and programs to promote holistic approaches and evidence-based practices that will help reduce health inequities in Pennsylvania.

A working definition of health equity can be expressed as the highest attainable standards of health experience for any group when compared to other populations.

This health disparities report subscribes to The National Partnership for Action to End Health Disparities goals, which include, but are not limited to, increasing awareness of the significance of health disparities, their impact on the nation, and the actions necessary to improve health outcomes for racial and ethnic minorities; strengthening leadership at all levels to address health disparities; improving cultural and linguistic competency and diversity of the health-related workforce; and improving data availability and coordination, utilization, and diffusion of research and evaluation outcomes.

The OHE is very proud of the advancements we have made in creating awareness, building capacity, and consolidating public and private partnerships to assure that health disparities are addressed holistically and consistently in Pennsylvania.

This report will help to provide direction and tools to focus our programs and activities and better serve unrepresented and vulnerable populations in Pennsylvania.

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Director, Office of Health Equity

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Executive Summary

The Pennsylvania Department of Health (PADOH), Office of Health Equity (OHE) is very proud to present this Health Disparities Report with the intention of creating awareness of health inequities in Pennsylvania and addressing the fundamental factors that create and sustain these inequities. These inequities include cultural competency and the structural consideration of all the social determinants of health that have become the roots of health inequities in Pennsylvania. This report will also help the OHE to enhance the development of programs and improve collaboration with public and private partners, diverse stakeholders and community-based organizations. In our view, health equity exists when everyone has the opportunity to attain their full health potential.

The report's major findings indicate that health inequities currently exist among many minority groups within the Commonwealth of Pennsylvania. These groups include the lesbian, gay, bisexual, transgender, intersex (LGBTI) community, seniors, incarcerated individuals, individuals with physical and mental disabilities.

Sexual and Gender Orientation Minorities

In an Allegheny County, Pennsylvania, LGBTI study, 44 percent (n=405) of participants self-reported having depression, anxiety or other emotional disorders (Lombardi, 2008). Incredibly, the NTDS revealed that 41 percent of all transgendered respondents had attempted suicide, compared to only 1.6 percent of the general population. Safe and affordable housing is a significant challenge for many transgendered individuals. A needs assessment conducted in Philadelphia found that transgender men and women had numerous health problems related to discrimination and violence. Of the 182 people who responded to the study, 25 percent of respondents were denied medical care because they were transgender, over half experienced violence in their homes, and about one- third had attempted suicide (Lombardi, 2008).

Seniors

Pennsylvania has almost two million citizens age 65 and older; over one in five Pennsylvanians is aged 60 or older. The typical nursing home occupant is likely to be female, over age 85, widowed and diagnosed with some form of dementia. Nearly 5 percent of people between the ages of 65 and 74 have Alzheimer's disease, and almost half of those aged 85 and older may have the disease. One out of every 33 baby boomers is living with hepatitis C infection, and three-fourths of hepatitis deaths occur in people between the ages of 45 and 64. Acierno, et al. (2010) estimated that one in 10 elders experienced some kind of emotional, physical or sexual mistreatment or neglect in 2009. Abuse occurred across socioeconomic status and race and correlated most strongly with low social support and previous traumatic event exposure.

Incarcerated Individuals

In Pennsylvania, prison inmates are at high risk for exposure to infectious agents due to cramped quarters, poor environments and the behavioral choices of inmates. They are also at increased risk for contracting viral infections because they may be pregnant, stressed or have little access to health care. In addition, a significant proportion of women, approximately 25 percent, are pregnant or postpartum when they enter prison (Kubiak, et al., 2010). A 2008 report from the U.S. Bureau of Justice Statistics found that more than half

of all prisoners in the U.S. have a specifically defined mental health illness (Hatton and Fisher, 2008).

Physical Disabilities

In 2009, the prevalence of specific disability types among persons of all ages in Pennsylvania was as follows (Cornell University, 2012):

- 2.2 percent reported a visual disability;
- 3.6 percent reported a hearing disability;
- 7.1 percent reported an ambulatory disability;
- 5.4 percent reported a cognitive disability;
- 2.5 percent reported a self-care disability; and
- 5.8 percent reported an independent living disability.

In Pennsylvania in 2009, the prevalence of disability for working-age people (ages 21 to 64) was (Cornell University, 2012):

- 10.1 percent among Caucasians;
- 17.8 percent among African-Americans;
- 4.8 percent among Asians;
- 31.6 percent among Native Americans;
- 14.6 percent among persons of all ages of Hispanic or Latino origin; and
- 21.2 percent among persons of some other race or mixed race(s).

In 2009, 27.6 percent of individuals with disabilities between the ages of 21 and 64 years old lived below the poverty line in Pennsylvania. According to the National SCI Statistical Center (2010), the medical costs of living with a person with disabilities can range from $321,720 to $985,774 the first year and between $39,077 and $171,183 each subsequent year.

Mental Disabilities

Mental disabilities is an umbrella term for a variety of disorders including anxiety, attention deficit hyperactivity disorder (ADHD, autism spectrum disorder [ASD], bipolar disorder, borderline personality disorder, depression, schizophrenia, obsessive compulsive disorder (OCD), panic disorder and PTSD. Between 80 and 90 percent of mental disorders are treatable using medication and other therapies (CDC, 2012g). Still, the majority of people with mental health disorders do not receive any treatment (U.S. DHHS, 2001). The problem remains how to get people to the clinic and, secondly, how to help them comply with a prescribed treatment plan. Among the population with any mental illness in 2009, 37.9 percent received mental health services in the past year.

Education, employment opportunities and income are three important indicators for socioeconomic conditions. Ethnic minorities often experience a marked disparity in these three key indicators. Access to care is without a doubt one of the fundamental factors to attain health equity, but, it is not the only factor of health disparities. Studies show that delaying health care frequently results in higher levels of morbidity and mortality. Health literacy is a barrier for patients seeking assistance and can be a concern for many patients when they are trying to access quality health care.

The health literacy of the patient seeking assistance can create a major barrier to accessing quality health care. Poverty is another element that is heavily analyzed in this report because

its consequences usually extends beyond living with limited funds, specifically when we are referring to situational and generational poverty. The 2012 Health Disparities Report showcases a brief snapshot of the major health disparities that face many groups. The report highlights the importance of cultural competence, cultural sensitivity, language access, and health literacy for healthcare providers, public health practitioners and the general public. This is highlighted in order to help create health equity in the Commonwealth of Pennsylvania

Introduction

The Pennsylvania Health Disparities Report will attempt to provide a comprehensive snapshot of the vulnerable populations throughout Pennsylvania. The vulnerable populations profiled in this report tend to experience inequity across the determinants of health. The determinants of health are factors that contribute to a person's current state of health. These factors may be biological, socioeconomic, psychosocial, behavioral or social (culture, social status and healthy child development). These circumstances forecast whether or not health equity will exist for the vulnerable populations throughout Pennsylvania. Health equity is when everyone has the opportunity to attain their full health potential.

As the nation has increasingly become aware of the need to address health inequities, many leading organizations have issued statements to define the problem. The World Health Organization (WHO) expresses health inequities as "differences in health, which are not only unnecessary and avoidable, but in addition, are considered unfair and unjust." (Caucasianhead, 1991) Health inequities lead to health disparities.

Healthy People 2020 additionally defines a health disparity as "a particular type of health difference that is closely linked with social, economic, and/or environmental disadvantage." (Healthy People 2020, 2012b) Healthy People is a set of national objectives published by the U.S. Department of Health and Human Services (DHHS) every ten years. The 2020 edition covers 42 different topics with hundreds of specific, measurable objectives for the nation's medical and public health systems to progress towards by the year 2020.

Health inequities adversely affect groups of people who have systematically experienced greater obstacles to health based on their racial or ethnic group; religion; socioeconomic status; gender; age; mental health; cognitive, sensory or physical disability; sexual orientation or gender identity; geographic location; or other characteristics historically linked to discrimination or exclusion." (Healthy People 2020, 2012b) The Substance Abuse and Mental Health Services Administration (SAMHSA), the federal mental health service agency, indicates that health inequities are "imbalances that impact practices influencing access, quality and outcomes of behavioral health care, or a significant disparity in the overall rate of disease incidence, prevalence, morbidity, mortality or survival rate in a specific group of people." (Safran, et al., 2009)

A recent Robert Wood Johnson Foundation (RWJF) study revealed a diverse disparity in life expectancies across the states, with African-Americans living significantly shorter lives than all other ethnic groups. In states with smaller life expectancy gaps by ethnicity, they found that it was not the result of African-American populations living longer but, rather, Caucasian populations having shorter life expectancies compared to the national average (Bharmal, et al., 2011). This serves as a reminder that while Pennsylvania works to decrease inequities between populations, it must also strive to lift every person out of unhealthy situations, rather than focus merely on narrowing differences.

Education, employment opportunities and income intertwine as three important indicators for socioeconomic conditions. Ethnic minorities often experience a marked disparity in these three key indicators. For example, 89.2 percent of Caucasians (age 25 or older) in Pennsylvania completed at least a high school education, compared to 82.7 percent of Asians, 81.4 percent of African-Americans and 65.6 percent of Hispanics. For those currently able to work, yet still seeking employment, the unemployment rate is 8.7 percent for African-Americans, 8.1 percent for Hispanics, 4.3 percent for Asians and 3.9 percent for Caucasians. The average household income by race/ethnicity is $83,020 for Asians; $70,585 for Caucasians; $46,447 for Hispanics; and $43,703 for African-American households (U.S. Census Bureau, 2006-2010).

Addressing health inequities often requires political will and initial financial investments that can reap long-term benefits. Regular well-child visits and immunizations improve a child's quality of life and protect the public. The Centers for Disease Control and Prevention (CDC) indicates that for every dollar spent on immunizations, it saves $6.30, with a cumulative savings of $10.5 billion. With the inclusion of financial losses due to missed work, death and disability, the aggregate savings grows to $42 billion (Zhou, et al., 2003).

In 1985, the HHS published a significant milestone report entitled "The Report of the Secretary's Task Force on African-American and Minority Health," commonly referred to as "The Heckler Report," documenting health inequities among minorities in the United States. Since then, many federal agencies within the HHS, such as the CDC and National Institutes of Health (NIH), and outside of HHS, such as the Environmental Protection Agency (EPA), have published goals and policies to address health inequities within their own spheres. State and local governments and organizations are encouraged to use these documents as foundations to create their own action plans.

Another important resource is the "National Stakeholder Strategy for Achieving Health Equity," published by the National Partnership for Action to End Health Disparities in 2011. This document works to promote collaborations among communities, states, tribes, the private sector and other stakeholders to address these issues. Healthy People 2020, previously mentioned, is another excellent resource that serves to coordinate and unite the nation on goals of prevention, treatment and health equity through its benchmarks, standards and strategies.

In 2006, the Pennsylvania Department of Health (PADOH) implemented its own goals to eliminate inequities throughout the state of Pennsylvania. This resource, entitled the State Health Improvement Plan (SHIP), aligns with Healthy People 2010 goals and provides guidance for health practitioners and advocates within the commonwealth. The PADOH, OHE, is working with its stakeholders to create an action plan that will update and add to the goals originally published in this document.

The following sections of this report briefly introduce many geographic, social and ethnic/racial populations in Pennsylvania that experience significant health inequities. Each section in this report is designed to assist policymakers, advocates and health professionals as they design programs, conduct outreach and create policies affecting the health of Pennsylvania citizens.

References:

(U.S. Census Bureau, 2006-2010) = U.S. Census Bureau, 2006-2010 American Community Survey, Retrieved July 2, 2012.

Social Determinants of Health

Often, health is considered a separate entity from other sectors of daily life, such as education, socioeconomic conditions, etc.; however, over the past 20 to 30, years many researchers, medical and public health professionals, and social justice advocates have assembled growing support for the social determinants of health.

Social determinants of health consist of structural and daily activity conditions, such as access to health care, education, and work, home and community conditions (CSDH, 2008). Several of these social determinants are briefly detailed in this section as they relate to Pennsylvania residents.

Access to Health Care

For many in the United States, as well as in Pennsylvania, limited or lack of health insurance coverage is a major barrier to accessing quality health care. According to the U.S. Census Bureau, 9.7 percent of Pennsylvania residents had no health insurance during 2008-2010 (U.S. Census Bureau, 2008-2010). Uninsured or underinsured populations are six times more likely to forego needed medical treatments as those with full health benefits (CDC, 2010d).

Studies show that for any person, delaying health care frequently results in higher levels of morbidity and mortality, including cardiovascular disease, diabetes, obesity, hypertension and cancer. Many of these chronic disease issues are largely attributed to neglecting preventive and detective care measures (Lombardi, 2008). Regular screenings are important because they give a higher chance of overcoming the disease or experiencing significantly better outcomes if it is detected in its early stages.

Mental health needs could also go unmet because people may not have health insurance; lack the knowledge to navigate the system, or experience communication, transportation or financial barriers to care. Many ethnic minorities in the United States are at high risk for mental health problems, such as anxiety, depression, somatization disorders and substance abuse. There is a significant link between asthma and anxiety, as well as diabetes and depression, both of which are more prevalent and less well maintained among minority populations than in non-Hispanic Caucasian populations (Jurkowski, et al., 2010).

The health literacy of the patient seeking assistance can create a major barrier to accessing quality health care. The U.S. DHHS defines health literacy as "the degree to which individuals have the capacity to obtain, process and understand basic health information and services needed to make appropriate health decisions." (HHS, 2010)

Low health literacy exists among all populations within the United States, not just among those with lower levels of education or language proficiency. However, it occurs more often among populations with cultural and linguistic differences. A Nielsen-Bohlman study concluded that the lack of emphasis on cultural competency and use of technical language by medical professionals when speaking to patients often contributes to the problem (Nielsen-Bohlman, et al., 2004).

For example, in terms of instruction related to asthma care, low parental health literacy lead to 4.6 times more hospitalizations, 1.4 times more ER visits and 2.8 times more missed school days than would otherwise be the case in Philadelphia, where childhood asthma rates are nearly double the national rate (Taylor, 2012). A Philadelphia physician recently wrote of a mother who misunderstood his medication instructions for her child with almost fatal consequences. Upon bringing her son to see the doctor with a serious asthma attack underway, the mother admitted that she was confused about which medicine was his "daily" controller (Flovent) and which was his rescue medicine (Albuterol). She also did not understand why she must give him medications daily when he was "all better now" (Taylor, 2012).

Education

As previously mentioned in the introduction, education, employment opportunities and income intertwine as they play out in various social determinants of health. Ethnic minorities experience a marked disparity in these three key indicators, which tend to have a direct correlation with poor health outcomes (U.S. Census Bureau, 2010d).

Throughout current educational equity literature, the debate rages over whether personal and family history or school context most affects the achievement gap between non-Hispanic Caucasian and minority students. Personal and family history barriers to education include

issues such as poverty, single parent families, lack of health insurance, crowded housing, documentation, grueling parental work schedules, low parental education levels, cultural differences, dangerous urban neighborhoods, psychological distress, isolation, frequent school changes, gender and oppressive responsibilities at home. School context barriers include pedagogical choices, school safety and atmosphere, staff support, English language programs, resources, and cultural sensitivity (Gibson, 2005; Bajaj, 2009; Spring, 2008).

However, even the smallest increase in educational attainment has a tremendous effect on parental ability to provide a healthy environment for their children. Global health and education studies have shown that children born to women with five years or more of primary school education have a 40 percent higher survival rate than those born to women with no education (Murray, 2006).

Poverty

Pockets of racial/ethnic, social and geographic minority groups in the U.S. experience disparities in access to resources, wealth and income, which tend to have a direct effect on health outcomes (U.S. Census Bureau, 2010d).

Poverty extends beyond living with limited funds. Dr. Ruby Payne, author of "A Framework for Understanding Poverty," has defined poverty as "the extent to which an individual does without resources." Poverty may include a lack of financial, emotional, spiritual, mental, physical, social and/or capital resources (Payne, 2005).

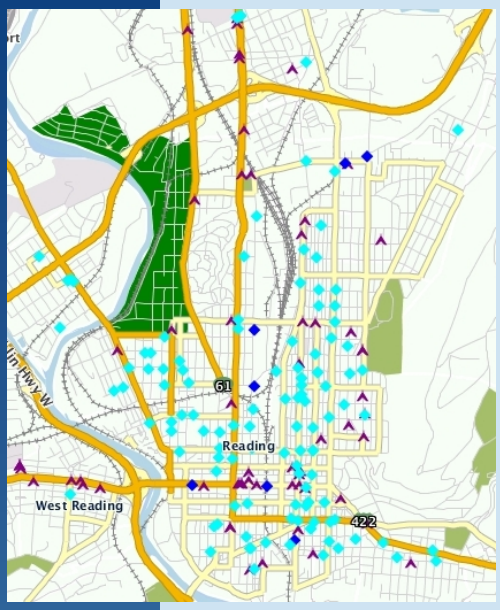
Payne emphasized the difference between generational and situational poverty, as each have extremely different effects on outcomes. Generational poverty is defined as a family that has lived in a state of poverty for at least two generations. Generational poverty brings its own culture, hidden rules and belief systems. Situational poverty, on the other hand, is defined as an individual or family that lacks resources due to a particular event, such as chronic illness, death or divorce. People in this group may have more resources and social capital. They may also have greater hope for the future and a belief that they can climb out of their situation (Payne, 2005). People in these instances often struggle with the "tyranny of the moment," a concept coined by Paulo Freire. This concept describes how people who survive day-to-day do not have the luxury of planning for the future (Lewis, 1994).

The Built Environment

Public health specialists and urban planners are learning that urban land use patterns, particularly those associated with sprawl, have significant effects on rising obesity rates, rates of physical activity and prevalence of other significant diseases (Plantinga and Burnell, 2005; Popkin, et al., 2012). The built environment refers to "the design of our homes, schools, workplaces, neighborhoods, cities and transportation systems" in a community (Rahman, et al., 2011).

Populations in lower income brackets experience vast quality of life disparities in terms of overall health, personal safety, education, employment, housing, food and recreation due to living in generally poorer environments. A significant social determinant centers on access to healthy food. Many low-income urbanites and rural residents may live in "food deserts," where there is limited or no access to large grocery stores selling fresh fruits and vegetables without traveling outside the community. These residents often live entirely from foods purchased at corner markets or small stores, which are more likely to sell processed foods and drinks high in sugar and fat (The Food Trust, 2011a). High consumption of these types of food can lead to a variety of chronic disease ailments, such as obesity, cardiovascular disease and diabetes.

However, not all communities with limited access to large grocery stores may be considered food deserts. For example, in Reading, Pennsylvania, there is one USDA-defined food desert (represented by the dark green census tract). USDA-defined food deserts are census tracts that meet two criteria:



Source: Nielsen, 2011

1) Low-income communities; at least 20 percent of residents living below the poverty rate, or the median income is either at or below 80 percent of the median family income of the surrounding area; AND

2) Low access communities; at least 33 percent of residents (or 500 persons, whichever is greater) live more than one mile away from a large grocery store in urban settings. In rural settings, residents must live more than 10 miles away from a large grocery store (USDA, 2012).

In the image to the left, the light blue diamonds represent small grocery/corner stores or "bodegas." The dark blue diamonds represent large grocery stores, while the purple triangles represent fast-food establishments in the area. Many of these establishments are outside the "food desert" tract but may represent an important food source for the surrounding community.

Violence

Among the most serious health concerns affecting all people is the impact of violent crime in communities. Injuries due to intentional disproportionates weighed toward the African-American community.

In Pennsylvania, young African-American men were more than 24 times more likely to die by homicide than Caucasian males of the same age and four times more likely than Hispanics. In 2007, accidents and homicides were, respectively, the fourth and fifth leading causes of death of all African-Americans in Pennsylvania. For all African-American males aged 44 and under, accidents and homicides were the first and second leading causes of death, respectively (PADOH, 2012b).

After African-Americans, Hispanics/Latinos have the second highest rate of death by homicide (PADOH, 2010h). In 2009, accidents and homicides were the leading two causes of death for Hispanic/Latino males aged 5 to 44 years old (PADOH, 2011f).

References

(U.S. Census Bureau, 2008-2010) = U.S. Census Bureau, 2008-2010 American Community Survey, Retrieved July 2, 2012.

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Racial/Ethnic Minority Inequities

The most obvious and well-documented health inequities occur among racial and ethnic minority populations. The number of ethnic minorities has grown at an astounding rate over the last 20 years, forecasting even greater challenges and opportunities as we strive to create a culture of equity.

As of the 2010 census, Pennsylvania has a total population of 12,702,379. Extreme differences in geographical regions, cultures, languages and experiences have contributed to shaping Pennsylvania residents. They differ in age, physical ability, socioeconomic status, sexual orientation, religion and education. Many have immigrated to Pennsylvania from the far ends of the earth. Even those born and raised in Pennsylvania may have lived their entire lives in the gigantic urban centers of Philadelphia County (with an average density of 11,241.1 people per square mile) or the remote rural areas of Forest County (with a density of 11.6) [PADOH, 2010h]. Ethnic minorities live throughout the state of Pennsylvania with the greatest density occurring in urban centers. While the total population of Pennsylvania is projected to increase by 6.7 percent between 1990 and 2025, the total minority population alone will increase by 76.7 percent. In fact, the PADOH predicts that the Pennsylvania's minority population will nearly double from 12.3 percent to 20.3 percent between those same years, making them the fastest growing segment of our population (PADOH, 2012a).

African-American

In the last decade, the African-American population of Pennsylvania has swelled from 1.2 to 1.4 million people, an increase of 12.5 percent. In 2010, over three-quarters of the African-American population resided in Philadelphia, Allegheny, Delaware, Montgomery and Dauphin counties (U.S. Census Bureau, 2012a). Notably, Dauphin County ranks 15th out of 67 counties in terms of total population; African-Americans make up 18 percent of its residents, the third largest proportion in Pennsylvania (U.S. Census Bureau, 2012a).

By population health status, African-Americans fare much worse than their Caucasian-American counterparts across a wide spectrum of health problems. In a 2009 report of Pennsylvania hospitalizations, rates for the following diagnoses were significantly higher among African-Americans than Caucasian residents (PADOH, 2010d):

- Asthma (various age groups)
- Pediatric asthma (ages under 18)
- Non-fatal spinal cord Injuries
- Congestive heart failure (ages 65-74)
- Congestive heart failure (ages 75-84)

African-Americans have the highest overall mortality rates when compared to all other racial groups within Pennsylvania and the United States as a whole. Categorically, African-Americans also have the highest mortality rates from the three leading causes of death in Pennsylvania (heart disease, cancer and stroke), in addition to HIV, homicide, diabetes and renal failure. African-Americans also have the highest rates of infant mortality, as well as significantly higher rates for most of the individual causes of infant mortality (PADOH, 2012b).

In 2009, Pennsylvania death records show that African-American residents had significantly higher age-adjusted death rates than Caucasians for the following causes of mortality (PADOH, 2010f):

Deaths (all causes)	Cardiovascular disease
Heart disease	Cancers (all causes)
Digestive system disorders	Stroke
Genitourinary system disorders	Nephritis/nephrotic syndrome/nephrosis
Renal failure	Septicemia
Diabetes	Homicide
Firearm-related injuries	HIV
Viral disease	Viral hepatitis
Hypertension and hypertensive renal disease	Asthma

- Anemia
- Fire, smoke and flames
- Prostate cancer
- Colorectal cancer
- Cancer of liver and intrahepatic bile duct
- Cancer (myeloma)
- Cancer of larynx
- Lung and bronchial cancer
- Female breast cancer
- Pancreatic cancer
- Stomach cancer
- Cervical cancer
- Infections and parasitic diseases

While African-Americans experienced inequities in terms of drug poisoning, injuries and accidents in 2007, health gaps for these indicators between African-American and Caucasian residents are no longer apparent in 2009. On the other hand, death by fire, smoke and flame; anemia; digestive disorders; and pancreatic, laryngeal and cervical cancers developed as new inequities between these groups during this time period (PADOH, 2010f).

Education

In the United States, African-American children and youth often receive a much lower quality of education than Caucasian children and youth. The Schott Foundation found that "African-American students have the lowest likelihood of all racial groups of attending a well-resourced, high-performing school and the greatest of attending a poorly resourced, low-performing school." (Talbert, 2011)

Dropout rates are also extremely high for this population. The U.S. high school graduation rate for African-American students is 62 percent, compared with 81 percent for Caucasian students. In Pennsylvania, the high school dropout rate for African-Americans is 3.4 times that of Caucasians (defined as 16- through 24-year-olds who are not enrolled in high school and have not earned a high school diploma) [U.S. Department of Education, 2010].

Poverty and lack of resources, violent classroom environments, severe institutionalized segregation, and discrimination from teachers and peers, all play a significant part in the educational inequities African-American students face throughout their school years (Bajaj, 2009).

Surprisingly, African-American students also face enormous linguistic barriers in the classroom. Asa Hilliard, a highly acclaimed African-American professor of educational psychology and urban education, said that the U.S. "looks at Standard English as a perfect, superior ambition—despite its historical conglomeration from 12 other languages—instead of merely a national convenience." This poses a problem in that it leads teachers to view African-American children as "nothing more than incomplete copies of Western European Caucasian children," leading to such labels of African-American children as "dumb," "learning disabled" or "speech impaired," when their language actually features vestiges of Bantu speech fused with English (Hilliard, 2002).

Asthma

In Pennsylvania, non-Hispanic African-Americans had higher current and lifetime asthma prevalence rates compared to Hispanics overall and non-Hispanic Caucasians in 2005-2006 and significantly higher than non-Hispanic Caucasians in 2007. Over the 2005-2007 periods, the lifetime asthma prevalence rate among non-Hispanic African-Americans was steadily increasing. In 2007, "current" asthma prevalence among Pennsylvanian children for Caucasians, African-Americans and Hispanics were 9, 17 and 12 percent. Lifetime prevalence among Pennsylvania children by race were 12, 24 and 21 percent for Caucasians, African-Americans and Hispanics, respectively. In 2010, African-American children aged 0-4 were hospitalized at an astounding rate of 135.5 (per 10,000 children) compared to Caucasians for the same age group at a rate of 21.1 (PADOH, 2012h).

During 2009, hospital discharge rates for young children with asthma (ages 5 and under) were over eight times higher among African-American residents compared to Caucasians. In addition, hospital discharge rates for asthma among African-Americans were at least two times higher than Caucasians in all age groups (PADOH, 2010d).

Obesity

African-Americans are more likely to be overweight or obese than any other ethnic group in the United States. In 2007-2009, 39 percent of the African-American population in Pennsylvania was estimated to be obese. This is an increase of nearly 15 percent from the period 2005-2007 (PADOH, 2012b).

In order to address obesity, African-Americans must overcome an increasing number of barriers. Large proportions of African-American Pennsylvanians live in poverty and generally cannot afford more expensive nutrient rich/low caloric foods. Statistically, African-American people are more likely to live in urban areas with food deserts (for more on this, see the section on urban disparities), high fast food concentrations and high crime areas with little access to parks and recreational areas (U.S. Census Bureau, 2012a). Cultural constructs surrounding attractiveness and body size are also a barrier to changes in health behaviors (Chen and Wang, 2012).

In addition, a recent Johns Hopkins study determined that race plays a significant role in whether practitioners offer weight support to patients. Overall, African-American patients were significantly less likely to receive counseling on weight reduction and exercise than their Caucasian counterparts, regardless of the physician's race. Caucasian doctors were especially unlikely to counsel African-American patients on weight and exercise. Bleich, a contributing author of this study, reported "physicians in general often have negative perceptions of African-American patients and a lack of sensitivity to the underlying health challenges they face." (Bleich, et al., 2011)

Chronic Diseases

Diabetes is extraordinarily high among African-American adults and children. In 2009, diabetes was the fifth largest killer of African-Americans aged 45-64 in Pennsylvania. During 2007-2009, diabetes affected 15 percent of African-American Pennsylvanians, higher than the national average for African-Americans at 12.6 percent. This is also much higher than the percentage of diabetics in the general population in either Pennsylvania or the nation (8 percent for both) [PADOH, 2012b]. African-American patients are also tested more often for diabetes than their Caucasian counterparts (64 percent and 56 percent, respectively) [PADOH, 2012b].

Between 2007 and 2009 in Pennsylvania, heart disease was the number one killer of African-Americans, while stroke was the third largest cause of death. In 2009, Pennsylvania death rates from coronary heart disease were 29 percent higher, and death rates from strokes were 40 percent higher among African-Americans than among Caucasian-Americans (PADOH, 2012b).

While the disparity in end-stage renal disease (ESRD) incident rates between African-Americans and Caucasians actually narrowed between 1998-2005, African-Americans were nearly four times more likely to develop ESRD in 2007 than their Caucasian counterparts (CDC, 2010b).

Prenatal and Postnatal Care

Among states with available data, Pennsylvania ranked among the top four with the lowest teenage pregnancy rates among non-Hispanic Caucasians (at a rate of 34 per 1,000) in 2005. In the same year, Pennsylvania also ranked among the top five states for highest teenage pregnancy rates among African-American teenagers (at 132–149 per 1,000) [Kost and Henshaw, 2012].

The 2008 birthrate (as opposed to pregnancy) for African-American and Hispanic teenagers was more than twice the rate for non-Hispanic Caucasian teenagers. In addition, the abortion rate among African-American teenagers was four times higher (and among Hispanic teenagers two times higher) than for non-Hispanic Caucasian teenagers (Kost and Henshaw, 2012). Underage African-American mothers were more likely to miscarry, terminate or otherwise lose their pregnancy (41.3 percent) than underage Caucasian (30.3 percent) or Hispanic mothers (16.0 percent) [PADOH, 2012b].

The March of Dimes defines low birth weight as any baby born weighing less than five pounds, eight ounces. Low birth-weight babies are at a significantly greater risk for serious health problems, lasting disabilities and death as newborns. Some common complications that low birth-weight babies experience are respiratory distress syndrome; bleeding in the brain; patent ductus arteriosus, a serious heart problem; necrotizing enterocolitis, a dangerous intestinal problem; and retinopathy of prematurity, an abnormal growth of blood vessels in the eye that can lead to vision loss (March of Dimes, 2012).

A public health problem exists in the United States surrounding the extent of African-American mothers who have low birth-weight babies. In Pennsylvania in 2008, African-American mothers of any age were nearly twice as likely to give birth to an underweight infant (PADOH, 2012b). While social determinants of health, such as income, education and geography have high prediction rates for most health outcomes, these factors do not fully account for what is happening among African-American mothers. For example, college-educated African-American women continue to experience more than twice the infant mortality rate as those born to college-educated Caucasian females (Hearst, et al., 2008).

Overall, the African-American infant mortality rate from 2007-2009 was more than twice that of Caucasian and Hispanic populations in Pennsylvania. African-American infants were two to four times as likely to die from pre-term births or fetal malnutrition as Caucasian or Hispanic infants. They were also almost three times more likely to die from complications during birth than Caucasian or Hispanic infants. In 2009, post-neonatal babies (between 28 days and one-year olds) were nearly three times more likely to die if they were African-American (PADOH, 2012b). In 2005-2009, African-American mothers were 2.4 times more likely to die in childbirth than Caucasian mothers.

Between 2007-2009, 54.2 percent of Pennsylvania's African-American mothers received prenatal care during their first trimester of pregnancy compared to 75.9 percent of Caucasian mothers. African-American mothers were also the least likely to breast-feed (55.4 percent) when compared to Caucasian mothers (68.6 percent) and Hispanic mothers (67.2 percent). African-American mothers were, however, more likely to not smoke while pregnant (85.1 percent) than Caucasian mothers (81.1 percent) [PADOH, 2012b].

Cancer

Cancer is the overall second leading cause of death for African-Americans. While mortality rates from cancer continue to fall, the disease disproportionately attacks and kills African-Americans. In 2009, African-Americans in Pennsylvania had the highest rates of death, compared to their Caucasian or Hispanic counterparts, from all cancers and in many major forms of organ cancers, including cancers of the bronchi and lungs, breast, prostate, colon, pancreas, liver, cervix and stomach (PADOH, 2012b). The 2009 cancer death rate for African-American residents was 32 percent higher than the corresponding rate for Caucasian residents (PADOH, 2011c). African-Americans also have a higher proportion of death rates to incident rates than either Caucasians or Hispanics and are less likely to reach the five-year survival milestone (PADOH, 2012b; American Cancer Society, 2012).

Sexually Transmitted Infections (STIs)

HIV/AIDS remains the fifth largest killer for African-Americans ages 25-64 and the fourth largest for African-American women ages 35-44 and African-American men ages 45-54 (PADOH, 2012b). The HIV/AIDS death rate is significantly higher for African-Americans in

every age group compared to other racial/ethnic populations, except for those aged 55-59, where confidence intervals (95 percent) overlap with Hispanic mortality rates (PADOH, 2010a).

Although non-Hispanic African-American children represented only 15 percent of the total number of children in the United States (2009), they accounted for over three-quarters of diagnosed pediatric HIV/AIDS cases (U.S. DHHS, 2012b). African-Americans are 12.6 percent of the total U.S. population, yet in 2009 they accounted for half of all new HIV diagnoses and just under half of new AIDS diagnoses (CDC, 2012h; U.S. Census Bureau, 2012a). From 2005-2010, the most prevalent methods of HIV/AIDS transmission for African-Americans in Pennsylvania were through heterosexual contact (46 percent), followed by male-to-male sexual contact (24 percent) and injected drug use (21 percent) [PADOH, 2010a].

In 2009 African-Americans had 8.7 times the reported chlamydia rates, 9.1 times the reported syphilis rates and 20.5 times the reported gonorrhea rates of Caucasians (CDC, 2012h). Among all racial groups, women experienced the highest prevalence of these diseases. John Douglas, director of the CDC's Division of STD Prevention clarified, "This has got nothing to do with personal risky sexual behavior. This has everything to do with communities having higher rates of infection for a variety of factors, including lack of access to health care." (Callaghan, 2009)

Health Care Access and Utilization

While African-Americans experience some of the worst health outcomes and face some of the highest health inequities when compared to other racial groups in Pennsylvania, they report very high levels of participation in preventive medical care. For example, screening rates for STIs are much higher for the African-American population aged 18-64 (64 percent) than for Caucasians (31 percent) and Hispanics (50 percent). In 2008-2010, African-American women from Pennsylvania were more likely to report having a mammogram in the past year (67 percent) and a pap test done within the past three years (84 percent) than Caucasian women over 40 years of age (61 percent for mammogram and 77 percent for pap test) [PADOH, 2012b].

Access to health care, however, remains a significant problem for a large part of Pennsylvania's African-American population, especially when compared to their Caucasian counterparts. In 2008-2010, 21 percent of African-Americans ages 18-64 did not have health insurance, compared to only 12 percent of Caucasians. Nineteen percent of African-Americans needed to see the doctor in the past year but could not because of cost, compared to only nine percent of Caucasians. In addition, only 58 percent of African-Americans visited a dentist in the past year compared to 72 percent of Caucasians (PADOH, 2012b).

Despite landmark historical contributions to medicine by African-Americans (e.g., performing the first cardiac surgery, advancements in pharmaceuticals and development of the process for storing blood plasma vital to the American military in Europe during World War II), African-Americans are disproportionately underrepresented in the modern medical community. From the number of minorities in the workforce "pipeline," future projections suggest that current trends are likely to continue (Merchant, et al., 2010). In 2010, African-Americans made up 13 percent of the U.S. population but only 5.8 percent of U.S. doctors and less than 1 percent of dentists (U.S. Bureau of Labor, 2010).

Studies have also shown that many African-Americans have low levels of trust in their healthcare providers. These feelings often result from prior negative interactions with providers, lack of access to African-American providers, institutional racism and a history of exploitation by the medical community, such as in the Tuskegee syphilis experiments (Jones, 1993).

Asian / Native Hawaiian / Pacific Islanders

Often, research studies will collapse Asian-Americans, native Hawaiians (NHs), and Pacific Islanders (PIs) together for ease of reporting. Though the U.S. Census Bureau distinguishes between NHs and PIs, conglomerating "Asians" together still creates a group made up of enormously diverse populations. The Asian continent alone is composed of 52 countries with over 100 official languages and dialects. Each region has its own specific religious, cultural and societal diversity (Tran, 2009).

In Pennsylvania, Asians account for 2.7 percent of the population while the number of NH/PI is less than 0.5 percent (U.S. Census Bureau, 2012c). The sizeable Asian/NH/PI classification includes people with origins from any of the original people from the Far East, Southeast Asia, the Indian subcontinent and the Pacific Isles, in addition to NH populations (U.S. DHHS, 2012a).

In the last decade, the PI population doubled and the Asian population increased almost 60 percent in Pennsylvania. Including both American-born and recent immigrants, Pennsylvania's Chinese, Indian, Filipino and Japanese populations have doubled in size in the last 10 years, while the Pakistani, Guamanian and NH populations have more than tripled (U.S. Census Bureau, 2010 Census). Within the past two years, rapidly growing populations of Bhutanese and Burmese refugees have resettled in Erie, Lancaster, Pittsburgh and Philadelphia (Pennsylvania Refugee Resettlement Program, 2012).

Highly concentrated in urban areas, Asian immigrants comprised 39 percent of metropolitan Philadelphia's immigrant and refugee population, higher than the Latin American and Caribbean immigrant populations (at 28 percent) in 2008 (Singer, et al., 2008). It is likely that these growth trends will continue, not only through immigration, but also because Asian-Americans have the overall lowest death rate and second highest fertility rate (after Hispanics) compared to other Pennsylvanians (PADOH, 2012b).

Between 2007-2009, 70 percent of Asians and 15 percent of NH/PIs were born outside of the United States, compared to 20 percent of Hispanics, two percent of African-Americans, and two percent of Caucasians. Overall, 35 percent of Asian/PIs have entered the U.S. within the past decade (U.S. Census Bureau, 2010a).

From 2007-2009, 85 percent of Asian-American Pennsylvanians over the age of 18 were foreign-born, while 75 percent of those under 18 were born in the United States (U.S. Census Bureau, 2010a). Min (2002) demonstrates how the significant cultural gap between first and second-generation Asian-American individuals, exacerbated by the generational gap, leads to differing English language abilities, views on cultural norms, self-perceptions and understandings of the U.S. health care system.

A recent study of Asian-Indians living in the eastern United States uncovered several cultural and linguistic obstacles to preparations for end-of-life care associated with generational differences. These include attitudes toward death and suffering, family duty, and preferences for information disclosure and decision-making (Sharma, et al., 2012). In another example, significant differences existed between first and third generations of Asian-American immigrants regarding their use of mental health services. From this study, the author suggests that mental health service programs should target recent immigrants and individuals lacking a strong family support system to increase utilization of mental health services (Ta, et al., 2010).

Asians have often been dubbed the "model minority" because they generally have some of the highest socioeconomic, educational and health outcomes when compared to other subpopulations (Chen, 2005). However, this is misleading, particularly because it dismisses the overwhelming diversity of ethnic and geographical backgrounds, which may hide significant health inequities and challenges.

According to the 2010 census data, the median family income of Asian-American families is $64,308, which is $14,900 higher than the national median income for all households. Asians also own 3.2 percent of Pennsylvania firms, although they represent only 2.7 percent of the population (U.S. Census Bureau, 2012c). Despite this, between 2007-2009 poverty affected 17.2 percent of Vietnamese families with children and 15.5 percent of similar Chinese families but only 5.4 percent of Filipino and 5.4 percent of Indian families. This disparity increases dramatically for single mothers with children (SMwC). Over 40 percent of Chinese SMwC and over 31 percent of Vietnamese SMwC lived in poverty, compared to the less than 16 percent of Indian SMwC (U.S. Census Bureau, 2010a).

As a group, Pennsylvanian Asians/NH/PIs are over 1.5 times more likely to have received at least a bachelor's degree compared to their Caucasian counterparts. In addition, over half of the NH/PI population in Pennsylvania has completed some sort of post-secondary education (U.S. Census Bureau, 2012c). On the other hand, great inequities surface when different ethnic backgrounds are broken down. Seventy percent of Indian Pennsylvanians and around half of people of Chinese- and Korean-descent have earned a bachelor's degree or higher, compared to only 20 percent of Vietnamese people (U.S. Census Bureau, 2010a).

Though it varies across different ethnic subgroups, Asian-American women have the highest life expectancy (85.8 years) of any other ethnic group in the U.S. Filipino women have a life expectancy of 81.5 years; Japanese women have 84.5 years; and Chinese women have 86.1 years. However, in general, Asian-Americans battle a variety of barriers to good health. These include infrequent medical visits, language/cultural barriers and lack of health insurance (U.S. DHHS, 2012a).

Despite the fact that Asian-Americans have the lowest mortality rate from cardiovascular disease and diabetes when compared with their African-American, Caucasian and Hispanic counterparts, morbidity and mortality from these diseases remains high (PADOH, 2012b). In fact, cardiovascular disease is the second highest killer of Asian-American men and women after cancer (CDC, 2012j).

Overall, Asian-Americans are at high risk for cancer, heart disease, stroke, unintentional injuries (accidents), diabetes and tuberculosis. This racial group also has a high prevalence of chronic obstructive pulmonary disease (COPD), hepatitis B, HIV/AIDS, smoking, tuberculosis and liver disease (U.S. DHHS, 2012a).

Among the more serious health concerns affecting Asian-PI communities is the impact of suicide, especially among youth and the elderly. Suicide is the second largest killer of Asian-PI males aged 15-44 and the third largest killer of females of the same age (PADOH, 2012b). Overall, Asians/PIs committed suicide at similar rates (5.9) as African-Americans (6.1) during 2007-2009. While there was not as significant a gender gap in suicide rates as compared to other populations, Asian/PI men committed suicide at a lower rate and Asian/PI women committed suicide at a higher rate when compared to their African-American and Hispanic counterparts (PADOH, 2012b).

Health Care Access and Utilization

Insurance coverage is a major barrier to accessing quality health care for Asian-Americans, just like it is for many others in the United States. In 2010, 18 percent of Asian-Americans were uninsured, compared to 11.7 percent of non-Hispanic Caucasians (U.S. DHHS, 2012a); however, the overall data masks inequities between individual Asian subgroups. In Pennsylvania in 2009, only 12 percent of Chinese and Asian-Indians lacked any form of healthcare coverage, which was comparable to Caucasians. Yet 20 percent of Cambodians and Koreans lacked health coverage that year, closer to the overall average for Asian-Americans (U.S. Census Bureau, 2010a).

In addition, insurance, religious traditions, cultural barriers and stigma often prevent Asian-Americans from accessing health care. A stigma is the result of social rejection, prejudice or

discrimination from others inside or outside one's own culture. The fear of stigma is a very real and powerful motivator that often pushes people to reject treatment even after they may have initially sought it (Gary, 2005).

Healthcare beliefs are profoundly interwoven into eastern religious traditions. Cultural values such as stoicism and distrust of western medicine may cause Asian-Americans to put off seeking care. Many Asian cultures attribute diseases and disorders to supernatural causes and thus require supernatural cures (Tran, 2009).

For example, some Laotians believe that immunizations will harm a baby's spirit. Many Buddhists may perceive suffering as an integral part of life. Confucianism often subjugates personal well-being for the good of the family or community. Tran (2009) put forth an example: a family elder instructed a youth to avoid seeking medical attention for his hepatitis infection, as it could jeopardize his sisters' marriage prospects. Taoism involves the belief that perfection is achieved when events are allowed to take a more natural course, even disease. Finally, many Hmong understand life to have a predetermined length, so many may not believe in the healthful benefits of intervention (Tran, 2009).

An analysis using the National Latino and Asian-American Study (2002–2003) data found that, overall; Asian-Americans avoided seeking professional mental health care. Only 8.6 percent of the total sample (n=2095) sought any mental health-related services. Only 34.1 percent of individuals who were likely to have a mental health disorder sought mental health services. In addition, Asian-Americans born in the U.S. showed higher rates of service use than first-generation immigrants. Over 62 percent of third-generation or later individuals with a probable diagnosis used services in the previous 12 months (Abe-Kim, et al., 2007).

Cancer

Compared to all other ethnic groups, Asian-Americans had significantly lower screening rates for breast, cervical and colon cancers (CDC, 2010a). This is especially concerning because Asian-Americans are the only ethnic group in the U.S. to have cancer as the leading cause of death. For all other racial/ethnic groups, heart disease is the number one killer (Chen, 2005).

Considering all cancers together, Asian-Americans experience and die from cancer at a much lower rate than any other racial group in the United States. In the middle of 2006-2008, Asian-Americans had the lowest overall cancer diagnosis rate when compared to Caucasians (1.8 times higher) and African-Americans (nearly two times higher). Asian-Americans also had the second lowest cancer death rate when compared to Caucasians (whose rate was just over two times higher), and African-Americans (over 2.5 times higher).

There are certain cancers, however, that occur in Asian-Americans with greater prevalence. The specific types of cancers that generally attack Asian-Americans more than any other racial/ethnic group are of infectious origin, such as hepatitis B, leading to liver cancer; human papillomavirus (HPV), leading to cervical cancer; and Helicobacter pylori, leading to stomach cancer (Chen, 2005). Nationally, cervical cancer incidence rates for Vietnamese-American women are five times higher than any other ethnic group in the United States (CDC, 2009a).

As a large proportion of Asian-Americans are recent immigrants, the higher rates of infectious-type cancers may reflect the lower quality of health care in their country of origin, and/or a greater disparity of access and quality of care received in the United States (Asian and PI Health Forum, 2011). Asian-Americans are also increasingly acquiring cancers associated with "westernized" diet and sedentary living as well, such as colorectal and breast cancer. Asian-American women who reside in the United States for over 10 years have an 80 percent higher risk for breast cancer than more recent immigrants (Chen, 2005).

In 2008, Asian-Americans had a significantly higher age-adjusted incident rate than all other racial groups for liver/intrahepatic bile duct cancer and stomach cancer in Pennsylvania. The

Asian-American liver/intrahepatic bile duct cancer rate was over 2.5 times the rate among Caucasians, and just slightly higher than the rate for African-Americans (1.04 times higher) and Hispanics (1.24 times higher). [PADOH, 2008].

Communicable Disease

The overall prevalence of hepatitis B virus (HBV) infection in the United States is 0.4 percent, with prevalence estimates ranging from 5-15 percent in Asian-American populations and up to 20 percent in some NH/PI populations. HBV prevalence varies across different subpopulations with the highest prevalence among immigrants from Vietnam, Laos, China and the lowest from Japan (Tran, 2009).

In Pennsylvania, Asian-American women have the second highest mortality rate from viral hepatitis when compared to women of other populations, yet death from viral hepatitis is so rare in Asian-American men that mortality rates cannot be reliably calculated (PADOH, 2012b).

Nationally, in 2010 the tuberculosis rate was 11 times higher among Asian-Americans than in the Caucasian population (U.S. DHHS, 2012a).

Neonatal and Postnatal Care

Overall, Asian-American women ages 15-44 have the second highest birth rate of any ethnic/racial group in Pennsylvania. From 2007-2009, their age-adjusted fertility rate was 74.8 per 1,000, compared to 97.8 for Hispanics, 71.0 for African-Americans and 52.0 for Caucasians (PADOH, 2012b). Asian-Americans are the least likely to give birth to an underweight child in addition to having the lowest infant mortality rate compared to all other subpopulations in Pennsylvania (PADOH, 2012b). However, rates within Asian-American populations will vary considering the diverse communities of geographic origin, socioeconomic and sociocultural backgrounds.

Asian-American women often have strong familial support structures and are more likely to be married than women of other races or ethnic groups in Pennsylvania. They are the second least likely (after Caucasians) to live in poverty. Both of these environments are extremely important social determinants for healthy babies (Pennsylvania Refugee Resettlement Program, 2012). In addition, Asian-American children in Pennsylvania are significantly less likely to be born to a mother receiving government benefits either through the Women, Infants and Children (WIC) program or Medicaid than their African-American or Hispanic counterparts, but still slightly more likely than a Caucasian child (PADOH, 2012b).

Asian-American mothers are the most likely to breast-feed (82.1 percent) compared to African-American (55.4 percent), Hispanic (67.2 percent) and Caucasian (68.6 percent) mothers. They are also much less likely to become teenage mothers than African-Americans or Hispanics and the very least likely to smoke during pregnancy (PADOH, 2012b).

While this may look like a very positive outlook for most Asian-American mothers and young children, there are certainly challenges among Asian subpopulations in Pennsylvania. The Asian-American population is rich in first-generation immigrants. The five-year waiting period for Medicaid eligibility for legal immigrants may prevent a parent from claiming eligibility for government programs, even for their eligible children. There is also fear of deportation, which prevents many from seeking health care or financial assistance. Likewise, those with limited English language proficiency may hesitate to seek out services. Finally, immigrants and refugees may have experienced great maternal and pediatric health challenges before entering the United States, not the least of which is a lack of routine vaccinations and prenatal care (Trinh-Shevrin, et al., 2009).

Hispanic/Latino

The United States developed the "Hispanic" category for the 1980 federal census, allowing people who trace their origins to countries that speak Spanish to so identify themselves. According to Dr. Sagas, a political scientist at New Hampshire University, the terms "Latina" and "Latino," is more of a "grass roots creation that rejects the stamp of Spanish colonization for one that not only includes Latinos of all races and nationalities, but also is gender specific." (Marchocki, 2006)

Nearly three-quarters of a million people comprise the Hispanic/Latino population in Pennsylvania. Although the arrival of the first Hispanics/Latinos to the commonwealth can be traced back to colonial days, this population experienced significant growth in the latter part of the twentieth century. Since then, the population has more than tripled between 1990 and 2010, growing from 232,262 to 719,660. In the last decade alone, the Hispanic/Latino population increased by 83 percent (U.S. Census Bureau, 2012b).

The Hispanic/Latino population in Pennsylvania has also become increasingly diverse. In 1990, 64.1 percent of the Hispanic/Latino population was of Puerto Rican heritage, while today the latter represents only 50.9 percent of Hispanics/Latinos. There has been large growth in the Mexican and Dominican populations in Pennsylvania, as well as increases in the numbers of Central and South Americans (U.S. Census Bureau, 2012b). It is likely that this growth and diversification will continue, not only through migration, but also because Hispanics/Latinos have low death rates and high fertility rates. (PADOH, 2012a).

According to the 2010 U.S. Census Bureau American Community Survey (ACS), 69.3 percent of Hispanics/Latinos over the age of 5 in Pennsylvania were fluent in English. Over 31 percent of Latinos are English-only speakers, and 53 percent are bilingual in Spanish and English. This leaves at least 16.4 percent of the population (approximately 105,000) over 5 years of age with little or no English abilities (U.S. Census Bureau, 2010a).

While socioeconomically diverse, Hispanics/Latinos in Pennsylvania generally have lower educational levels and are often at the bottom rung of the economic scale. Concentrated levels of poverty occur among Hispanic/Latino female-headed households compared to non-Hispanic Caucasian populations. In general, Latinos with lower socioeconomic status, and who are less English fluent, will concentrate in the urban areas (where there is greater access to services and transportation) and in large Spanish speaking communities (U.S. Census Bureau, 2010a).

Overall, Hispanics/Latinos experience similar socioeconomic conditions as the African-American population. In 2010, 33.5 percent of Pennsylvanian Hispanics/Latinos lived in poverty, compared with 28.4 percent of African-Americans and 10.6 percent of non-Hispanic Caucasians. This includes 41 percent of all Hispanic/Latino children compared with 37 percent of all African-American children and 13 percent of all non-Hispanic Caucasian children (U.S. Census Bureau, 2010a).

While 36 percent of Hispanics/Latinos have achieved some post-secondary education in 2007-2009, Hispanics/Latinos generally achieved lower educational levels and experienced higher levels of poverty than non-Hispanic Caucasians (U.S. Census Bureau, 2010a). Even Latinos with similar educational credentials as non-Hispanic Caucasians make only between 81-83 percent of their counterpart's income (spring, 2008).

It is fair to assume that, as a result of living in similar overall conditions, Hispanic/Latino health status would be similar to that of African-Americans. High poverty rates have generally been linked to worse health outcomes, regardless of race. Surprisingly, despite their socioeconomic status, educational attainment and language limitations, Hispanics/Latinos had lower overall rates of death than non-Hispanic Caucasian or African-American populations and lower rates of death in the top three causes of death in Pennsylvania in 2009: heart disease, cancer and stroke (PADOH, 2012a). This phenomenon,

the Acculturation Effect/Latino Health Paradox, occurs most often in people of Mexican origin and Hispanic men in the United States (Hummer, 2007; Gorman, 2010). Evidence shows that many Hispanic/Latino immigrants arrive in the United States healthier than the average native-born resident in terms of markers that would lead to chronic illness. However, their health slowly declines the longer they are here (Gorman, 2010).

Despite this, Latinos disproportionately suffer from mortality related to violent homicides, viral diseases, HIV and viral hepatitis (PADOH, 2010f). Hispanic/Latino males had the second highest rates after non-Hispanic Caucasian males (whose rate were almost two times higher) of drug-induced deaths in 2007-2009 in Pennsylvania and 1.7 times more likely to die by drug overdose than African-Americans (PADOH, 2012b).

Asthma

In the United States, asthma prevalence, morbidity and mortality vary widely between different Latino subgroups. The prevalence of asthma is highest in Puerto Ricans, second highest in Dominicans and Cubans, and lowest in Mexicans and Central Americans. Socioeconomic, environmental, educational and genetic differences all play a part, in addition to likely "ethnic-specific gene-environment interactions" that vary risk for asthma (Choudhry, et al., 2007).

In 2010 in Pennsylvania, the number of patients admitted to any non-federal Pennsylvania hospital with asthma as the primary discharge diagnosis were higher for Hispanic/Latinos compared to non-Hispanic Caucasians and, more specifically, at the 65+ age level for non-Hispanic Caucasians and African-Americans. Across all age groups, asthma rates for Hispanics/Latinos were between 1.8 and 4.2 times higher than rates among non-Hispanic Caucasians (PADOH, 2012h).

Obesity

Hispanic/Latinos must overcome an increasing number of barriers to address obesity. Large proportions of Hispanic/Latino Pennsylvanians live in poverty and cannot afford the higher cost nutrient rich-low caloric foods. Statistically speaking, a majority live in urban areas with food deserts (for more on this, see the section on Urban residents), high fast food proliferation, and high crime with few opportunities to access parks and recreation areas. The correlation between living in a household with income below 150 percent of the federal poverty level and being overweight or obese was stronger for Latino children than for non-Hispanic Caucasian or African-American children (Robert Wood Johnson Foundation, 2011a).

Latino youth are more likely to be overweight or obese than their non-Hispanic Caucasian peers. Overall, obesity rates among Hispanics/Latinos in Pennsylvania rose from 27 percent in 2004 to 36 percent in 2009 (PADOH: EpiQMS, 2012b). According to current estimates, more than 38 percent of Latino youth ages 2-19 in the United States are overweight, and almost 21 percent are obese (Robert Wood Johnson Foundation, 2011a).

Obesity is often caused by overeating or eating low-nutrient and high-caloric foods like junk food. Junk food-eating behaviors in minority youth are often reinforced by several factors, including their exposure to various media sources. The Kaiser Family Foundation defines media as television, movies, video games, music, computer use, newspapers, magazines and books. According to their calculations, Latino youth participate in 13 hours of media per day on average, 4.5 more hours per day than their non-Hispanic Caucasian youth peers (8 hours and 36 minutes) [Robert Wood Johnson Foundation, 2011b].

Latino youth spend an estimated 5.5 hours per day watching television, compared to nearly 3.5 hours per day for Caucasian youth (Robert Wood Johnson Foundation, 2011b). Research shows that increased television viewership is directly associated with increased snacking and caloric intake among youth, specifically high-caloric, low-nutritive foods frequently advertised on television. A recent study suggested that each one-hour increase in

television viewing correlated with an increased intake of 167 calories per day. Another large study determined that the amount of a child's exposure to television directly corresponded to their requests for advertised food and drinks (Robert Wood Johnson Foundation, 2011b).

Studies show that African-Americans and Hispanics/Latinos are significantly less likely to self-report obesity and the associated health risks involved, indicating that they may consider being overweight and obese a way of life (Sivalingam, et al., 2011). This perspective comes through in the Bethlehem Health Bureau's (BHB) Community Assessment from 2010. Participants responded to the question, "What are the top five health priorities in Bethlehem?" Obesity is one of the major concerns for non-Hispanic respondents while Hispanic participants do not even register obesity among their top five concerns (City of Bethlehem, Pennsylvania, 2010).

Cancer

In 2008, the top four cancers diagnosed in Pennsylvanian Hispanic/Latino populations were male prostate, female breast, colorectal and lung. The incident and mortality rates among Hispanic/Latinos are actually the lowest for these four and many other forms of cancer, compared to non-Hispanic Caucasian or African-American populations in Pennsylvania (PADOH, 2012b; Fred Hutchinson Cancer Research Center, 2012).

On the other hand, the Hispanic population in Pennsylvania in 2008 had a significantly higher age adjusted incident rate for liver/intrahepatic bile duct cancer, which was over two times the rate of non-Hispanic Caucasians (PADOH, 2009). Cervical cancer incident rates were also slightly higher in Hispanic women than in non-Hispanic Caucasian women (PADOH, 2012b).

Health Care Access and Utilization

Twenty-one percent of adult Hispanics/Latinos were estimated to need a doctor in 2008-2010, but could not seek services because of the associated costs. Twenty-two percent of Hispanics/Latinos did not have a personal healthcare provider, compared to 17 percent of African-Americans and 9 percent of non-Hispanic Caucasians. In 2009, 35 percent of adult Hispanics/Latinos did not have dental insurance, and, of those with dental insurance, 16 percent had difficulty in finding dentists who would accept it (PADOH, 2012b).

Statistically, Hispanics are especially unlikely to seek help from a mental healthcare professional (Jurkowski, et al., 2010). Hispanics/Latinos are eager to avoid the stigma that having a mental illness might bring, both internally and externally, to their community (Gary, 2005). They are more likely, however, to discuss psychiatric issues with a personal care physician (Willerton, et al., 2008).

Education

In general, Latino students must grapple with a proportionately high number of issues that make them "at-risk," whether from home, school or society (Bajaj, 2009). Spring (2008) shows that almost 50 percent of those with three or more of the following risk factors will never enroll in post-secondary education:

- Being in the lowest socioeconomic status
- Changing schools two or more times
- Having average grades of "C" or lower
- Living in a single-parent home
- Having one or more older siblings who had dropped out
- Being held back one or more grades
- At least one disability
- Speaking English less than 'very well'
- A parent or parents who emigrated in the past five years
- Both parent(s) and/or guardian(s) unemployed

- High school segregation

The Longitudinal Immigrant Student Adaptation study (LISA) shadowed 309 immigrant students, 61 percent of whom were Latino, and compiled data about their home lives, social lives and school lives that might provide information as to why these students do not generally prosper academically (Suarez-Orozco, et al., 2008).

The results of the LISA study showed that a significant majority of immigrant students and their parents put academic goals as a first priority, beginning the school year with high hopes for the future. Nevertheless, as time passed, their experiences became more and more discouraging. The study participants' GPAs steadily declined the longer they attended U.S. schools. In fact, two-thirds experienced either a steady or sudden decline in GPA (Suarez-Orozco, et al., 2008).

The LISA study showed that in segregated schools, study participants were less likely to do well on achievement exams (Suarez-Orozco, et al., 2008). Most of the schools housed a segregated population of poor, minority students but also espoused segregation within the school between specific ethnic identities, teachers and administrators, students and teachers, and bilingual and mainstream classes (Suarez-Orozco, et al., 2008). In one school, the head of the bilingual program described her wing of the school as "ghetto" because of its blatantly unequal resources and attention, highlighting their "second-class citizenship" (Suarez-Orozco, et al., 2008). Many English speaking language (ESL) teachers bemoaned that their students had literally no social or academic contact with mainstream programs or English speaking students. According to the study, this proved significantly detrimental to English language learner (ELL) progress. Students who had at least one English-speaking friend consistently outperformed their peers who did not (Suarez-Orozco, et al., 2008).

Nationally, Latinos have the highest high school dropout rates of any other major racial or ethnic group (Bajaj, 2009). In 2008, 4.8 percent of non-Hispanic Caucasians, 9.9 percent of African-Americans, and 18.3 percent of Latinos dropped out of school. For Latinos, this number has decreased over time, from 35.8 percent of Latino high school students who dropped out in 1988 (U.S. Department of Education, 2010). When they do enter post-secondary institutions, Latinos are considerably overrepresented in two-year colleges (Bajaj, 2009).

STIs

Sexually transmitted infections are a growing problem among the Hispanic community. Large inequities exist between non-Hispanic Caucasians and Hispanics/Latinos concerning almost every major STI (CDC, 2012d; CDC, 2012b). Nationally, in 2010, gonorrhea occurred 2.2 times more often among Hispanic women than non-Hispanic Caucasian women. In men, Hispanic rates were 2.8 times higher than their non-Hispanic Caucasian counterparts (CDC, 2010c).

Chlamydia rates among Hispanic women were 3.1 times that of non-Hispanic Caucasian women and 2.9 times higher among Hispanic men compared to non-Hispanic Caucasian men (CDC, 2010c).

For primary and secondary syphilis in the U.S., rates for Hispanic males were over twice as high as non-Hispanic Caucasian males in 2010, and the incidence rate for Hispanic women was exactly twice that of non-Hispanic Caucasian women (CDC, 2010c).

The 2009 age-adjusted death rate for HIV/AIDS among Hispanic residents was over seven times higher than the rate among non-Hispanic Caucasians. This is an increase from 2008, when the age-adjusted death rate for HIV/AIDS among Hispanic residents was four times higher than the rate among non-Hispanic Caucasians (PADOH, 2010f). In 2005, Hispanics/Latinos accounted for 15.1 percent of all AIDS cases in the U.S., and by 2010 they made up almost 21 percent. In that same year in Pennsylvania, however, adult

Hispanics/Latinos between 18 and 64 were more likely to be tested for HIV (55 percent) than non-Hispanic Caucasians (29 percent) [PA DOH, 2012b].

Maternal care and Neonatal health

Hispanics/Latinos have the highest fertility rate in Pennsylvania. From 2007-2009, the fertility rate was 97.8 per 1,000 mothers ages 15-44, compared to 71.0 for African-American women and 52.0 for non-Hispanic Caucasian women (U.S. Census Bureau, 2010a). In addition, the percentage of births to unmarried Pennsylvania Latinas (65.7) was more than twice as high as the percent of births to unmarried non-Hispanic Caucasian mothers (30.9) [PADOH, 2010c].

Hispanic/Latino mothers and children face significant health challenges. In 2010, 42 percent of Pennsylvanian Hispanic/Latino children under the age of 18 lived in poverty (U.S. Census Bureau, 2010a). Hispanic/Latino children in Pennsylvania are also the most likely to be born to a mother receiving government assistance through the Women, Infants and Children program and second most likely to be born to parents receiving help through Medicaid/Medical Assistance, behind African-Americans. Due to socioeconomic hardship, these children likely face enormous inequities from birth (U.S. Census Bureau, 2010a).

The percentage of Pennsylvanian Hispanic mothers without prenatal care (44.9 percent during the first trimester and 2.1 percent throughout pregnancy) was nearly twice that of non-Hispanic Caucasian mothers in 2009 (23.8 and 1.0, respectively). Hispanic/Latino mothers were slightly less likely to breastfeed (69.2percent) than non-Hispanic Caucasian mothers (68.6 percent) but more likely than African-American mothers (58.6percent) [PADOH, 2010c].

That same year, the teen (ages 15-17) pregnancy rate was over four times higher among Hispanics compared to non-Hispanic Caucasians in Pennsylvania (PADOH, 2010c). Hispanic/Latino teen mothers were significantly less likely to terminate, miscarry or otherwise lose their pregnancy (14 percent) when compared to their non-Hispanic Caucasian (34percent) or African-American (44 percent) counterparts.

Nearly 9 percent of Hispanic/Latino mothers gave birth to underweight babies in Pennsylvania during 2007-2009 (PADOH, 2010c). A large, national study (n=2141) determined that Hispanic women are more likely to have a pre-term birth the longer they live in the United States. Researchers found that the frequency of pre-term births was 3.4 percent for women who had lived in the United States for less than 10 years, 7.4 percent for those who had lived in the United States for more than 10 years, and 10 percent for those who were born in the United States (Society for Maternal-Fetal Medicine, 2012).

Overall, Hispanic/Latino infant mortality rates in 2007-2009 (6.7 per 1,000 live births) were similar to non-Hispanic Caucasian populations (6.3). Hispanics/Latinos were also more likely not to smoke while pregnant (90 percent) when compared to their African-American (85 percent) and non-Hispanic Caucasian (81 percent) counterparts (PADOH, 2012b).

Resettled Populations

According to the Migration Policy Institute (2012), the term immigrants refer to people "residing in the United States who were not U.S. citizens at birth." Immigrants include "naturalized citizens, lawful permanent residents (LPRs), certain legal non-immigrants (e.g., persons on student or work visas), those admitted under refugee or asylee status and persons illegally residing in the United States."

The majority of Pennsylvania's immigrants were born in Asia (37.7 percent); 29.9 percent come from Latin America, mostly Mexico, 22.3 percent from Europe, 7 percent from Africa, 2.6 percent from North America and 0.5 percent from the Oceania region (U.S. Census Bureau, 2012a).

Immigrants

Immigrants accounted for 5.8 percent of Pennsylvania's 2010 population. In 2010, 49.5 percent of immigrants in Pennsylvania were naturalized U.S. citizens and eligible to vote (U.S. Census Bureau, 2010 American Community Survey table CP02). Pennsylvania was above the national rate (43.7 percent) of residency for naturalized immigrants. Data from 2009 shows that 86.9 percent of children with foreign-born parents were U.S. citizens and 88 percent were considered English-proficient (U.S. Immigration Support, 2011).

In 2010, 26.8 percent of the foreign-born population who were 25 years and older had a bachelor's degree or higher. This is lower than the general population of Pennsylvania which is at 27.9 percent (Ryan & Siebens, 2012).

Poverty is an important determinant of health that overshadows a large proportion of immigrant health outcomes. Slightly over 18 percent of immigrant families live in poverty with children under 18 in the household.

The poverty rate among single parent families was dramatically greater than families with two parents. Single parenting is highly associated with depressive symptoms and alcohol abuse, which can be detrimental to healthy child development (Cunningham and Knoester, 2010). In Pennsylvania the percentage of immigrant female head of households living in poverty, with no husband present and with children under 18, was 46.3 in 2011 (U.S. Census Bureau, ACS, 2011, table S0501).

There are significant health and life-style differences between first- and second-generation immigrants in the United States. The degree of acculturation, measured in part by food choices, language preference and fluency, and social choices, depends on several factors including neighborhood and school segregation and education levels of the parents. Acculturation is associated in some cases with positive health outcomes, and in other cases, with negative ones. In general, second-generation immigrants tend to be significantly more acculturated to America than the first. For example, second-generation immigrants are at greater risk for substance abuse, poor dietary practices and precarious birth outcomes. On the other hand, more acculturated populations are more likely to use preventive and clinical health care and have positive self-perceptions of health (Lara, et al., 2005).

Undocumented Immigrants

The Office of Homeland Security estimates that about 11.5 million undocumented immigrants were living in the United States in January 2011. There has been little change since 2007. Of all undocumented immigrants living in the United States in 2011, 55 percent entered between 1995 and 2004 (Passel and D'Vera, 2011).

In 2011, 59 percent of undocumented immigrants were from Mexico (U.S. Department of Homeland Security, 2012). While waves of Mexican-born immigrants have been steadily raising since 1850, with a sharp upward spike in the 1970's, Mexican immigration has leveled off since 2007. This may be the result of the economic downturn in the United States, destabilizing U.S. job and housing markets, strengthening border enforcement, increased dangers associated with illegal border crossings, a rise in deportations, the long-term decline in Mexico's birth rates, or broader economic conditions in Mexico (Passel and D'Vera, 2011).

The health of undocumented immigrants plays a significant role in the economic and physical health of Pennsylvania in general. Unlike refugees and legalized immigrants who may undergo clinical check-ups upon entrance into the United States, illegal immigrants miss that process and may be carriers of contagious disease. Their children may spread the disease to their peers at school (Barnett and Walker, 2008). In addition, detecting and treating illness early can reduce overall healthcare costs, which burden the public. The costs of emergency health care for immigrant children are on average three times higher than for native-born

children because, by the time they are seen, their condition has advanced past the initial stages (American Medical Student Association, 2004).

Mental Health

The effects of immigrating, including isolation, poverty and leaving close family members behind can seriously impact morale, hope and psychological well-being. Because of these and a myriad of other stressors associated with immigration, research has shown that immigrants have heightened risks for anxiety, depression, posttraumatic stress disorder (PTSD) and psychiatric disorders (Hiott, et al., 2006). In a meta-analysis of studies documenting the association between immigration and schizophrenia and other psychotic disorders, researchers found no significant risk difference between first and second generations, but there were significant differences according to ethno-racial status and host country. The authors show that the risk factors "clearly persist into the second generation, suggesting that post-migration factors play a more important role than pre-migration factors or migration, per se." (Bourque et al., 2011)

The mental health of immigrants is highly associated with social determinants, including social support, income, employment, culture, physical environment, coping skills, gender, and the availability, accessibility and cultural appropriateness of local mental health services (Reitmanova and Gustafson, 2009).

Culture and stigma play a major role in preventing immigrants from seeking professional mental help. In one study of married Korean-American women who were generally well educated and had lived in the U.S. for more than 10 years, the majority "acknowledged the need for mental health services but did not seek professional help and coped with the stressors of immigrant life by endurance, patience and religion." (Bernstein, 2007)

Language Barriers

In the United States, high English language proficiency is closely correlated with positive health outcomes. Numerous studies show that immigrants with lower English proficiency often work in poor environments, dangerous conditions and jobs with little accountability that put them at greater risk for work-related injury and illness. In addition, increased barriers to accessing healthcare services, having health insurance, and lower health literacy and ability to communicate with practitioners contribute to negative health outcomes (De Castro, et al., 2010).

The U.S. Census defines limited English proficiency (LEP) as "speaking English less than very well." (U.S. Census Bureau, 2012a) With this in mind, 38.2 percent of Pennsylvania's Asian-Americans over the age of 5 had LEP in 2011 (U.S. Census Bureau, 2010a). The percentage of people 5 years or older who do not speak English at home varies across different Asian ethnic groups. Nationally, for example, 55 percent of Vietnamese, 46 percent of Chinese, 22 percent of Filipinos and 22 percent of Asian Indians speak English less than very well (U.S. DHHS, 2012a).

Linguistic isolation, defined as not having an English-speaking household member over the age of 14, is another way to look at the language access problem. More than one-third of Korean, Taiwanese, Chinese, Hmong and Bangladeshi households, and almost half of Vietnamese households are linguistically isolated and have extreme difficulties finding ways to communicate with their healthcare providers (Tran, 2009).

For example, one study describes an elderly Cantonese-speaking woman admitted to the hospital after an accidental drug overdose. That night, she got up to use the rest room. The nurse, unable to understand her, tried unsuccessfully to redirect her to bed. When the patient became agitated, the nurse put her in restraints and gave her two sets of sedatives. In the morning, she was barely responsive (Schillinger and Chen, 2004).

According to the 2010 U.S. Census Bureau ACS, 69.3 percent of Hispanics/Latinos over the age of 5 in Pennsylvania were fluent in English. Of the Hispanic population, 31.8 percent were English-only speakers and 53 percent were bilingual in Spanish and English (U.S. Census Bureau, 2010a). This leaves at least 16.4 percent of the population (approximately 105,000) over 5 years of age with little or no English abilities.

Violence

Intimate partner violence (IPV) is a pattern of "assaultive and coercive behaviors designed to establish control by a person who is, was or wishes to be involved in an intimate or dating relationship with an adult or adolescent." (Robert Wood Johnson Foundation, 2009) Women are the most common victims, but men can experience IPV as well. Unfortunately, IPV is a common occurrence in America. In 2008, about 1.5 million women were raped and/or physically assaulted by an intimate partner (Robert Wood Johnson Foundation, 2009).

A RWJF report found that IPV prevalence among immigrants is not higher on average than in the general population and, in fact, may be less prevalent. Certain factors, such as socioeconomic status and alcohol and drug abuse, are more important indicators of IPV (Robert Wood Johnson Foundation, 2009).

Refugee children often fear for their safety and the repercussions of racism (Ware Institute for Civic Engagement, 2012). About 2,450 ethnic minority Burmese (Karen, Chin, Burman) and ethnic Bhutanese refugees are resettled in South Philadelphia, and some 250 have made their way there from other areas of the U.S. (Mallard, 2012). However, this area has a long history of racial tension and violence between African-American and Asian youth (Nelson, 2011).

Immigrants tend to struggle more often than U.S.-born victims in getting help. One factor is a cultural reluctance to discuss intimate experiences and frailties that may be construed as shameful. A victim may face a language barrier such that he or she cannot explain clearly what has happened. They may not understand their legal rights and feel unsuited to navigate the legal or health system. They may have been victimized by authorities in their native land and do not have confidence that someone will help or intervene. They may also be socially and economically isolated (except for their partner) and do not want to risk going in alone or being deported. Fear of becoming isolated from the community or lifeline can be very important to IPV victims (Family Violence Prevention Fund, 2009).

Migrants

There are several official definitions of migrant farm workers. Some sources include non-migrating seasonal workers or dependents traveling with migrating farm workers. The U.S. DHHS identifies a migrant as "an individual whose principle employment is in agriculture on a seasonal basis, who has been so employed within the last 24 months, and who established for the purpose of such employment a temporary abode." DHHS defines a seasonal worker the same way; however, he or she does not change residence (Cason et al., 2004).

In the U.S., approximately three million migrant workers help plant, harvest and pack the nation's crop-grown food. They often leave their families behind and travel long distances in order to find employment, spending months to years away from home (U.S. Dept. of Agriculture, 2008). The majority of migrant workers are young, married men who are often alone, uneducated, illiterate, poor and do not speak English. Only 33 percent speak English fluently and most have attended school only through the sixth grade. About half of migrant workers are U.S. citizens or permanent residents. On average, most earn annual incomes below the poverty level (U.S. Dept. of Agriculture, 2008). Around 75 percent of migrant workers come from Mexico, two percent are from Central American countries and one percent of the workers are from elsewhere (U.S. Dept. of Labor, 2010).

During 2011, the Pennsylvania Department of Labor and Industry estimated there were 45,500 migrant workers in the commonwealth (Pa. Department of Labor, 2012). In

Pennsylvania, Chester and Adams Counties have the highest number of migrant and seasonal farm workers (Rural Opportunities, Inc., 2002). Ninety-five percent of Pennsylvania's migrant and seasonal farm workers are minorities and/or foreign-born (twice the proportion of a generation ago). Most are Hispanic but the group also includes African-Americans, Jamaicans, Haitians, Laotians, Thais and other racial minorities (Cason, et al., 2004).

For decades the U.S. has relied on migrant workers as an important source of economic development, though they are generally marginalized in society. Migrant workers are an especially vulnerable population that must overcome extraordinary barriers to good health. Agricultural labor is the second most dangerous occupation in the U.S., behind mining, in terms of fatalities, injuries and illnesses. Farm workers experience inadequate training, long hours, environmental hazards and toxic chemicals, heavy machinery and sharp objects (U.S. Dept. of Agriculture, 2008). There have been a number of cases where migrants find themselves compelled to work in situations of "forced labor" for certain employers in order to avoid being "told on" to immigration. (Bon Appétit Management Company Foundation, 2011).

Many migrants avoid medical attention or do not have access to it. Only 9 percent of migrant workers have health coverage (U.S. Dept. of Agriculture, 2008). Many feel anxiety about seeing a doctor for fear of repercussions regarding their illegal status. Also, there is a shortage of practitioners in rural settings in general, particularly ones with cultural sensitivity and capabilities for translation/interpretation of documents, procedures and treatments for migrant workers with LEP (Persichino and Ibarra, 2012).

HIV/AIDS

Recent estimates place HIV/AIDS prevalence around 13.5 percent among migrant workers in the U.S. (Shehadeh, et al., 2012). This rate is much higher than the estimated HIV prevalence rates in the general U.S. (0.6 percent) and Mexican (0.3 percent) populations (Joint United Nations Programme on HIV/AIDS, 2003).

Potential explanations for this epidemic among migrant workers include behavioral, social and economic factors. Shehadeh, et al., (2012) suggests that acculturation stress associated with frequent moving and instability can lead to high-risk sex and substance abuse as a coping method.

Magis-Rodriguez, et al., (2004) adds that major migrant routes lying across border towns between the U.S. and Mexico are rampant with access to commercial sex workers and intravenous drugs. Migrant women are at especially high risk for sexual abuse and rape along these routes (Bronfman, et al., 2002). Alternatively, both women and men may accept sexual work in order to survive when other forms of employment becomes scarce (Organista, et al., 1998; Galvan, et al., 2008).

Education

A large proportion of migrant worker children face barriers to education. They are not able to stay in one school for very long, as their parents must move within and between states for work, depending on the seasons. The National Pass Coordinating Committee (NPCC) reports that the graduation rates for migrant children (data from 1995) show that only 50.7 percent of migrant students passed high school (National Pass Coordinating Committee, 2009).

In addition to frequent moves, family situations can play a major role in a child's academic success. Their families are likely extremely poor and often rely on the children for supplemental income. Children may also play an important child care role as their parents work (National Pass Coordinating Committee, 2009).

Nutrition and Obesity

Migrant farm workers experience disproportionately higher rates of certain diseases that can be traced back to poor diet. These illnesses include heart disease, stroke, asthma, diabetes, obesity and hypertension (Cason, et al., 2004).

Research attributes poor diet in migrant workers to a host of factors. These factors include poverty, lack of access to public assistance programs, low fruit and vegetable consumption, unbalanced diets, lack of time to prepare meals, and communication and language barriers. In addition, frustration and intolerance of American foods, living in remote locations with little access to food, lack of transportation, lack of cooking facilities and lack of cooking skills attribute to poor diets as well (Kasper, et al., 2000; Cason, et al., 2004). In addition, Kasper, et al., (2000) found that food insecurity occurred in low-income legal immigrants in the U.S. at a rate almost twice that of low-income non-immigrant families.

Environmental Hazards

Often, farm workers are exposed to a variety of pesticides that can cause severe harm and illness. Studies show that despite training programs, exposure and poisonings still occur to a significant number of workers and their family members (Quandt, et al., 2010).

Quandt, et al., (2010) found significant levels of pesticide exposure in migrant workers' blood and urine samples across the agricultural season. The authors indicated that these findings suggest inadequate pesticide training among farm workers. In fact, Whalley, et al., (2009) estimated that, though it is federally mandated, one-quarter to two-thirds of farm workers do not receive any training; of those who do, as many as 70 percent report they "did not understand it." Additionally, Salvatore (2008) and Whalley, et al., (2009) both reported that noncompliance to regulations may also play a role in high levels of pesticide toxicity. They also found that the facilities in many farm worker camps and houses had insufficient washing stations to maintain safe hygiene against pesticide residue (Whalley, et al., 2009).

Occupational Hazards

Migrant farm workers are at high risk for injuries on the job because they use heavy machinery, work with sharp objects and receive little safety training (U.S. Dept. of Agriculture, 2008). They may also experience mild to severe heat stress and dehydration (Luginbuhl, et al., 2008).

Refugees / Asylees

Refugees (applying for status from outside the U.S.) and asylees (applying for status from within the U.S.) are a special class of people who leave their homes, crossing international borders to avoid persecution. According to the 1951 United Nations Convention relating to the status of refugees (the Refugee Convention), persecution must be on the grounds of race, religion, nationality, membership in a particular social group or political opinion (Human Rights Education Associates, 2002).

Refugees differ substantially from voluntary immigrants in that they have been forced from their homes and have little choice as to when and where they can resettle. Many originate from agriculturally-based economies that experience periods of uprooting and terror. They may live for months or years in a temporary refugee camp. Then, if their refugee status is approved, they are placed in a new country, given an apartment, and have to find and maintain professional employment, pay bills, and navigate grocery stores and bus schedules for the first time (Ware Institute for Civic Engagement, 2012).

Refugees under the direction of the United Nations High Commissioner for Refugees (UNHCR) are distributed across the world, with more than half in Asia and about 20 percent in Africa. Their housing conditions vary greatly, from "well-established camps and collective centers to makeshift shelters or living in the open." (UNHCR, 2011b)

UNHCR reports that the number of refugees worldwide at the beginning of 2011 was 10.5 million, down slightly from the year before. These numbers were published before the height of turmoil in Syria, which, by March of 2012, had forced over 30,000 people to abandon their homes and seek safety in neighboring Turkey, Lebanon and Jordan. Additionally, during the production of this report, there have been tens of thousands of Malian people uprooted by fighting between Tuareg rebels and government forces in Mali since mid-January 2012.

The United Nations Relief and Works Agency (UNRWA) for Palestine refugees in the near east also provides assistance to 4.8 million registered refugees, many of them displaced Palestinians in 60 camps throughout the Middle East (UNHCR, 2011b).

International law recognizes that all persons have the right to seek asylum or refugee status, but it does not compel states to provide it (Human Rights Education Associates, 2002). Each year the U.S. Department of State, Bureau of Population, Refugees, and Migration, the U.S. Departments of Health and Human Services, and Homeland Security, proposes to Congress the refugee ceiling, or quota, for the upcoming federal fiscal year (FY). For FY2011, President Obama approved a ceiling of 80,000 refugees (International Institute of New England, 2010) and 10,000 asylees (U.S. Immigration Support, 2011).

Bhutan is a predominantly Buddhist constitutional monarchy bordered by China to the North and India to the South. It is about one half the size of Indiana (CIA World Factbook, 2012a). In the early 1990s, the monarchy passed severe laws against the Nepali people, a Hindu minority, which stripped them of their rights to citizenship, ownership of property and ability to obtain government jobs. Around 100,000 ethnic Nepalis fled to refugee camps mostly in Nepal and India (Pennsylvania Refugee Resettlement Program, 2012).

The Pennsylvania Refugee Resettlement Program characterizes Bhutanese refugees as a group that "struggles with the language barrier, job hunting, navigating the complex medical and educational systems, and learning to live with modern amenities. However, many are well on their way to self-sufficiency and are industrious, hard-working members of Pennsylvanian communities." (Pennsylvania Refugee Resettlement Program, 2012) Of the 1,197 refugees who received interpretation services in 2011, 53 percent were of Nepalese origin (PADOH, 2011a).

Refugee admissions into Pennsylvania have been increasing steadily. In 2010, Pennsylvania admissions increased by 22 percent from the previous year (U.S. DHHS, 2010a). Pennsylvania had 3,303 newly arriving refugees in 2011, from 57 separate countries. Over the past two years, rapidly growing populations of Bhutanese and Burmese refugees have resettled in Erie, Lancaster, Pittsburgh and Philadelphia. The five largest proportions of refugees to Pennsylvania in 2011 came from Bhutan (1511), Nepal (778), Burma (227), Iraq (131), and Vietnam (58) [PADOH, 2011a].

Refugees are a vulnerable population that faces a unique set of social, economic and health challenges. The majority of refugees have spent a large portion of their lives in "temporary" camps before repatriation and come from a history of hardship, war, famine and violence. Among other illnesses, refugees experience disproportionately high rates of tuberculosis, malaria, hepatitis, intestinal parasites and nutritional deficiencies (Morris, et al., 2009). Other common conditions seen in refugees are severe skin irritations, anemia, poor eyesight and poor dental hygiene (Ware Institute for Civic Engagement, 2012).

Once refugees enter the U.S., federal law demands that each person receive an entrance assessment that provides immediate treatment for infectious diseases that are easily spread, such as tuberculosis and intestinal parasites (Morris, et al., 2009). These screenings also provide protection for the existing Pennsylvanian population. In 2011, 575 refugees diagnosed with tuberculosis were resettled in Pennsylvania (PADOH, 2011a).

Refugees are at greater risk for a variety of physical and mental health maladies due to the trauma of forced migration. Also, the geographic regions housing high refugee populations may have had high rates of communicable disease and inadequate health care (Pennsylvania Refugee Resettlement Program, 2012).

When the U.S. Government resettles refugees, they select the most able-bodied and healthy people first, with the idea that they will create a foundation for the next to rely upon. Since 2010, the United Nations has begun closing Bhutanese and Burmese refugee camps, and, as a result, Lancaster and other areas in Pennsylvania now face the growing challenge of aiding sicker, less able-bodied arrivals (Ware Institute for Civic Engagement, 2012).

Basic Needs

Under the law, social workers must place refugees in an apartment that complies with state regulations. This type of housing is extremely limited, as landlords are traditionally able to avoid renting to refugees by asking for a credit check and landlord history. According to Normanne Rothermel, Refugee Coordinator for the Commonwealth of Pennsylvania, refugees in Pennsylvania have at times found themselves homeless for lack of adequate options (Ware Institute for Civic Engagement, 2012).

Refugees often have a difficult time finding employment due to language barriers. Lancaster County has become a model resettlement program and the area has been able to provide a wide range of jobs for incoming refugees due to ample factory and agricultural opportunities. In other areas of Pennsylvania, such as Philadelphia, jobs are much more difficult to find. In order to keep their Temporary Assistance for Needy Families (TANF) benefits, refugees must either be employed or attend career enhancement classes or vocational ESL classes. Unfortunately, there is a shortage of certified classes available in the state that meets the policy standard (Ware Institute for Civic Engagement, 2012).

Lancaster County has made great strides in providing a welcoming, patient and useful experience for refugee children entering public school. They have hired members of the Nepali community as teachers' assistants to provide two hours per day of ESL instruction (Ware Institute for Civic Engagement, 2012).

Mental Health Needs

At the 2012 Community Conference on Refugees in Lancaster County, mental health issues repeatedly surfaced as a major concern by volunteers, government agency representatives and non-governmental organization (NGO) workers who aid in refugee resettlement. Many refugees use substance abuse to cope with sadness and isolation. Most of the refugees feel alone, isolated and frustrated. This disparity is especially severe among the elderly. In general, refugees are at heightened risk for mental illnesses, including anxiety, depression and PTSD, as a result of many having had exposure to the most extreme kinds of violence and emotional and physical trauma. Often, family members have been killed, and the refugee may have been tortured, raped or viciously persecuted in other ways (Ware Institute for Civic Engagement, 2012).

Refugees have unique challenges for overcoming mental health issues. On a practical level, many refugees rely on volunteers for transportation to health appointments. Also, few refugees understand the mental health options available to them, and there is little funding for healthcare navigators to assist them (Ware Institute for Civic Engagement, 2012).

Language and culture also create difficult barriers. For instance, among the Karen people, it is culturally inappropriate to complain about problems. Many male refugees may come from cultures or countries permitting physical abuse toward children and wives, and this practice may have grown especially acute under the stress of living in a refugee camp. It is also extremely difficult for rare ethnic groups to find a mental health provider who is both culturally sensitive and can communicate effectively with a patient. In Lancaster, refugee social workers have found some success with group facilitation within a homogenous language setting (Ware Institute for Civic Engagement, 2012).

Sexual and Gender Orientation Minorities

The 2010 Census reports that there were 22,336 same-sex couples in Pennsylvania or 4.5 couples per 1,000 households. Of these couples, nearly 14.5 percent were same-sex married/domestic partnerships, while 19,108 were unmarried partner couples (Williams Institute, 2010).

In fiscal year 2008-09, the PADOH solicited written expert testimony on health research priorities for the state to address. Dr. Lombardi at the University of Pittsburgh wrote that "addressing the quality and competency of health care delivered to lesbian, gay, bisexual and transgender (LGBT) Pennsylvanians is an urgent and unmet need in the Commonwealth." (Lombardi, 2008)

Lesbian, Gay, Bisexual, Transgender and Intersex (LGBTI) Pennsylvanians face ongoing inequities in terms of their absence in statewide surveillance systems, discrimination by healthcare providers, and discrimination in the workplace and in social situations. These individuals are at much greater risk for physical and sexual abuse, smoking and substance abuse, HIV/AIDS, depression, PTSD and suicide (Lombardi, 2008). Because of the dearth of specific studies on individual and composite portions of the LGBTI community, it is difficult to know exactly how they, as single persons, couples and families, fare in accessing health care and receiving equal and culturally competent services (ONE Colorado Education Fund, 2012).

Members of LGBTI groups have regular preventive and treatment needs, as well as special needs specific to their sexual or gender orientation. Providers unfamiliar with the special hormonal and physical issues of transgendered individuals can place them at especially high risk for morbidity and mortality, particularly in emergency medical situations (Lombardi, 2008).

There are few laws protecting LGBTI families in terms of insurance coverage, hospital visitation rights and powers of attorney. Also, policies that guide providers' treatment of LGBTI individuals and families are rare. Transgender individuals often face an uphill battle accessing "the full range of their health care needs," such as routine preventive and care services, and psychological and medical treatment related to gender transition (ONE Colorado Education Fund, 2012).

Sexual Minorities

The Mazzoni Center of Philadelphia (the Center), a longstanding LGBTI-focused community health organization, provides perspective on the numbers of LGBTI individuals using health care in the Philadelphia region. In 2010, the Center reported providing direct services to 18,117 people, including medical, legal, testing, case management or housing services. In addition, the organization engaged about 15,000 people through its community outreach efforts. By percentage, the following breakdown shows demographic characteristics of those clients who received direct services (Mazzoni Center, 2010):

SEXUAL ORIENTATION
Gay 45%
Lesbian 11%
Bisexual 10%
Heterosexual 32%
Questioning 2%

GENDER
Male 62%
Female 24%
Transgender 14%

RACE/ETHNICITY
African-American 53%
Caucasian 35%
Hispanic/Latino 8%
Asian/Pacific Islander 2%
Other 2%

AGE RANGE
under 18 7%
18–24 19%
25–40 39%
41–55 27%
55 and over 8%

CLIENT UTILIZATION BY DEPARTMENT
Medical 26%
Care services 15%
Behavioral health 3.5%
HIV testing 28%
Prevention 25%
Legal services 1.5%
Housing 1%

Substance Abuse

The extent of substance abuse within the gay community varies between subsets (i.e., all gay urban neighborhoods, age subgroups, gender, casual partnerships, etc.). However, substance

abuse, across the board, is generally higher among gay or bisexual individuals, as well as men who have sex with men (MSM) who may not necessarily identify as gay or bisexual, than in the broad population. Among MSM, substance abuse often occurred using methamphetamines, amyl nitrates (poppers), and drugs used to treat erectile dysfunction (Ostrow and Stall, 2008). In a study conducted in Allegheny County, Pennsylvania, lesbians were substantially more likely than heterosexual women to use alcohol and to "use it heavily" (Lombardi, 2008).

LGBTI adults are twice as likely to begin smoking as heterosexual adults (Levinson, et al., 2012). While studies show adult smoking has decreased in most populations, studies of gay men, lesbians, and bisexual men and women have found smoking among these groups to be on the rise. Tobacco companies will often specifically target LGBTI people, and LGBTI youth in particular, in their marketing tactics (Levinson, et al., 2012).

Tobacco-related health inequities exist largely in the lesbian community. Cardiovascular disease, which includes heart attack, hypertension, stroke and arteriosclerosis, is the leading cause of death for all women. These outcomes can be caused or significantly exacerbated by smoking. Since lesbians smoke more on average and often have a higher body mass index than heterosexual women, they are at much greater risks for tobacco-related diseases of the heart (Lombardi, 2008).

One study from Colorado showed that significantly few gay, lesbian, bisexual and transgendered Coloradans who smoke are thinking about quitting or getting ready to quit. The study reports that, among most smoking populations, 20 percent will be getting ready to quit and another 40 percent are thinking about quitting. However, the rates from the LGBTI community were nearly half of what researchers expected (Levinson, et al., 2012).

The same study showed that one-quarter of the respondents in the Colorado study were uncomfortable approaching their doctors for help with quitting smoking (Levinson, et al., 2012). A large proportion of LGBTI people postpone seeking medical care in general for fear of discrimination or the inability to find culturally competent providers (Lombardi, 2008).

Discrimination and Violence

In a recent study analyzing data from the large-scale National Violence against Women survey, the author found that intimate partner violence is more prevalent among gay, lesbian and bisexual individuals than among heterosexuals. IPV prevalence is higher among bisexual respondents than gay respondents and is most often perpetrated by an opposite sex partner. The author suggests that this disparity is most likely due to minority stress, including discrimination (Messinger, 2011).

A study conducted by the Philadelphia Lesbian and Gay Task Force (1999) on discrimination and violence perpetrated against LGBTI people in Pennsylvania (n=3014), found that over half of respondents reported having experienced discrimination at some point based solely on sexual orientation. Stratified by gender, half of the men and one-quarter of the women respondents had experienced violence on account of their sexual orientation (Lombardi, 2008).

The National Climate School Survey (n=6209) disclosed extreme gaps in the ability of Pennsylvania schools to provide a safe environment for youth who do not display traditional sexual or gender characteristics. According to the study, "Pennsylvania LGBTI students face extreme levels of harassment and assault, skip school at alarming rates because of feeling unsafe and perform poorer in school when they are more frequently harassed." (GLSEN, 2009) In the past year, 88 percent of respondents experienced verbal harassment, 52 percent were physically harassed and 27 percent were physically assaulted because of their

sexual orientation. Only 19 percent of LGBTI students reported that their school had a useful, comprehensive anti-bullying policy (GLSEN, 2009).

Steady employment has an enormous impact on a person's overall mental health and fulfillment; ability to purchase basic needs and nutritional foods; and access to healthcare coverage (Ferrie, et al., 2002). In a landmark study called the National Transgender Discrimination Survey (NTDS), researchers found that the unemployment rate was significantly higher among transgender individuals and was often related to discrimination and stigma over one's gender identity. Nearly 13 percent of transgender respondents in the workforce were unemployed, nearly double the national average at the time of the survey. The percentage of unemployed respondents who were transgender, in addition to having other minority characteristics, was particularly high. For example, transgendered respondents who were African-American had an unemployment rate of 26 percent and those who were Latino had a rate of 18 percent. A full 16 percent of all respondents said they felt compelled to work in the underground economy, including performing sex work and selling drugs, for a basic income (National Center for Transgender Equality, 2011).

Needs assessments conducted in Philadelphia found that transgender men and women had numerous health problems related to discrimination and violence. Of the 182 people who responded to the study, 25 percent of respondents were denied medical care because they were transgender, over half experienced violence in their homes, and about a third had attempted suicide (Lombardi, 2008).

STIs

HIV and AIDS have been and remain an extreme concern of the gay community, especially among men who have sex with men across all ages. According to the CDC, approximately 1.1 million people in the United States are living with HIV, and more than half of those infected are men who have sex with men, regardless of sexual orientation (CDC, 2008b).

Within Pennsylvania, cases among MSM remain high, especially within Allegheny County. A significant change over the past 20 years is that more African-American MSM are being diagnosed with AIDS. Dr. Lombardi suggests that this shift in disease demographics implies a need for more sensitive studies in order to "understand the different experiences of Caucasian and African-American gay or bisexual men." (Lombardi, 2008)

According to the CDC, an individual has HIV if the virus is present in his or her blood, whether or not symptoms are expressed. AIDS, on the other hand, occurs when an HIV patient reaches a threshold CD4 blood count and exhibits one or more of a long list of symptomatic indicators (Health Resources and Services Admin., 2012).

Transgender people are three times (2.6 percent vs. 0.9 percent) more likely than cisgender men and nine times (2.6 percent vs. 0.3 percent) more likely than cisgender women to have newly identified HIV infection among this sample of 2.6 million people (CDC, 2011b).

There is a sizeable racial disparity among transgender people acquiring HIV. If you look only at African-American transgenders in the sample, the newly identified HIV infection rate goes up even higher, from 2.6 percent to 4.4 percent. This means that they are approximately 1.5 times more likely to have newly identified HIV infection than the transgender population without adjusting for race. In fact, in New York City between 2005-2009, approximately 90 percent of male to female (MtF) and female to male (FtM) transgender people newly diagnosed with HIV infection were African-American or Hispanic (CDC, 2011b).

Of the new diagnoses of HIV infection among transgender people in New York City from 2005–2009 (n=206), 95 percent were transgender women (MtF). Among the newly diagnosed people, 50 percent of transgender women had documented substance use, commercial sex work, homelessness, incarceration, and/or sexual abuse, compared with only 31 percent of cisgendered new diagnoses (CDC, 2011b).

Syphilis is a sexually transmitted disease that disproportionately affects MSM and has grown enormously as a percentage of the population in the past 10 years. In 2000, only 4 percent of all cases existed among MSM. In 2009, MSM represented nearly two-thirds of all syphilis cases. This fact is "particularly alarming," says Dr. John Douglas, director of the CDC's Division of STD Prevention, "as gay men are also a high risk population for HIV, and syphilis infection can make it easier to contract HIV." (Callaghan, 2009)

Douglas reports that syphilis has almost been eliminated in the United States. However, in the last 10 years, it has made a comeback and has often proved immune to antibiotics. Douglas estimates that recent successes with HIV medications have encouraged MSM to take greater risks in sexual behavior (Callaghan, 2009).

Mental Illness

Most population-based studies estimate above average mental health disorders among LGBTI adults (Mustanski, et al., 2010). In an Allegheny County, Pennsylvania, LGBTI study, 44 percent (n=405) of participants self-reported having depression, anxiety or other emotional disorders (Lombardi, 2008).

Incredibly, the NTDS revealed that 41 percent of all transgendered respondents had attempted suicide compared to only 1.6 percent of the general population. These rates rise further for those who have lost a job due to bias (55 percent), were harassed/bullied in school (51 percent), had low household income, or were the victim of physical assault (61 percent) or sexual assault (64 percent) [National Center for Transgender Equality, 2011].

Transgender

Transgender is an umbrella term that reflects the great diversity of individuals who identify with a gender other than their biological assignment at birth. Transgender individuals may experience gender dysphoria, a recognized medical condition of strong dissatisfaction or anxiety felt by having to physically and socially live as a different gender than that with which he or she identifies (Dessens, et al., 2005).

The overarching issues negatively affecting the general health of LGBTI individuals stem from stigmatization, stereotyping and misunderstandings by community, family and health providers (CDC, 2011d). A growing, but limited amount of data is available for lesbian, gay and bisexual communities.

These inequities increase dramatically for those who are also members of other disadvantaged and vulnerable populations, such as ethnic/racial minority groups, those with disabilities or those living in poverty (Halberstam, 2005).

Because of social stigma and discrimination, members of transgender communities are at substantially higher risk for the following health factors (CDC, 2011d):

- Smoking/Alcohol
- Domestic violence
- Homelessness
- Poor patient/provider relationships
- Lack of access to health care and sufficient insurance
- Lack of access to transgender-friendly and culturally literate providers

These same health factors are issues for the wider LGBTI community as well.

In the NTDS, data shows that, compared to a cisgendered person, a transgendered person often experiences longer wait times, even physical assault, while trying to access basic medical care. Avoidance and postponement of care often leads to later crises and greater difficulties in treatment (National Center for Transgender Equality, 2011). The same study

also showed that, despite severe harassment, mistreatment, discrimination and violence faced by respondents in healthcare settings, participants also showed extreme "determination, resourcefulness and perseverance" in obtaining health care related to gender transitioning (76 percent) [National Center for Transgender Equality, 2011].

Childhood Gender Identity Disorder

There is a growing recognition of children who demonstrate characteristics of a somewhat abstract condition called gender identity disorder (GID). These children tend to experience "strong and persistent cross gender identifications have discomfort with his or her sex, and exhibit significant distress from gender dysphoria." (Spack, et al., 2012) Individuals with GID have no genetic, anatomic or hormonal abnormalities that alter genital or sexual function. Because of the relative newness of childhood and adolescent GID, providers and academics still disagree as to whether the condition is biological, psychological or social in nature (Wilson, 2002).

Lately, a growing number of very young children have been evaluated for GID, though the majority will not meet criteria for the disorder until they enter puberty. The number of children with GID is difficult to ascertain because of the associated stigma and shortage of sensitive and trained providers. There are likely more cases occurring than are reported. At the Children's Hospital of Boston, before they initiated a program specifically designed to deal with gender issues, they saw an average of 4.5 patients with gender dysphoria per year; after the program, they saw roughly 19 patients per year (Spack, 2012).

Homelessness

Safe and affordable housing is a significant challenge for many transgendered individuals. In the NTDS, 19 percent of respondents had been refused a home or apartment and 11 percent had been evicted because of their gender identity/expression. In terms of home ownership, only 32 percent of total respondents reported owning their home compared to 67 percent of the general population (National Center for Transgender Equality, 2011).

For reasons including discrimination, family rejection, poverty, drug and alcohol use, and mental and physical health, homelessness is an ever-present reality for many transgender people. Almost two percent of NTDS respondents were homeless at the time of the survey; nearly twice the rate of the general population. One-fifth (19 percent) of all respondents reported experiencing homelessness at some point in their lives (National Center for Transgender Equality, 2011).

The NTDS shows that those transgender respondents who had lost a job due to bias (26 percent for Caucasians and 32 percent for African-Americans) experienced four times the rate of homelessness. In addition, these respondents misused drugs or alcohol 70 percent more often, were incarcerated 85 percent more often, and were over twice as likely to work in the underground economy. The NTDS also found those same respondents had twice the HIV infection rate compared to those who did not lose a job due to bias (National Center for Transgender Equality, 2011).

The NTDS showed that homelessness, as it does for everyone, put transgender people at a much greater risk for abuse and victimization. Among those respondents who had experienced homelessness, 55 percent were harassed by shelter staff or residents, 29 percent were turned away altogether and 22 percent were sexually assaulted by residents or staff (National Center for Transgender Equality, 2011).

Homeless shelters across the nation are generally stressed for resources and staff. As a result, they may find it challenging to make special accommodations for transgender people. Shelters are very careful to provide separate quarters for men and women and have strict rules about mixing. Forcing transgender women to room and shower openly with other men vastly increases the likelihood for verbal, physical and sexual harassment and assault (Mottet and Ohle, 2003).

Intersex

According to the Intersex Society of North America, the term "intersex" refers to a person with physical or biological characteristics that do not conform to the conventional definition of female or male. For example, a person might be born with female genitalia on the outside and male-typical anatomy on the inside. An intersex person may alternatively have genitals that seem to be in-between the usual male and female standards; or a person may be born with "mosaic genetics," having a mix of both XX and XY chromosomes throughout the body. Intersex characteristics do not necessarily reveal themselves at birth. The intersex anatomy may only appear at puberty, in childbearing years or during one's autopsy. The historical blanket term for intersex people was "hermaphrodite," which has since been abandoned (Intersex Society of North America, 2008).

Society, the medical community and the intersex community debate over the ethical treatment of babies born without clear gender distinction. Issues arise as to which gender to normalize for medical purposes, whether to change appearances through operation or hormone treatment for cosmetic reasons, or merely to allow the child to grow up as they are (Roen, 2004).

These questions are especially concerning, as the child's identity will often be determined by others prior to his/her ability to consent. Furthermore, studies have shown that a childhood devoted to operations and medical procedures can lead to fear and distrust of the healthcare profession as a whole (Roen, 2004).

Aging

The U.S. is witnessing the largest numbers of aging gay, lesbian, bisexual and transgender people due to the highly populated baby boomer generation and social changes that have allowed greater numbers of this population to express themselves openly. Robert Espinoza, Senior Director for Policy and Communications at SAGE (Services and Advocacy for Gay, Lesbian, Bisexual and Transgender Elders) suggests that aging Americans is not merely a "demographic phenomenon," but "must be understood as a paradigm shift that will test how our country deals with our most marginalized people." (Espinoza, 2011)

Espinoza has fielded a large number of discrimination complaints regarding LGBTI elder encounters with healthcare professionals in clinics, hospitals and nursing homes. Specific complaints include verbal and physical harassment and abuse, denial of basic requests (Espinoza, 2011), and enforcement of inappropriate clothing (Lehman, 2012). A Latino partner organization to SAGE has handled numerous reports from local agencies on aging that refused to provide services to Spanish-speaking LGBTI elders and then reported them to immigration (Espinoza, 2011).

Statistically speaking, biological families provide 80 percent of the long-term care for the elderly in the U.S. A large proportion of the elderly rely on friends and institutions for care. Families may commonly abandon LGBTI elders in nursing homes far from the people and settings in which they have derived comfort and support (Espinoza, 2011).

Finding and living in nursing homes has been a difficult process for many LGBTI elders. For example, some facilities allow only married couples to live together. In one case, a retirement home allowed a couple to enroll on the condition that they live "as sisters" (Lehman, 2012). SAGE reports that a significant number of elders revert "back into the closet" for fear of discrimination (Espinoza, 2011).

Unfortunately, LGBTI elders are also more likely to delay accessing care in order to avoid discrimination and cultural insensitivity. AIDS experts report that, in general, LGBTI elders do not receive tailored care based on their specialized sexual needs, as practitioners may assume that "older people have no sexualities." (Espinoza, 2011)

Transgender elders are rarely studied; consequently, their unique health and psychosocial needs often go unmet as a result. Very little is known about the long-term effects of hormone therapy or transition-related surgery in elders whose bodies differ greatly in terms of immunity, hormone levels and medication needs (National Center for Transgender Equality, 2011).

Youth

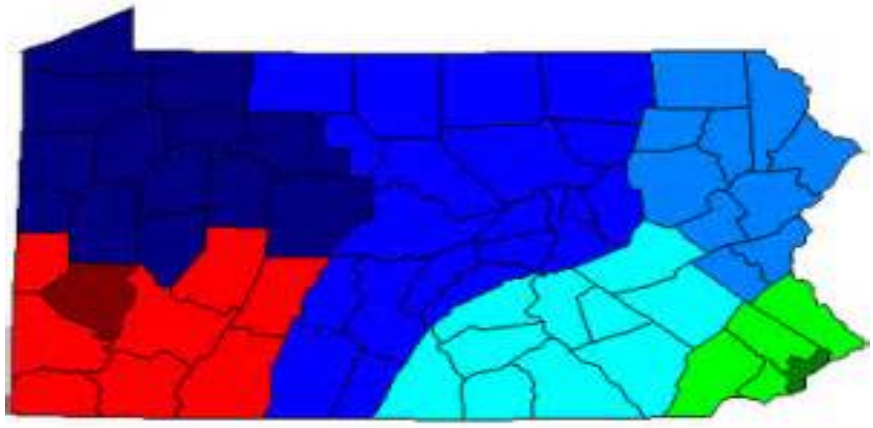
In the largest study of youth behaviors in the U.S. conducted between 2001 and 2009, surveyors asked respondents about smoking, drinking, using drugs, throwing up to lose weight, having unprotected sex, driving after drinking alcohol, wearing seatbelts and bike helmets, carrying a gun, and contemplating suicide (CDC, 2011d).

The study found that gay, lesbian and bisexual teenagers were significantly more likely than their heterosexual peers to engage in risky, unhealthy behaviors. In fact, students in lesbian, gay and bisexual communities were more likely to report engaging in 70 percent of all the risk behaviors measured, compared with heterosexual students. Lesbian, gay and bisexual youth were particularly more likely to engage in skipping school for fear of personal safety, attempting suicide, making a suicide plan, using tobacco, alcohol and other drugs, engaging in unsafe sexual behaviors, and trying to manage weight in an unhealthy way (CDC, 2011d).

Homelessness

The Ali Forney Center in New York City, a longstanding shelter for homeless LGBTI youths, reports that as many as 25 percent of LGBTI teenagers who "come out of the closet," are rejected by their families and often find themselves homeless on the streets. The Ali Forney Center also documents that homeless LGBTI youths are more likely than straight homeless teens to experience violence on the streets and in the homeless shelter system (Ali Forney Center, 2012).

Several recent studies of homeless urban youths reported that 30-40 percent of homeless youths are lesbian, gay, bisexual or transgender individuals with an average age of 17 years old (Adler, 2012; Shillington, et al., 2011). Carl Siciliano, founder and executive director of the Ali Forney Center, explains that "kids were dying in the streets; there was no shelter for gay youth; every couple of months, I would know someone who was murdered in the streets ... kids are coming out at younger and younger ages, and there are so many parents who can't be parents to their gay kids." (Adler, 2012)



Geographic Disparities

Rural Residents

Rural Pennsylvania comprises roughly 75 percent of the geographical boundaries and 27 percent of the state's total population (Center for Rural Pennsylvania, 2012b). The Center for Rural Pennsylvania, a legislative agency of the Pennsylvania General Assembly, defines a rural area as one having a population density of 284 persons or less per square mile on average. Therefore, there can be rural areas in an urban county and an urban area in a rural county. In Pennsylvania, there are 19 urban counties and 49 rural counties. On average, the urban population per square mile is 814, while the rural population is 104 per square mile (Center for Rural Pennsylvania, 2012a).

In rural counties, 15.3 percent of all housing units were vacant in 2010 compared with urban counties, 7.6 percent. However, the majority of vacancies in rural counties are classified as seasonal, recreational or occasional use properties (Center for Rural Pennsylvania, 2012a). Vacant properties and lots, whether rural or urban, have been associated with health hazards including hazardous waste materials, structural dangers, uncontrolled fires, breeding grounds for crime, illegal dumping areas and leaking sewage (Rural Community Assistance Corporation, 2007; Schilling, 2002).

Age cohorts differ substantially by geography. Between 2000 and 2010 in Pennsylvania, the number of people under 18 years of age decreased by 7.1 percent in rural areas, while the population aged 65 and older increased by 4.9 percent. In urban areas, the number of people under 18 decreased by 3.5 percent, and persons 65 and older increased by only 1 percent (Center for Rural Pennsylvania, 2012a). As a result, rural agencies have an especially important role tackling the unique health and social issues of elders.

Though racial/ethnic minorities comprise only 8 percent of the Pennsylvania rural population, this shows a dramatic increase over the last 15 years, while the number of non-Hispanic Caucasians decreased by 1 percent (Center for Rural Pennsylvania, 2012d). Between 2000 and 2010 in Pennsylvania, the African-American population increased by 39 percent, the Latino/Hispanic population increased by 108 percent, the population of people of two or more races increased by 71 percent, and the Asian population increased by 55 percent (Center for Rural Pennsylvania, 2012d).

Rural ethnic minorities tend to be younger, have higher poverty rates, lower income and higher unemployment rates than their Caucasian counterparts. In Pennsylvania in 2010, the median household income for minorities was $38,189 versus $45,343 for Caucasians. Also, the unemployment rate for minorities was 14 percent compared to 9 percent for Caucasians (Center for Rural Pennsylvania, 2012d). Comparing income between rural and urban populations is tricky, changing according to how one measures it.

The recession beginning in 2007-2008 has had a powerful effect on all Pennsylvanians. Many economic safety nets and social programs have been cut or reduced, and people struggle to find jobs and living wages. The Keystone Research Center and Pennsylvania Budget and Policy Center (2011) calculate that urban "areas" suffered the most from poverty in 2010 (14.7 percent compared to 9.5 percent in rural locales). However, according to the Center for Rural Pennsylvania, which measures poverty in terms of counties, the total poverty rate was higher in rural counties (13.1 percent versus 12.3 percent). The number of households with incomes under $20,000 and the percentage of lower to middle income households was higher in rural counties. The rate of residents receiving homeless assistance was higher in rural counties (Center for Rural Pennsylvania, 2012a). However, urban counties had a significantly higher number of households in the upper income brackets (20.8 percent versus 11.9 percent).

In general, the health of Americans has improved greatly over the last 25 years. However, studies show that health in rural areas, on average, has actually declined. Rural residents tend to be "older, poorer, less educated and are more likely to be uninsured" than urban persons. Rural communities are also more inclined to have higher rates of chronic illness,

disability and self-reported poorer overall health than their urban counterparts (CDC, 2009b).

Injuries and Accidents

In 2009, Pennsylvania had 7,847 deaths due to all types of injuries. Fifteen counties showed age-adjusted injury death rates for 2005 to 2009 that were significantly higher than the comparable state rate. Though Philadelphia had the greatest number overall, most of the highest-ranking counties were rural. Injury rates were significantly higher in rural counties for children under 5 years old, children ages 10-14, young adults ages 20-24, and seniors ages 65-74 and 80-84 (PADOH, 2012f).

Suicide death rates were similar between rural and urban counties. However, of the eight counties in the period 2005-2009 that showed significantly higher age-adjusted suicide rates than the state rate, six were rural (PADOH, 2012f).

In 2009, 1,261 Pennsylvanians died in motor vehicle traffic accidents. On average, one person died every seven hours throughout the year because of motor vehicle accidents. Men, especially those ages 15 to 29, were involved in significantly more traffic accidents than women. However, rural women are 2.1 times more likely to die by motor vehicle accident than urban women. Rural men are 1.8 times more likely than urban men to die the same way. Rural individuals had significantly higher traffic accident deaths than urban people ages 10 and older. Juniata and Wyoming Counties had the highest rates of accidents (PADOH, 2009d).

Health Care Access

Rural communities have a substantially higher prevalence rate for obesity, cancer, heart disease, diabetes and many other serious chronic conditions. Some researchers have speculated that the severity of many health problems in rural areas is partly because of insufficient healthcare resources, difficulties in accessing health care and provider shortages (Berg-Copas, et al., 2009). Large numbers of residents also lack health insurance. In rural Pennsylvania counties, 8.2 percent of children are uninsured, and 14.2 percent of adult's ages 18-64 have no health insurance coverage (Center for Rural Pennsylvania, 2012a).

Language access is another principle concern for healthcare providers and residents. With the sudden influx of immigrants into rural locales, hospitals and clinics do not have the resources or training to address the unique needs of those with differing languages and cultures (Berg-Copas, et al., 2009). In a series of focus groups for Hispanic immigrants, the most frequently perceived barriers to health care included lack of health insurance, cost, language, discrimination on the basis of legal status and transportation (Cristancho, et al., 2008).

Long distance travel is an important consideration for those having to spend time in the hospital and remain away from friends and family throughout the duration of their hospital stay.

Cardiovascular Disease

Many of the risk factors for cardiovascular disease (CVD) are more prevalent in rural areas than in urban areas across the United States. Physical activity levels have been found to be lower in rural residents, along with a poorer diet. They tend to eat less nutritionally sound foods and more fat and sugar. Through the early 1990's, urban people smoked more often; however, since that time, rural people are at more risk for using tobacco. Rural males are also more likely to drink alcohol in excess and to engage in risky behaviors while under the influence (Forrest, et al., 2011).

In Pennsylvania, Philadelphia had significantly higher rates of CVD than the state population; however, Northumberland County, a very rural area, had almost exactly the same rates (PADOH, 2012b). More than anything, income inequalities play a major role in the risk

factors for CVD; living in disadvantaged neighborhoods is related to increased risk for heart disease by about 50-80 percent (National Minority Consortia, 2008). Forrest, et al. (2011) agrees that the rates of CVD vary across rural and urban areas; however, they found that the very highest rates of mortality from heart disease have been found in rural regions with low population densities and limited access to emergency medical services.

Urban Residents

Pennsylvania has seven of the nation's 100 largest metropolitan areas - Philadelphia, Pittsburgh, Harrisburg, Allentown, Scranton, Lancaster, Youngstown and the New York extension area. Pennsylvania's 16 metro areas contain 84 percent of the state's population, 87.3 percent of the job share and 92.3 percent of the commonwealth's gross domestic product (Brookings Institute, 2005).

Urban areas have unique challenges that come from sharing small living spaces, dealing with excessive poverty and violence, and vying for limited resources. Dr. Ana Diez-Roux, epidemiologist at the University of Michigan, shows that, when mapped out on a grid, CVD, being overweight or obese, hypertension, low birth weight, diabetes, asthma, heart disease, environmental hazards, and poverty overlap each other and are "socially patterned across neighborhoods." According to Diez-Roux, these clusters arise as a result of the absence or presence of policies that create exorbitant spatial inequalities (National Minority Consortia, 2008). Seattle Public Health Official Dr. James Krieger explains that places are an excellent and accurate predictor of individual health (National Minority Consortia, 2008):

> "Place matters ... because place determines what someone is exposed to in terms of a whole host of factors that can affect their health. So place matters because it can determine what kind of physical or chemical agents you might be exposed to. It matters what kind of social environment you're exposed to. It matters if there is a lot of violence or crime in your neighborhood. It matters if it's easy to go for a walk in your neighborhood. Or find healthy foods. Who your neighbors are. The way you interact with your neighbors can also affect your health. So place, ultimately, is a critical determinant of health."

In America, the mortality rates specifically for low-income African-Americans are enormously disproportionate within many urban centers. When considering Harlem or Chicago's South Side, one study from 1990 projected that one-third of African-American girls and two-thirds of African-American boys who reached their 15th birthday could not expect to survive to their 65th birthday (Geronimus, et al., 2004).

Food Insecurity

Research shows that children living in disadvantaged neighborhoods have overall less healthy diets. "Disadvantaged" is determined by the degree of poverty, unemployment, vacant housing and the number of single parent, female-headed households. A cross-sectional study of 182 children ages 7-12 found that children living in disadvantaged neighborhoods consumed a significantly higher proportion of trans fat, total fat calories and sodium than children living in more advantaged neighborhoods (Robert Wood Johnson Foundation, 2011a). Though obesity affects every socioeconomic and racial group, the most severe and debilitating health problems are prevalent amid low-income urban areas, concentrated among racial/ethnic minorities (Tanumihardjo, et al., 2007).

Cardiovascular Disease

The causes of inequities in CVD rates between those who live in advantaged and disadvantaged urban neighborhoods are a complex set of factors, one prominent factor being stress. Stress hormones increase arterial plaque, raise blood pressure, weaken immune systems and increase risk for almost every chronic disease. In neighborhoods with high crime, violence, scarce resources, little public space, and little opportunity, stress can be

a constant companion. High stress situations include worrying over bills, food, employment, health and children's safety (National Minority Consortia, 2008). David Williams, Sociologist of the Harvard School of Public Health, explains, "Sometimes we naively think of improving health by changing individual behaviors but the choices of individuals are often limited by the environments in which they live. So many multiple negative stressors feel as if someone has been hit from every single side and they have few resources to cope." (National Minority Consortia, 2008)

In Pennsylvania, the rate of heart disease deaths based on racial differences varies greatly across both urban and rural counties. In fact, Beaver County (considered urban by the PADOH) has the most significant CVD disparity between African-Americans and Caucasians. In Beaver County in 2010, African-Americans died at a rate almost twice that of Caucasians from CVD. On the other hand, York county, also urban with a very similar population density as Beaver county, was the only Pennsylvania county with a statistically lower African-American CVD rate than both the state average and Caucasian CVD rate (PADOH, 2012b).

Asthma

A national survey of adult asthma prevalence by urban-rural residence in the U.S. in 2005 showed no statistical differences between urban and rural asthma rates. They found, instead, that "demographic, behavioral and healthcare characteristics unique to place of residence" made a much larger difference (Morrison, et al., 2009). Unsafe housing with wall cracks and water leakage breeds mold and dust mites, which lead to and seriously exacerbate asthma. People were spending up to $5,000 per year on repeated emergency room visits per child. Nationwide, the cost of asthma in health care and in lost school and workdays is around $20 billion per year (National Minority Consortia, 2008).

The PADOH reports that the number of individuals admitted to any non-federal Pennsylvania hospital with asthma as the primary discharge diagnosis were nearly two times higher in urban hospitals than in rural (PADOH, 2012h).

Media consumption is especially problematic in high-crime and low-income urban areas, as there are usually very little access to safe walking space and outdoor recreation areas, resulting in children remaining inside most of the time. Research shows that the presence of "sidewalks, safe intersections, walkable communities, accessible destinations, appealing green spaces, and public transit" can have a drastic impact on health outcomes (Rahman, et al., 2011). In fact, children who do not have safe outdoor areas to walk and play have 20–45 percent higher odds of becoming obese or overweight. Rahman, et al. (2011) shows that an urban mix of connected streets, high residential density, pedestrian-oriented retail and high quality public transportation creates a lifestyle where people walk and bike more for transportation, have lower body mass indexes, drive less, experience less traffic-related injuries, have better mental health, and have improved access to healthy food, medical care and increased affordable living.

An important factor affecting increases in obesity is global changes in food production. Within the last 25 years, the food industry has been able to extract oil and sugar from various sources and introduce them into processed food at a much cheaper cost. The government supports these types of food production techniques because they decrease manufacturing costs (Popkin, et al., 2012). Corner stores typically stock these types of foods because they are inexpensive, preserve well and have no need for expensive refrigeration (The Food Trust, 2011a).

Well-documented research shows that low-income and minority communities have statistically limited access to affordable, healthy food options including fruits, vegetables, and natural or perishable products. Also, these same districts have a higher prevalence of urban corner stores that often carry only cigarettes, alcohol and energy-dense, low-nutritive foods and beverages (Borradaile, et al., 2009). After generations of living in this kind of built environment, it has become part of the culture to subsist on fast food and processed foods

(Kwate, 2008). These types of foods are also cheaper and thus significantly more accessible for people with low income (Drewnowski and Specter, 2004).

In 2005, the Food Trust of Philadelphia, a nonprofit group that works to ensure sufficient and healthy food for all, implemented the Healthy Corner Stores Initiative (HCSI). The HCSI is a program that has been successfully executed in other large urban centers throughout the nation, including Washington, D.C., Baltimore and Sacramento. In March 2010, the Food Trust won a significant grant from the Philadelphia Department of Public Health's $15 million Federal Recovery Act grant to prevent childhood obesity and related diseases (Sullivan, 2011).

The Obama administration has vowed to eliminate areas without access to healthy foods by 2017 and has already taken several steps toward this goal. First Lady Michelle Obama coordinated contracts with Wal-Mart, Walgreens, Supervalu, and three regional chains to open 1,500 new stores throughout the nation in underserved communities and stock an adequate supply of fresh fruits and vegetables.

Poverty

The current recession has had a powerful effect on Pennsylvania, especially, urban areas. In Pennsylvania's metropolitan districts, poverty rates rose 2 percentage points in 2010 to a total of 1,360,202 people living in poverty. Poverty is already much higher in urban areas (14.7 percent) compared to rural (9.5 percent) [Keystone Research Center, 2011]. Furthermore, people living in impoverished conditions experience a higher cost of living for many commodities, including buying a car, cashing a check, purchasing furniture, appliances and groceries. Economists call it the poverty tax (National Minority Consortia, 2008).

Violence

Violence is prevalent in urban centers across the United States. Research shows that the majority of urban youth have been exposed to high levels of community violence. Up to one-third of urban male adolescents reports direct victimization, including being beaten or mugged in their school or neighborhood, being attacked with a knife or stabbed, or being shot at by another person (Singer, et al., 1995; Brady, et al., 2008). This exposure begins at extremely young ages. According to caregiver testimony, two-thirds of a sample of 3 to 4-year-old preschoolers in a Washington, D.C. Head Start Program had been exposed to at least one incident of neighborhood violence (Shahinfar, Fox and Leavitt, 2000; Brady, et al., 2008).

Violence is especially prevalent among minority groups in urban areas. African-American males showed 2.8 times the age-adjusted firearm death rates compared to Caucasian males over the period 2005-2009 (PADOH, 2009d).

In many urban populations, especially among minority women and women of lower socioeconomic status, depressive and anxiety symptoms are pervasive causes of ambulatory care visits, lost workdays and "poor functioning" among adults. Though these psychiatric symptoms are likely related to the stresses of having low income, lacking social supports and experiencing poor health in general, Clark, et al. (2008), suggests that the high prevalence of anxiety and depression are highly connected to violence within urban neighborhoods. Women in the study were twice as likely to experience anxiety or depression if they had been exposed to violence in the community. They explain, "community violence associated with urban living may tax the personal resources of residents and reduce the supports available to cope with emotional responses, resulting in poorer mental health outcomes." (Clark, et al., 2008)

Robert Prentice, Director of the Health Inequities Initiative, explains that violence is a public health issue. Not only in terms of direct deaths and injuries, but almost more importantly, "because of the ripple effect it has on other things that contribute to poor health, the ability of people to go out, to go shopping, to live a normal life." (National Minority Consortia,

2008) He also says that the impact of violence triggers physiological responses in a child that can change their developing brain and immune system to the point that they are significantly more vulnerable to physical and mental health problems throughout their lifetime (National Minority Consortia, 2008).

Education

In predominantly Caucasian, middle-class schools, curriculum tends to be more rigorous and expansive (Schmidt and Cogan, 2009). On the other hand, schools that have a majority of minorities tend to lack many resources. Kozol's "Savage Inequalities" describes children sitting in study halls for hours at a time or enduring substitutes every day because there are not enough teachers (Spring, 2008).

Gender and Age Disparities

Men

In Pennsylvania, men account for 49 percent of the total population. Public health discussions surrounding inequities often ignore the male demographic, as they habitually represent the advantaged group. However, men face a number of significant and unique health problems compared to women. The disparities are often amplified for males in racial/ethnic minority groups.

In Pennsylvania, men are more likely than women to lack health insurance coverage, less likely to have seen a dentist for a cleaning in the past year, and more than twice as likely to lack a regular primary care provider, suggesting less preventive care (PADOH, 2012b).

African-American and Hispanic men fare much worse in most health indicators. However, Pennsylvania death rates by accidents and suicides in 2007-2009 were much lower among Latino and African-American males ages 15-34 than for Caucasian males. Hispanic/Latino males and African-American males were also less likely to die in automobile accidents, compared to Caucasian males (PADOH, 2012b).

Motor Vehicle Accidents

In 2009, 1326 Pennsylvanian residents died in motor vehicle traffic accidents, so that, on average, one person died every seven hours throughout the year (PADOH, 2009d). Men, especially those ages 15-29, were involved in significantly more traffic accident deaths than women (PADOH, 2009d).

In Pennsylvania, in 2010, men died in motor vehicle accidents at a rate almost 2.5 times that of women. Also, 5 percent of men reported having driven after having too much to drink while only 1 percent of women reported the same (PADOH, 2012e; PADOH, 2012b).

Fortunately, the age-adjusted death rate for males in Pennsylvania has fallen dramatically. In 2005, males died at a rate of 19.8 per 100,000, while in 2009 it was 14.7 per 100,000 (PADOH, 2009d).

Cancer

Morbidity and mortality from all types of cancers are higher among males. In 2009, the overall age-adjusted cancer death rate for men declined by 14 percent but still remained 44 percent higher than the rate for females (PADOH, 2011c).

Female breast cancer is significantly greater in women but has comparable rates to male prostate cancer. Lung, bronchus, colon and rectum cancers are higher among males. The age-adjusted incident rate for kidney and renal, melanoma, thyroid, liver and intrahepatic bile duct, and pancreatic cancers have increased among males during the period 1998-2008. However, cancers of the lungs, bronchi, colon and rectum experienced decreasing trends among males (PADOH, 2011c).

Violence

African-American males disproportionately experience injuries due to intentional violence. Homicide, especially, between African-American men from the ages of 15-34 is an urgent problem. In Pennsylvania, young African-American men were 24 times more likely to die by homicide than Caucasian males of the same age, and more than four times as likely as Hispanics. In 2007, accidents and homicides were the first and second leading causes of death respectively for African-American men ages 44 and under (PADOH, 2012b).

Hispanics/Latinos have the second highest rate of death by homicide, primarily among males. In Pennsylvania, in 2009, the homicide rate for Hispanics/Latinos was almost six times greater than the corresponding rate for Caucasians. In addition, the homicide rate by firearm for Hispanic/Latino male residents was over six times higher than the rate for Caucasian males (PADOH, 2010f).

A 2012 report by the Williams Institute based on U.S. Federal Bureau of Investigation (FBI) data shows that gay men face higher rates of hate-motivated physical violence than lesbians, bisexuals or "other federally protected groups with high rates of hate crimes." This information is troubling as studies show that sexual-orientation motivated hate crimes tend to be more violent than other hate crimes (Stotzer, 2012).

Though men with disabilities experience less assault and victimization than women with disabilities, it is worth mentioning, as this vulnerable class is often ignored. In a documented study of the prevalence of lifetime and past-year sexual violence among a representative sample of men with disabilities in Massachusetts, the authors found that the prevalence of lifetime sexual victimization was 13.9 percent among men with disabilities compared to 3.7 percent among men without disabilities. Over 26 percent of women with disabilities experienced victimization over their lifetime, compared to 12.4 percent of women without a disability (Mitra, et al., 2011).

Heart Disease

In the United States, men die from heart disease 1.54 times more often than women. In Pennsylvania, the difference is slightly but not significantly greater (1.56 times) [PADOH, 2012b]. Although hypertension is more prevalent among women, the gap is narrowing as rates for men have been increasing at a faster pace over time compared to women. Currently, there are no differences between males and females for stroke mortality (Environmental Protection Agency, 2012).

Heart disease in Pennsylvania kills African-American men about 1.5 times more often than African-American women (PADOH, 2012b). The lowest CVD mortality rates were observed for Asian or Pacific Islander females (125.5 per 100,000), followed by Asian or Pacific Islander males (174.8 per 100,000) [Environmental Protection Agency, 2012].

Suicide

Suicide is often the outcome for people with severe mental illness and is the eighth leading cause of death in the U.S. On average, 81 people commit suicide every day (CDC, 2012g). Suicide is a major public health concern for young people, especially males ages 10-24. Males of this age group commit suicide over four times more frequently than females. In 2009 in the U.S., suicide was the third leading cause of death for 10-24 year-olds of both genders. The most frequently used method for suicide, at 45 percent, was by firearm; suffocation was the second most common at 40 percent (CDC, 2012k). In Pennsylvania in 2010, men died by suicide four times more often than women. Considering only suicide by firearm, men died 9.5 times as often as women (PADOH, 2012b).

In 2007, in Pennsylvania, African-Americans had a lower suicide rate (5.9 per 100,000 population, age adjusted), compared to Caucasians (11.9 per 100,000 population, age adjusted) [PADOH, 2010b]. On the other hand, since 1980, suicide has doubled nationally among young, African-American males (CDC, 2012g).

Women

In Pennsylvania, women represent 51 percent of the population. Though women are not a minority group solely by number, they experience great social, economic and health disparities compared to men. In addition, women who also belong to an ethnic/racial minority group often have low-income status and fare much worse in general.

Income is positively correlated with health in significant ways. Families are relying more on women's income than in the past, yet women have fared worse during the last economic downturn in terms of unemployment and wages. In 1963, the U.S. passed the Equal Pay Act, which helped to narrow the gap between women and men's wages, but has still not closed it almost 50 years later. In 2010, Pennsylvania had the same wage gap as the national standard, where the average woman made $.77 to every dollar a man made working full-time, year-round. African-American (67 cents per dollar) and Hispanic women (55 cents per dollar)

experienced an even greater gap when compared to Caucasian men working full time, year-round for the same work (National Women's Law Center, 2012).

This wage gap exists across all levels of education and types of employment. In 2010, women in Pennsylvania with a high school diploma made only $.65 to every dollar paid to a man with a high school diploma. Women with a bachelor's degree made $.69 to every dollar paid to a man with a bachelor's degree. Pennsylvania women working in management, business and financial occupations made only $.70 to every dollar paid to men in the same occupations, and those in sales and related occupations received $.61 to every dollar (National Women's Law Center, 2012).

Women face significant disparities in political leadership roles in the state. For example, in Pennsylvania, 32 counties have no female county commissioners and four counties have between 11-20 percent female commissioners. However, in 27 counties, one out of three commissioners are women; in one county, seven of 17 commissioners are women (Philadelphia); in three counties, two of the three commissioners are women (Sullivan, Blair, Chester); and in Monroe county, all three commissioners are women (Harris, 2011).

In the Pennsylvania General Assembly, 11 of 50 senators are women (22 percent) and 33 of 203 representatives are women (16 percent). The Pennsylvania General Assembly currently has a historically high female composition at 17.4 percent. Pennsylvania is ranked 42nd out of 50 states for its proportion of female state legislators. Colorado is ranked first with a composition of 41 percent women (Harris et al., 2011).

No woman has ever served as Pennsylvania governor. In the nation, six women are currently serving, and 31 have served in 23 states at some point in history. Catherine Baker Knoll (D) was the only woman in Pennsylvania history to be elected lieutenant governor. She served from 2003 until her death in 2008. Along with 26 other states, no Pennsylvania woman has been elected as senator to the U.S. Congress. However, seven women have served in the House of Representatives (Harris, et al., 2011).

Maternal Care

In 2010, Amnesty International reported that maternal health care in the United States is "not just a public health emergency - it is a human rights crisis." From 1987 to 2006, maternal mortality ratios increased from 6.6 deaths per 100,000 live births to 13.3 deaths per 100,000 live births (Amnesty International, 2010).

Although the U.S. spends more money on health care than any other nation and more on maternal care than any other health service, American women, especially ethnic minorities, have a higher risk of dying from pregnancy-related complications than women in 49 other countries, including Kuwait, Bulgaria and South Korea. Nationally in 2011, African-American women were almost four times more likely to die of pregnancy-related complications than their Caucasian counterparts (Amnesty International, 2010).

Amnesty International suggests that the main obstacles women face in obtaining needed basic maternal services include (Amnesty International, 2010):

- Discrimination;
- Financial, bureaucratic and language barriers to care;
- Lack of information about maternal care and family planning options;
- Lack of active participation in care decisions;
- Inadequate staffing and quality protocols; and
- Lack of accountability and oversight.

Due to declining population projections in rural counties and decreased funding, hospitals across Pennsylvania are cutting costs by phasing out maternity wards. In Pennsylvania, nearly two-thirds of births are covered by medical assistance. The reimbursement rate is below

the national average of 82 percent. As the number of young and middle-aged women without healthcare coverage rose by 1.3 million between 2008 and 2009, hospitals were squeezed to the point that they could not maintain their maternity wards any longer, and 39 hospitals have closed their maternity wards since 1997. The hospitals with remaining maternity wards have extremely crowded floors, potentially providing poor and delayed care (Abraham, 2011).

Cancer

The PADOH estimates that 107 female Pennsylvanians were diagnosed with some form of invasive cancer each day in 2011, totaling 39,010 cases. On average, 29 cases of breast cancer, the most common among women, were diagnosed each day. Cases and deaths due to all types of cancers are slightly less in females than in males. (PADOH, 2011c).

The overall age-adjusted cancer incident rate for females in Pennsylvania rose from 429.7 per 100,000 in 1998 to 459.7 in 2008. Lung/bronchi, thyroid, melanoma, pancreatic, liver/intrahepatic bile duct, brain/other nervous system, and kidney/renal pelvis cancer rates experienced increasing trends among females during this same 11-year period (1998-2008). Decreasing trends were observed for stomach, cervix, colon/rectum and ovarian cancers among females. Cancer death rates for women have been dropping in the last 10 years and are consistently lower than rates for men (PA DOH, 2011c).

For most cancers, incidence rates for Pennsylvania females were significantly higher than the national average. Breast cancer incidence rates were lower than the national average throughout 1998-2007 but were slightly higher in 2008. In 2008, lung and bronchi cancers were 19 percent higher among Pennsylvania residents compared to the U.S. Age-adjusted incidence rates for colon and rectum cancer and urinary bladder cancer among Pennsylvania residents were consistently higher than U.S. rates between 1998 and 2008 (PADOH, 2011c).

Violence

Women are at higher risk than men for domestic violence and intimate partner violence, and they incur more numerous and severe injuries. In 2005, the CDC and National Center for Injury Prevention and Control reported that women experienced two million injuries that year from IPV, costing billions of dollars (CDC, 2008a).

Victims of IPV are often reluctant to report their partner for fear of reprisal, shame or isolation, so numbers are often approximates. Nearly one-third of all U.S. women are believed to experience physical or sexual abuse by an intimate partner at some point in their lives. Roughly 1.5 million women experience rape and/or physical assault by a husband or boyfriend each year. Between 2001–2005, about 96 percent of females who reported intimate partner violence were victimized by a male and about 3 percent by another female (Family Violence Prevention Fund, 2009).

Studies show that females are at a much greater risk for "intimate killings and sex-related homicides." Though the overall number of intimate partner homicides has decreased since 1998, the proportion of female-to-male victims has actually increased (Family Violence Prevention Fund, 2009).

Pregnant women are at especially high risk for intimate partner violence and homicide. In a retrospective study of pregnant women between the years 1993-2008 in Maryland, researchers found that homicides (n=110) were the leading cause of death during pregnancy and the first postpartum year. Death most commonly occurred in the first three months of pregnancy. African-American women, women younger than 25 years old and unmarried women, were at the highest risk for homicide (Cheng and Horon, 2010).

STIs

STIs are a growing problem among all women. Despite concerted public health efforts and education campaigns, STIs continue to rise in the United States, with 19 million new cases

and $15.9 billion in costs annually. Dr. John Douglas, director of the CDC's Division of STD Prevention, reports that women have been showing steady increases in STIs since 2004; indeed, women increased 36 percent from 2007 to 2008 alone (O'Callaghan, 2009).

Females are at a much greater risk for STIs than males in general because of their biological structure; however, they also tend to be screened at higher rates than men. Chlamydia and gonorrhea are the two most commonly reported infectious diseases in the United States. Girls between the ages of 15-19 years had the highest prevalence rates for both of these diseases, followed closely by young women 20-24 years of age (CDC, 2008d). Chlamydia, gonorrhea and syphilis can damage the female reproductive organs and exponentially raise the risk of contracting HIV infection in both sexes (CDC, 2012d; CDC, 2012b). Gonorrhea can also cause pelvic inflammatory disease (PID) in women if left untreated (CDC, 2012d).

Children

In the United States, children suffer the most from poverty. According to the U.S. Census in 2010, over 15 million children from infants to 17-year-olds lived in poverty (Pennsylvania Budget and Policy Center, 2011). Many of Pennsylvania's children and youth have family situations in which only one parent is present. There are 421,400 single parent-headed families with children under the age of 18 in Pennsylvania (Cunningham and Knoester, 2010). Of those single parents, exactly half are in the workforce and have children under the age of 6 (NACCRRA, 2011). The poverty rate among single parent families is two to five times greater than in families with two parents. Single parenting is also highly associated with depressive symptoms and alcohol abuse (Cunningham and Knoester, 2010).

Drowning

In a recent study, the CDC found that the leading cause of death among children age 4 and younger is by drowning. Most of these deaths occurred in swimming pools. In the U.S., data from the National Electronic Injury Surveillance System -- All Injury Program for 2005 to 2009 showed that, in addition to deaths by drowning, 5,789 children were treated in U.S. hospital emergency rooms each year for non-fatal drowning. The drowning death rate among males was approximately four times that for females (UPI Health News, 2012).

The CDC also found that minority children, especially African-American children, are at an even greater risk of drowning. African-American children between the ages of 5 and 14 were three times more likely to drown than Caucasian children of the same age range. In addition, research by the USA Swimming Foundation shows that up to 70 percent of African-American and Hispanic children do not have basic swimming skills (Kay, 2012).

Environmental Toxins

Infants and children are particularly vulnerable to environmental toxins for two main reasons. First, their organs are still in the developmental stages and are prone to malformation and mutation (American Academy of Pediatrics, 1997). Secondly, children breathe more rapidly and inhale more pollutants per pound of body weight than adults. Since their airways are narrower than those of an adult, lower amounts of air pollution can result in dangerous levels of swelling in a child (American Academy of Pediatrics, 1993).

Environmental hazards and pollution can come from the air inside and outside of the home, from water, soil, food and chemicals in play areas (American Academy of Pediatrics, 1997). Bioaccumulation and synergism of toxins are a growing concern in the scientific community as the U.S. increasingly uses various chemicals and pesticides in its agricultural processes. Bioaccumulation is the step-by-step increased concentrations of toxins. Synergism is the combined effects of toxins as they move up the food chain. Over 80,000 chemicals, not all toxic, are now commercially available for use by the agricultural industry, which makes it possible for them to enter into American homes and dinner tables (Oats and Cohen, 2009).

Asthma

In all of Pennsylvania, from the years 2005-2009, the highest inpatient hospitalization rates of childhood asthma were in Philadelphia County, followed by Delaware County and then Montgomery County. Infants to 5-year-olds had a significantly higher hospitalization rate per 1,000 compared to children aged 6 to 18 (PADOH, 2011b).

By population health status, African-American children fare much worse than their Caucasian counterparts. During 2009, hospital discharge rates for young childhood asthma (ages under 5 years old) were over eight times higher among African-American residents compared to Caucasians. In addition, hospital discharge rates for asthma among African-Americans were at least two times higher than for Caucasians in every age group (PA DOH, 2010d).

Air quality can also vary by geographic location. For example, Franklin and Cambria counties received a "B" for ozone levels in the American Lung Association's 2012 State of the Air Report (American Lung Association, 2012). On the other hand, Lehigh and Northampton counties received an "F." As a result, the report considered 50 percent of residents in both Lehigh and Northampton counties as an "at risk population" for asthma because of the poor air quality (City of Bethlehem, PA, 2010).

Immunizations

Today infants are at risk for many diseases that were previously considered eradicated from the developed world. Some parents worry that immunizations increase the risk of autism or that their children may acquire the disease they are being immunized against, causing the resurgence of vaccine-preventable diseases to occur. The American Academy of Pediatrics and the American Medical Association, among other organizations, recently affirmed the need for immunizations, stating "Polio is still endemic in parts of the world, and pertussis is killing infants here in the U.S. Several states have declared epidemics of pertussis this year. Measles, too, is making a comeback, with more cases in the U.S. in 2011 than in 15 years. These diseases pose real threats to children who are unprotected by vaccines." (Rochman, 2012)

In Pennsylvania, in 2009, only 69.4 percent of children aged 19-35 months received the full series of recommended vaccinations (CDC, 2009c). The next year, 12 percent of young children across the nation did not receive their vaccinations within the time frame suggested by the CDC or did not receive them at all (Kennedy, et al., 2011).

Regular visits and immunizations improve a child's quality of life while providing a safeguard for the general public. When one considers herd immunity and national costs saved in direct medical health care, the CDC indicates that every dollar spent on immunization saves $6.30, with a cumulative savings of $10.5 billion. With the inclusion of losses due to missed work, death and disability, the aggregate savings grow to $42 billion (Zhou, et al., 2003).

Opiate-Addicted Babies

A recent cultural practice of liberally prescribing opiate medications for cancer and chronic pain has made these drugs increasingly available to the public, thereby creating an African-American market outlet for them. This accessibility has created an "opiate addiction pathway" (Patrick, et al., 2011). The overdose mortality and dependence rates are highest among disadvantaged, young, rural adults and is most concerning for pregnant women (Patrick, et al., 2011).

Neonatal incidents of opiate withdrawal tripled between the years 2000 and 2009. Medicaid/Medical Assistance budgets are struggling, as a large proportion of the mothers who need detox methadone treatment for themselves and for their babies have limited financial means. Though there is more need than in the past, programs are systematically running out of funding. In addition to the cost of methadone treatment, children experiencing withdrawal from opiates often require special services for developmental and behavioral disorders for many years after birth (Patrick, et al., 2011).

Autism

The CDC defines autism spectrum disorder (ASD) as a group of "developmental disabilities that can cause significant social, communication and behavioral challenges." This broad disorder lies along an even broader spectrum of severity. The syndrome has specific criteria including individuals having difficulty with social interaction and communication. Much of the disorder affects people uniquely in terms of when symptoms start their severity and the "exact nature of the symptoms." (CDC, 2012c)

The number of children diagnosed with autism has skyrocketed in the past 10 years. The CDC's latest numbers report that one in 88 children overall and one in 54 boys is born with this disease. These numbers are up 78 percent from 2002 and 23 percent from 2006. These drastic increases concern experts as they study whether autism is caused by a growing environmental problem or the medical community's vastly improved ability to detect and diagnose the disorder. The experts are still grappling with this question (CDC, 2012c).

The greatest increases in autism diagnoses, according to the CDC surveillance report, were among Hispanic and African-American children. Both of these groups traditionally have low rates of detection (Insel, 2012). Mental health professionals can detect autism as early as 14 months of age; however, U.S. children are usually not diagnosed until around 4½ years old.

According to University of Pennsylvania autism expert David Mandell, minority children may be diagnosed with autism as much as a year and a half later than Caucasian children. This presents problems for minority parents and children in successfully managing the disorder. Early detection and intervention play a significant role on therapy treatment outcomes (Neergaard, 2012b).

Child Welfare System

In the U.S., the child welfare system is an umbrella group of services networked to "promote the well-being of children by ensuring safety, achieving permanency and strengthening families to care for their children successfully." The states retain primary responsibility for child welfare services with federal support through funding and legislative initiatives. The welfare system investigates suspected child abuse or neglect, monitors homes, and maintains foster child and adoption services (U.S. DHHS, 2011a).

Children in the welfare system are extraordinarily vulnerable, initially due to their age and status, as wards of the state without familial oversight. They overwhelmingly suffer from poverty, violence, abuse, mental health issues and limited access to quality medical care. Abused children are at greater risk for teen pregnancy, practicing unsafe sex, mental illness, and drug and alcohol abuse (City of Bethlehem, PA, 2010).

Across the nation, nearly half of all children that encounter child welfare agencies have clinically diagnosed emotional or behavioral problems. Between 40 and 60 percent of children in the child welfare system have a diagnosed psychiatric illness. Children in foster care require between 10 and 20 times the rate of utilization of mental health services compared to children living within their homes. National estimates suggest that the use of psychotropic medication among children in the foster care system is 13.5 percent. This number is much higher than the 4 percent of privately insured children on medication and the 5 to 6 percent seen among Medicaid-enrolled children (Raghavan, et al., 2010).

A recent national study looked into whether children in the child welfare system were receiving needed mental healthcare services according to legislative standards. Researchers looked at data on 3,802 youths from the National Survey of Child and Adolescent Well-Being, the nation's first longitudinal study of children in the child welfare system. The study examined rates of screening, assessment and referral to mental health services. Researchers found that only half of all children in the sample received care consistent with any one national standard, and less than one-tenth received care consistent with all of them. Older

children exhibiting significant psychological behaviors and those placed in foster care had on average higher odds of receiving care consistent with national standards (Raghavan, et al., 2010).

Policy within the welfare system has changed dramatically over the years. Professionals have been aware of the high mental health needs and large disparities among these children for the past two decades. In fact, professional organizations have proposed standards of care specifically tailored for this population. At the same time, recent changes to Medicaid regulations have weakened entitlements to screening and assessment for children in the system. Unfortunately, little accountability exists to ensure that children within the welfare system actually receive care consistent with national standards (Raghavan, et al., 2010).

Youth and Young Adults

Adolescent Sexual Health

Adolescence is often the time when people begin to explore their sexuality and start making the kinds of decisions that will have enormous impacts on the rest of their lives. Sexual health is important in three major areas: 1) reduction of teen pregnancy, 2) reduction of sexually transmitted infections, and 3) reduction in nonconsensual sexual behaviors. In terms of these three areas, certain subpopulations of adolescents (ages 12-18 years old) tend to experience damaging disparities. The Oregon Health Authority recently published a report distinguishing the most vulnerable subgroups as (Gowen and Aue, 2011):

- Youth in corrections;
- Youth with developmental disabilities;
- Youth in foster care;
- Homeless youth;
- Lesbian, gay, bisexual, transgender and questioning (LGBTQ) youth;
- Youth with mental health conditions; and
- Youth who have experienced sexual abuse.

These groups share similar social determinants of health, sexual health disparities and negative outcomes. All of these groups experienced higher rates of pregnancy involvement, sexual abuse and STIs. Most individuals in these subgroups experienced a sexual debut earlier than the general public, higher rates of sexual activity and lower rates of condom use. Youth in the LGBTQ community had the highest overall risk of indicators, such as substance abuse during sex, dating violence, survival sex and multiple sexual partners. Survival sex is defined by the United Nations as a temporary, informal activity where people "have occasional commercial sexual transactions or where sex is exchanged for food, shelter or protection." (UNAIDS, 2003)

Teen pregnancies cause health problems for both the mother and baby, not to mention social, economic and psychological difficulties. In the U.S., the national target for teenage pregnancies is 17 births per 1,000 persons in the female population. In 2006, Northampton county experienced 24 births per 1,000, and Lehigh county saw 37 births per 1,000 persons in the teen population (City of Bethlehem, PA, 2010).

A pediatric study comparing severely overweight high school students with their normal weight peers found that these overweight students engaged in riskier behaviors overall. Overweight high school girls were more likely to have tried cigarettes or smoked regularly than girls with a healthy weight. More importantly, overweight teen girls showed a particular vulnerability in their sexual behavior. Compared with healthy weight female students, female high school students with extreme obesity had lower odds of ever having sex, but those who did had significantly greater odds of drinking alcohol or using drugs just before their last sexual encounter, types of activities that tend to lead to poor decision-making (Ratcliff, et al., 2011).

Mental Health

Suicide is a major concern for young people, especially male's ages 10-24 years old. Suicide rates tend to increase with age. For children ages 10 to 14, 1.3 per 100,000 died by suicide; for youth ages 15 to 19, 7.8 per 100,000 committed suicide; and for young adults ages 20 to 24, 12.5 per 100,000 youth died by suicide. In terms of race, Native American and Alaska Native youth have the highest rate of death, with 17.4 suicides per 100,000. Caucasian youth are next highest with 7.5 deaths per 100,000 (CDC, 2012k).

The national Youth Risk Behavior Survey (YRBS) reports that, in 2009, 6.3 percent of U.S. high school students self-reported as having attempted suicide one or more times in the previous 12 months. Interestingly, female students reported almost twice as many attempts (8.1 percent versus 4.6 percent for males) as male students, and Hispanic females reported more attempts than any other racial or ethnic groups at 11.1 percent. Only 1.9 percent reported having made "a suicide attempt in the previous 12 months that resulted in an injury, poisoning or overdose that had to be treated by a doctor or nurse." In addition, almost 11 percent of high school students reported having made a concrete plan for suicide in the previous 12 months, and almost 14 percent reported having seriously considered attempting suicide in the previous 12 months (CDC, 2009d).

The reasons for children and youth thinking of, planning or committing suicide is varied and complex. However, certain social, biological and environmental factors place them at higher risk for this behavior. These include mental illness and substance use disorders, previous suicide attempts, firearms in the household, non-suicidal self-injury, exposure to a friend or family member's suicidal behavior and low self-esteem (National Center for the Prevention of Youth Suicide, 2012).

Dating Violence

Children and youth are dating at much younger ages than in past generations, and, as a result, teens (youths age 9 to 14) are experiencing a significant incident of dating violence (Draucker, et al., 2010). Dating violence in very young people does specific harm to the development of healthy sexuality, intimacy and personal identity (Foshee and Reyes, 2009). If not addressed, it could lead to physical injury, substance use and abuse, binge drinking, depression, suicidal thoughts and attempts, unhealthy sexual behaviors, disruptions in body image and self-esteem, violence in future relationships, and poor educational outcomes (Draucker, et al., 2010; Banyard and Cross, 2008).

The National Council on Crime and Delinquency (NCCD) reports that approximately one in three adolescent U.S. girls is a victim of physical, emotional or verbal abuse from a dating partner, far exceeding the rate of other types of violence experienced by youths (Davis, 2008). In a national online survey, one in five tweens report that their friends are victims of dating violence, and nearly half who are in relationships know friends who are verbally abused. Also, two in five 11-12-year-olds report that their friends are victims of verbal abuse in relationships (Teenage Research Unlimited for Liz Claiborne, Inc., 2008).

A survey of seventh graders in a low-income community found that more than one in three boys (35.2 percent) and nearly one in four girls (24.1 percent) reported being a victim of physical violence in a dating relationship in the past year. Almost one in four seventh grade girls (24.9 percent) and more than one in five boys (21.2 percent) reported perpetrating physical violence in a dating relationship in the past year. The researchers also found that boys are more likely to inflict injuries by committing dating violence (Swahn, et al., 2008).

Seniors

Elders are a vulnerable class due to a variety of factors, including increased risk for poor and fragile health, dementia and disability, and limited incomes. Pennsylvania has almost two million citizens age 65 and older; over one in five Pennsylvanians is aged 60 or older. Pennsylvania ranks fourth in the U.S. by percentage of the population age 65 and older behind Florida, West Virginia and Maine. Pennsylvania also ranks fourth in the U.S. by

number and percent of population age 85 and older. The Pennsylvania Health Care Association estimates that, by 2020, Pennsylvania's 60 and older population will exceed a quarter of the total population (U.S. Census Bureau, 2010d; Pennsylvania Health Care Association, 2011).

Today elders are living much longer than in previous generations, but healthcare professional's debate about the quality of those extra years. Some seniors remain active and happy until the end of their lives, while others have increasingly long years to suffer through age-related diseases and disability. An article from the Journal of the American Medical Association explains that, by 2050, there will likely be an annual increase of over 4.5 million hip fractures and more than 36 million patients with dementia. These significant swells in two "profoundly disabling conditions" alone are enough to "help explain the concerns of an imminent pandemic of frailty, comorbidity and disability." (Michel, et al., 2008)

Furthermore, the "shifting balance of generations," the lengthening of lives and improvements in communicable disease treatments have culminated in an excess of chronic disease, which is substantially determined by factors and behaviors beginning in the childhood years (Michel, et al., 2008).

Long-Term Care

Improving the quality of long-term care for the elderly in the United States is an overwhelming prospect, as it requires excessive amounts of money, policy reforms and innovative ideas. Many people in the healthcare industry, as well as advocates for the elderly, have begun to call for significant improvements in senior living options as the baby boomer generation nears its golden years (Kadlec, 2011). Nearly 70 percent of those turning 65 this year will eventually require long-term care in their lifetimes (Pennsylvania Health Care Association, 2011).

Nursing homes are medically oriented residences for seniors who generally cannot take care of themselves medically or physically. In Pennsylvania, the typical nursing home occupant is likely to be female, over age 85, widowed and diagnosed with some form of dementia. However, trends show that the number of "post-acute hospital short stay patients requiring intensive medical rehabilitation services" is on the rise (Pennsylvania Health Care Association, 2011).

Pennsylvania has approximately 720 nursing homes with nearly 89,000 beds. The average annual cost for a private room in a nursing home is $77,745 in the United States, while in Pennsylvania, costs average $96,725. In the greater Philadelphia region, the average annual cost is $106,033 (Pennsylvania Health Care Association, 2011).

There are state and federal supports to assist elderly individuals and their families with these costs. Medicare, a federal program specifically for seniors, will pay for 13 percent of nursing home care. Medicaid/Medical Assistance, on the other hand, is a joint state/federal program designed to supplement low-income residents. Nearly 30 percent of seniors with Medicaid in nursing homes have usually qualified by liquidating and exhausting any assets they may have had. It is difficult, however, for seniors to find nursing homes that will accept Medicaid, as the government will only pay the facility roughly $8.00 for every $19.24 that the nursing home assesses in costs per resident hour, per person. While the senior citizens in Pennsylvania may have up to 65 percent of his or her nursing home cost covered by Medicaid, the nursing home itself encounters an enormous financial burden (Pennsylvania Health Care Association, 2011).

In 1987, in response to a study showing that nursing homes across the nation were rife with abuse and neglect, Congress passed federal law that raised minimum quality standards, strengthened federal and state oversight, and demanded a minimum-staffing requirement. While this law has made some improvements in quality, Park and Sterns (2009) found that the federal minimum staffing standard only had the power to affect very low staff facilities.

However, 16 states took the initiative to implement stricter staff requirements, which demonstrated a marked improvement in all quality indicators (Park and Sterns, 2009).

Pennsylvania was not among the states that required more exacting staffing requirements. The National Citizens' Coalition for Nursing Home Reform reports that Pennsylvania has inadequate staffing provisions in nursing homes which likely "lead to chronic quality-of-care problems, such as failure to adequately treat and prevent pressure sores." (Burger, et al., 2000)

Assisted living and personal care homes provide alternative means for senior citizens to live independently with limited medical and personal help. They may have social halls, cafeterias and organized activities. Seniors must usually show that they are physically capable to care for themselves most of the time. However, these homes are often cost-prohibitive. The average annual cost of a personal care or assisted living home is $3,000 a month or $36,000 annually (Pennsylvania Health Care Association, 2011).

Suicide and Depression

The National Institute of Mental Health (NIMH) estimates that major depression among older people living independently in their community is only between one and five percent. The rate increases, however, with decreased independence and dissatisfaction with home situations. In those who require home health care, depression rises to 13.5 percent, and for those in the hospital, 11.5 percent. Also, approximately five million seniors have subsyndromal depression or "symptoms that fall short of meeting the full diagnostic criteria for a disorder." (National Institutes of Mental Health, 2012)

The NIMH says that, contrary to popular belief, depression is not a natural progression of aging. While everyone experiences periods of sadness, grieving or "blue" moods, long or persistent periods of depression that interfere with daily functioning are not normal, even in the elderly. The elderly tend to experience life situations that may lead to prolonged frustration and sadness, including the loss of loved ones, financial hardships and poor health. The NIMH reports that even mental health professionals often mistake these bouts of depression as an "acceptable response" to aging, a mistake that leads to low rates of diagnosis and treatment in seniors (National Institutes of Mental Health, 2012).

Completed and successful suicide is a significant problem in the United States' older adult population. According to the CDC, between 2000 and 2006 adults ages 65 years and older in the United States had a higher death rate by suicide (14.8 per 100,000) than the general population (10.9 per 100,000) [Marty, et al., 2010].

Among adult Asian males 85 years and older, the suicide rate is extremely high (Suicide Prevention Action Network USA, 2007). This may result from a myriad of cultural and social factors. Many older Asian-American immigrants struggle to adapt to American life and feel useless and unable to cope. Western culture does not accommodate the levels of reverence and respect that many elders are treated with in their native cultures.

Many Asian-American and Pacific Islander cultures connect the psychological and physical realms to the point that they may "express emotional distress through physical problems and [tend] to believe that physical problems cause emotional disturbances." (Suicide Prevention Action Network USA, 2007) In addition, a large proportion of Asian immigrants arrive in the U.S. alone and experience social and cultural isolation leading to emotional distress (Suicide Prevention Action Network USA, 2007).

Elder Abuse

The abuse and neglect of elders by caretakers and family members is a serious and prevalent issue today. Acierno, et al. (2010), estimated that one in 10 elders experienced some kind of emotional, physical or sexual mistreatment or neglect in 2009. Acierno analyzed data from 5,777 respondents between 60-97 years old and found that the one-year prevalence

for emotional abuse was 4.6 percent, 1.6 percent for physical abuse, 0.6 percent for sexual abuse, 5.1 percent for potential neglect and 5.2 percent for financial abuse by a family member. Abuse occurred across socioeconomic status and race and correlated most strongly with low social support and previous traumatic event exposure. When viewing this data, one can assume that these percentages are underestimated, as many seniors may not report mistreatment because they are embarrassed or want to protect their caregivers (Acierno, et al., 2010).

Alzheimer's disease and Dementia

The CDC reports that Alzheimer's disease is "the most common form of dementia among older adults … and involves parts of the brain that control thought, memory and language, and can seriously affect a person's ability to carry out daily activities." Scientists are still trying to determine the exact cause of Alzheimer's disease, though it is thought to have a significant genetic link, as well as an environmental and behavior portion. Some of the same risk factors for heart disease and stroke, such as high blood pressure, high cholesterol and low levels of folate may increase risk for Alzheimer's disease. Protective factors from Alzheimer's disease may include physical, mental and social activities (CDC, 2012f).

Approximately five million people over the age of 60 suffer from Alzheimer's disease in the U.S. It is rare for people younger than 60 to contract the disease, meaning that risk increases with age. Nearly 5 percent of people between the ages of 65 and 74 have Alzheimer's disease and almost half of those aged 85 and older may have the disease. Alzheimer's disease is the fifth leading cause of death for adults aged 65 years and older, and the mortality rate is rising; it has doubled since 1980. Though the statistics show an enormous number of people with the disease, the CDC explains that Alzheimer's disease should not be considered a normal part of aging and the nation should continue to innovate and research a cure (CDC, 2012f).

STIs

Elder citizens often have highly active sexual lives, which has led to a marked increase in the cases of sexually transmitted infection among seniors. In fact, up to 80 percent of seniors over the age of 65 are sexually active. England's West Midlands Health Protection Agency recently published a study reporting that STI rates had more than doubled among people ages 45 and older between the years 1998-2008. From 1996 to 2003, total cases of chlamydia, genital herpes, gonorrhea, syphilis and genital warts among people over 45 increased 127 percent, while cases increased in patients under age 45 by 97 percent. In the U.S., the CDC showed relatively stable prevalence of syphilis, chlamydia and gonorrhea in people ages 55 and older, but many experts suggest that these numbers may not reflect reality, as the CDC numbers rely on self-reporting (Sharples, 2008).

Several factors have combined to increase the prevalence of STIs among senior citizens. These factors include the availability of Viagra and other drugs that increase libido, the increased divorce rate, online dating options that allow seniors the opportunity to date people, and ignorance of safe sexual practices. Many seniors believe that condoms are unnecessary after menopause because they do not need to worry about pregnancy. Also, primary care physicians may commonly feel uncomfortable broaching the topic with elders or they make the "dangerous assumption that older people are not engaging in sex after a certain age." (Sharples, 2008)

America is also dealing for the first time with an aging population that has HIV/AIDS. This is linked directly to the success of highly active anti-retroviral therapies actualized in the 1990s. Older adults are more likely to be dually diagnosed with HIV and AIDS than their younger counterparts. Since AIDS is a disorder that is acquired much later in the process of contracting HIV, this means that elders have often been living with the disease for years without diagnosis or treatment. The ACT UP slogan for AIDS in the early 1980s proclaimed that "silence equals deaths," and Espinoza (2011) declares that the "silence on this aging issue is deafening."

At the same time, HIV policies do not attend well to the aging population. Espinoza (2011) reports that seniors with HIV are "virtually absent from major legislation or strategies affecting this population, from the Older Americans Act, which is the largest provider of older adult services, to the Ryan White Care Act, which is the largest funder of HIV/AIDS services, to the recently released National HIV/AIDS Strategy under the Obama administration."

Hepatitis C

Hepatitis C is contracted through the blood of an infected individual. Scientists have not yet confirmed whether hepatitis C can spread through sexual contact, but the most common mode of transmission is through the sharing of hypodermic needles. After 1992, hepatitis C is generally no longer spread through blood transfusions and donated organs. Since then, health professionals began widespread testing of the national donated blood supply (Neergaard, 2012a).

Approximately 3.2 million Americans have chronic hepatitis C infection, and at least half may not be aware of it. People entering retirement have the greatest risk for the disease. One out of every 33 baby boomers is living with hepatitis C infection and three-fourths of hepatitis deaths occur in people between the ages of 45 and 64. Most of these people contract the disease in their 20's, allowing the virus time to do significant damage. Federal public health officials suggest that anyone born between 1945 and 1965 should get a one-time blood test to check for this disease. One CDC study shows that cases of hepatitis C have risen in the past five years, and in 2007 more people died in the U.S. from hepatitis C than from the AIDS virus (Neergaard, 2012a).

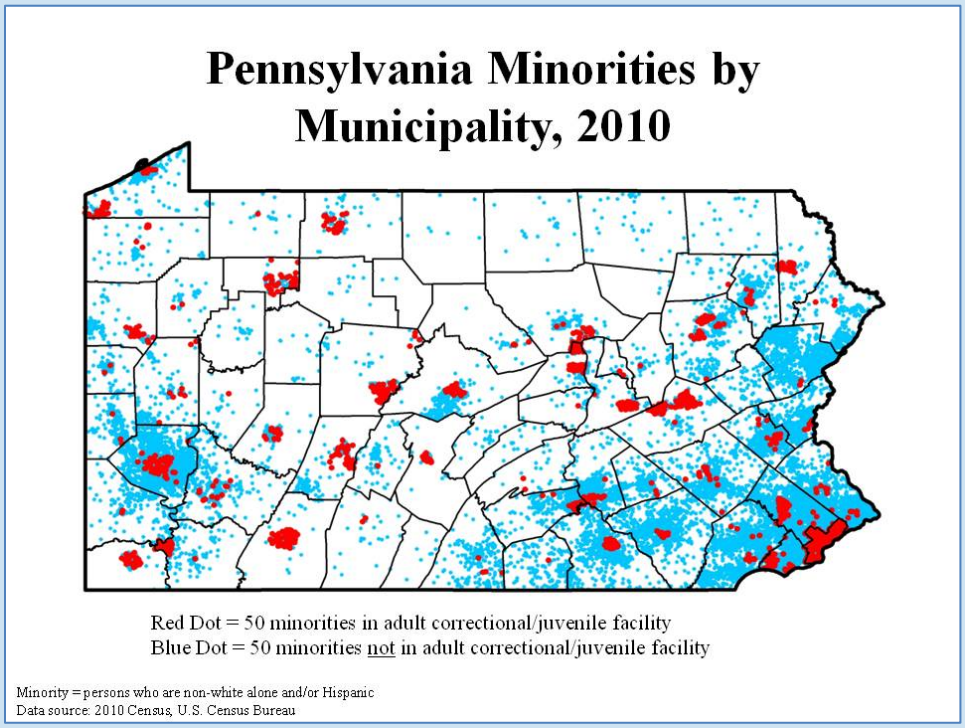
Standard treatment for hepatitis C takes about a year to complete, exhausts one's body and can cost up to $30,000. However, a handful of new drugs on the market have begun to increase hope for reversing the currently increasing hepatitis C trend. The new drugs are added to standard treatment and improve curative outcomes and decrease therapy time. However, they do have additional costs and side effects (Neergaard, 2012a).

Incarcerated Individuals

The United States incarcerates the largest number of people in the world. Though the U.S. has less than 5 percent of the world's population, it holds 25 percent of the world's population of people in jail (housing inmates with a sentence of less than a year) or prison (housing inmates with a sentence one year or more) [American Civil Liberties Union (ACLU), 2012]. The United States also has the largest number of incarcerated women, at least three times more than any other nation (Hartney, 2006).

In Pennsylvania, Caucasian men and women are incarcerated at average rates compared to the rest of the United States, while the rate of minority incarceration is extraordinarily high. Pennsylvania jails hold African-American inmates at a rate of 2,792 per 100,000 compared to Caucasians at a rate at 305. Pennsylvania also incarcerates Latinos at the highest rate in the nation (1,714) [Hartney, 2006].

Severe inequities are evident between different populations within the prison system. African-Americans, American Indians and Alaskan Natives, and Hispanics overwhelmingly represent the racial/ethnic populations in U.S. prisons (Gary, 2005).



Healthcare Access

Jail and prison inmates are at high risk for exposure to infectious agents due to cramped quarters, poor environments and the behavioral choices of inmates. They are also at increased risk for contracting viral infections because they may be pregnant, stressed or have little access to health care. During a pandemic emergency, omitting vaccinations leaves inmates, correctional facility workers and nearby communities vulnerable to the disease (CDC, 2012c).

A recent CDC report showed that 55 percent of U.S. jails did not receive any H1N1 vaccine during the 2009-2010 pandemic, effectively excluding them from the national vaccine campaign, while only 14 percent of federal prisons and 11 percent of non-federal prisons did not receive the vaccine. Also, the first shipment of vaccine was delayed to jails significantly more often than to prisons. This consequential oversight ignores the fact that jailed populations return promptly to communities where they could have potentially spread the H1N1 virus (CDC, 2012c).

Despite state laws for testing and treatment for STIs, including HIV/AIDS, only two-thirds of Pennsylvania jails provide STI testing for select inmates. Only two jails require that all inmates be tested during their intake. Three jails did not have specific policies regarding treatment options for those who tested positive for STIs. According to the ACLU, STIs affect incarcerated women at significantly greater rates, and jails should, therefore, have explicit policies for testing and treatment (ACLU, 2012).

Mental Illness

Individuals in prison and jail have a significantly higher proportion of mental illness than the general population. A 2008 report from the U.S. Bureau of Justice Statistics found that more than half of all prisoners in the U.S. have a specifically defined mental health illness (Hatton and Fisher, 2008).

The Bureau of Justice report illustrates that female prisoners have a much higher overall rate of mental illness than men (Hatton and Fisher, 2008). Women who suffer from mental illness in jails and prisons experience unequal amounts of adverse consequences compared to men. These include an impaired ability to cope with the extraordinary stresses of the environment, separation from children and uncertainty of their safety, inability to follow rules, increased infractions and disciplinary problems, harsh punishment leading to prolonged isolation and longer sentences, self-mutilation, suicide attempts, sexual abuse, and other forms of violence (Human Rights Watch, 2003).

The alarming rates of mental illness within the criminal justice system can be traced to a single point in history. Through the work of various activists in the 1940s, the inhumane treatment of people within psychiatric institutions began a worldwide effort to close them down. The U.S. Civilian Public Service (CPS) group was especially active at the Philadelphia State Hospital in northern Philadelphia. Residents at Philadelphia State Hospital were abused, neglected and forced to perform hard labor. However, it did not officially close until 1987 (Safran, et al., 2009).

CPS's program for "deinstitutionalization" of mental health care successfully closed state mental hospitals, but the second part of the plan, creating effective community mental health systems, rarely occurred; so jails and prisons turned, out of necessity, into primary mental healthcare providers (Safran, et al., 2009).

Though the criminal justice system was not designed to function as a mental health provider, the courts have determined that "there is a Constitutional responsibility for the government to provide mental health care for incarcerated persons in need of such care." (Safran, et al., 2009) This directive presents many challenges, as offenders often enter prison with extremely poor overall health. Offenders tend to have experienced substance abuse, violence and risky life styles, which complicates treatment. Thus, it costs more to deal with security and safety concerns while delivering mental health treatment within the prison setting (Safran, et al., 2009).

Mental health services provided by the prison have a direct effect on community health (Safran, et al., 2009). The prison mental healthcare system often only has information for inmates and a mandate to manage crises and control symptoms. A more goal-oriented and community-minded program should strive to facilitate recovery and build skills needed to improve independence and enhance quality of life (Hatton and Fisher, 2008).

Sometimes the public may be tempted to dismiss the need for health care among prisoners; thus, political will, as well as resources, are often lacking. However, many prisoners become repeat offenders and divide their time between the community and living within the prison. In fact, 97 percent of all inmates will eventually return to their communities.

Women

The rate of females entering prison has spiked 4.8 percent in the last 15 years, compared to an increase of male inmates by only 2.7 percent (Hatton and Fisher, 2008). Aggressive sentencing legislation including the "War on Drugs," mandatory minimum sentencing laws, "three strikes" legislation, and the reduced use of parole, has drastically and disproportionately incarcerated women in the last 20 years (Hatton and Fisher, 2008).

In addition to facing gender inequities, women of color fare even worse. African-American women have a prison rate 3.8 times that of Caucasian women, while Hispanic women have a rate 1.6 times that of Caucasian women. These ethnic/racial inequities are consistent across all ages of inmates. Over her lifetime, an African-American woman is over seven times more likely than a Caucasian woman to become incarcerated (Hatton and Fisher, 2008).

The average age of incarcerated women is 35, taking a generous toll on the cohesion of families and communities. Female prisoners disproportionately come from low-income populations, are undereducated and have few work skills. The majority of women's convictions come from drugs, property crimes or mental illnesses (Hatton and Fisher, 2008; ACLU, 2012). Not all women entering prison on drug charges are related to drug abuse or use. Often drug dealers may target women with children to deliver their wares because they are unlikely marks for police (Hatton and Fisher, 2008). Also, drug use among women is often a coping response to emotional, physical and sexual violence perpetrated against them (ACLU, 2012).

The majority of women in jail are mothers, usually the primary caretaker and/or breadwinner for the family prior to incarceration. When they enter prison, the family often disintegrates, causing a ripple effect throughout a community (ACLU, 2012). In addition, a significant proportion of women, approximately 25 percent, are pregnant or postpartum when they enter prison (Kubiak, et al., 2010). Nine percent of women serving behind bars give birth in prison. Experts are just beginning to study the impact of the subsequent forced separation between mother and child (Chambers, 2009).

Pennsylvania law requires a health screening within 24 hours of incarceration and a physical within 14 days. However, the ACLU found that eight county jails did not have policies for taking medical histories or performing physicals on female inmates. Only a quarter of those that did perform physicals provided some form of gender-specific screening. No Pennsylvania county jails allow contraceptives except for medical purposes (ACLU, 2012).

The ACLU completed a needs assessment of female and reproductive care within Pennsylvania jails. In general, they found that the "policies at Pennsylvania jails are not meeting the reproductive health needs of incarcerated women." (ACLU, 2012) Policies mandated by detailed state regulation were more likely to be followed, but even these were grossly absent at many facilities. The study found that many necessary healthcare needs are ignored because there is no standing law addressing those needs; women are given treatment originally instituted for men's needs (ACLU, 2012).

Ten correctional facilities lacked policies regarding pregnancy testing. This may lead to severe medical consequences for mother and child should the mother intend to continue her pregnancy or increased risks should she decide to have an abortion. Although Pennsylvania law demands that jails provide prenatal care, 11 jails (20 percent of those surveyed) did not have any policy regarding it. Only one jail had a policy to provide information to women on how they may obtain prenatal care after their release. Women who do not obtain consistent prenatal care are more likely to have poor birth outcomes, such as babies with low birth weight, pregnancy complications, and maternal or infant health problems (ACLU, 2012). Since the average jail stay is less than two weeks, irregular use of hormonal contraception greatly causes unintended pregnancies in this population (ACLU, 2012).

Only 65 percent of Pennsylvania jails provided for postpartum mental health services for inmates. However, only two made postpartum care available regardless of whether or not they had a live birth. This lack of policy is "problematic because pregnant women in prison have higher rates of depression and anxiety during their pregnancies and after birth." (ACLU, 2012) In July 2010, Pennsylvania became the tenth state to pass legislation limiting the use of restraints on pregnant inmates. In fact, it was common policy for pregnant women to wear restraints during childbirth. The ACLU was not able to determine the amount of compliance to the new law; however, at the time of their study, 42 facilities had no policy regarding the use of restraints during labor and delivery (ACLU, 2010). Only seven jails had written policies specifying "at what point a pregnant woman should be taken to the hospital during her labor or provided instruction for correctional personnel on how to avoid a birth in jail or en route to the hospital." (ACLU, 2012)

Individuals with Disabilities

The Americans with Disabilities Act (ADA) defines a disability as "a physical or mental impairment that substantially limits one or more major life activities." (EEOC, 2012) Disabilities can generally be categorized into cognitive, hearing and speech, vision, or mobility impairments. In Pennsylvania, in 2009, the disability prevalence rate was 11.0 percent of the population, just slightly above the U.S. average (Cornell University, 2012).

Physical Disabilities

In 2009, the prevalence of specific disability types among persons of all ages in Pennsylvania was as follows (Cornell University, 2012):

- 2.2 percent reported a visual disability;
- 3.6 percent reported a hearing disability;
- 7.1 percent reported an ambulatory disability;
- 5.4 percent reported a cognitive disability;
- 2.5 percent reported a self-care disability; and
- 5.8 percent reported an independent living disability.

In Pennsylvania in 2009, the prevalence of disability for working-age people (ages 21 to 64) was (Cornell University, 2012):

- 10.1 percent among Caucasians;
- 17.8 percent among African-Americans;
- 4.8 percent among Asians;
- 31.6 percent among Native Americans;
- 14.6 percent among persons of all ages of Hispanic or Latino origin; and
- 21.2 percent among persons of some other race or mixed race(s).

Mobility impairments describe a spectrum of limitations that may affect coordination, endurance and ambulatory functioning. This type of disability often limits one's ability to move around and perform daily functions. Mobility impairments may be temporary or permanent and can result from a variety of effects, including conditions present at birth or others that are a result of illness or physical injury (San Francisco State University, 2012).

For example, spinal cord injuries can have different outcomes depending on how they affect the spine. People with quadriplegia have paralysis of arms, legs and trunk and often use electric wheelchairs. Paraplegia is a paralysis of the lower extremities and the lower trunk. These individuals have full movement of arms and hands and may use a manual or electric wheelchair (San Francisco State University, 2012).

It is estimated that the annual incidents of spinal cord injury (SCI) is approximately 40 cases per one million people in the U.S., resulting in approximately 12,000 new cases per year. The number of people in the United States living with a SCI in 2010 is estimated to be approximately 265,000 people (Cornell University, 2012).

Other common causes of mobility impairments include amputations, severe arthritis, back disorders, cerebral palsy or neuromuscular disorders, including muscular dystrophy, multiple sclerosis (MS) and ataxia (San Francisco State University, 2012).

Access

In the United States, those with disabilities may have multiple barriers to daily life, including obtaining physical access to schools, clinics, grocery stores and other necessary institutions. They may also need accommodations for eating, dressing and other elements of survival (Law, et al., 2007).

Individuals with disabilities also experience greater challenges obtaining health care because of the physical difficulty in accessing buildings, in addition to general discrimination and social inaccessibility. A group of national and statewide surveys showed that people with disabilities had limited access to health care compared to people without disabilities. Inability to access preventive care and delaying care until later created poor outcomes for treatment and recurrent health problems, which affected education, employment and quality of life (Hampton, et al., 2011).

Minden, et al. (2007), studied the Sonya Slifka Longitudinal Multiple Sclerosis Study and found that large numbers of people with MS had "(a) limited access to specialists, (b) restricted choice of hospitals/providers, and (c) problems obtaining mental health services." One study looking at access to health care among people with rehabilitation needs receiving Medicaid found that individuals with spinal cord injuries reported the most frequent difficulties accessing healthcare services (Hampton, 2011).

Income and Employment

Individuals with physical disabilities often experience higher levels of poverty and unemployment, which further complicates their ability to access necessities. In 2009, 27.6 percent of individuals with disabilities in Pennsylvania between the ages of 21 and 64 years old lived below the poverty line. This is only slightly higher than the national average of 26.4 percent (Cornell University, 2012).

According to Cornell University's Disability Status Report, in Pennsylvania, the poverty level for people of working age with ambulatory disabilities in 2009 was 29.4 percent; for those with self-care disabilities, it was 33.5 percent; and for those with disabilities that prevented them from living independently, 34.3 percent (Cornell University, 2012).

According to the National SCI Statistical Center (2010), the medical costs of living with a SCI can range from $321,720 to $985,774 the first year and between $39,077 and $171,183 each subsequent year. However, household income for those who reported being paralyzed due to a SCI is heavily skewed towards lower income brackets and is significantly lower than household income for the country as a whole (U.S. Census Bureau, 2012a).

It was not until 1990 that the U.S. Congress passed a law preventing employers from discriminating against a qualified applicant based on disability. Though the ADA has provided a standard for encouraging and incentivizing employment, people with physical disabilities still face a marked degree of barriers in accessing meaningful jobs. Employers may potentially experience legitimate struggles in creating an accessible environment for people with disabilities, as well as overcoming tendencies toward direct and indirect prejudice and discrimination (Lindsay, 2011).

The U.S. Department of Labor reported in 2012 that the unemployment rate for men with disabilities who are currently willing, able and seeking work is 18.4 percent, exactly twice the rate for men without disabilities. For women with disabilities who are able to work and seeking employment, the rate is 16 percent, compared to 7.9 percent for women without disabilities (U.S. Dept. of Labor, 2012).

Mental Health

A number of studies have determined a significant correlation between physical and mental disability. Women with MS and SCI are at extremely heightened risks for psychiatric conditions such as anxiety, depression and PTSD that can further negatively affect their health (Hampton, 2011). Brown and Turner (2010) conducted a study (n=550) assessing racial/ethnic disparities in depressive symptoms among people who are physically disabled. The study found that heightened risk for mental illness in disabled populations is greatly attributable to "variations in stress exposure, available coping resources and shame" especially among minority groups (Brown and Turner, 2010).

Hampton (2011) also discovered that many individuals had a difficult time finding a therapist who had experience with their kind of disability. Without that perspective, these individuals felt their counseling sessions were not very useful. This was especially true of racial/ethnic minorities who wanted a counselor who was culturally competent and had experience with their particular disability. One person expressed, "When I got injured I had counseling because I couldn't accept the injury, you know, I didn't know why it happened to me. I had three counselors/social workers but they did not understand me. They were in a different

world. They did not know how to counsel someone who is being rejected, they didn't know because they had never experienced that." (Hampton, 2011)

In addition to social concerns, many respondents in the sample had problems obtaining psychological counseling because of accessibility. One woman said, "I cannot drive, so I can only go to places close to me using my power chair or using the Metropolitan Transit System (MTS) for travel distance." In another example, "There are some accessibility issues all around. Sometimes there are not enough curb cuts or the sidewalks are messed up." "The MTS services were often not quite reliable and I often missed my appointment." Finally, "It was just too much stress to coordinate the [bus] schedule, so I just quit going." (Hampton, 2011)

Mental Disabilities

Mental illness is an umbrella term for a variety of disorders including anxiety, attention deficit hyperactivity disorder (ADHD), autism spectrum disorder (ASD), bipolar disorder, borderline personality disorder, depression, schizophrenia, obsessive-compulsive disorder (OCD), panic disorder and PTSD. According to the National Alliance on Mental Illness (NAMI), mental disabilities are "medical conditions that disrupt a person's thinking, feeling, mood, ability to relate to others and daily functioning." (NAMI, 2010) The CDC reports that mental disorders are as disabling as cancer or heart disease in terms of premature death and lost productivity (CDC, 2012g).

The statistics measuring the prevalence of mental health disorders in the U.S. differs depending on the definition used. The NIMH reports that one in four adults, or approximately 57.7 million Americans, experience a mental health disorder in any given year. The CDC, Office of Minority Health and Health Disparities, which uses a broader definition, says that one in two Americans experiences some form of diagnosable mental disorder each year (CDC, 2012g).

The prevalence of mental health issues in children and youth has increased in the past several years, though more accurate and careful diagnoses may play a role in the numbers. In 2010, one in five children in the United States had a mental health disorder (Healthy People 2020, 2012c). Two of the most commonly identified are ADHD and ASD. Experts estimate that one in every 88 children will have a form of ASD (CDC, 2012a). In addition, males are four times more likely to have ASD than females (National Institute of Neurological Disorders and Stroke, 2012; CDC, 2012a).

African-Americans are at a greater risk of experiencing mental illnesses than Caucasians but are less likely to seek treatment. When they do seek treatment, they are more likely to use an emergency room for mental health purposes. The rate of mental illness among Hispanics tends to mirror that of Caucasians, though Latina women are at higher risk than Latino men. American-Indians and Alaska natives suffer disproportionately from depression and substance abuse (CDC, 2012g).

The causes of mental health disorders lie within the determinants of health, which include social, behavioral, environmental and biological factors. Some risk factors include genetic predisposition, gender, age, income and education level, sexual orientation, geographic location, interpersonal and family relationships, housing quality, social support, employment opportunities, and work and school conditions (SAMHSA, 2007).

Policymakers have struggled with mental health issues, frustrated at the difficulties in tracking and funding the disorders (Gary, 2005). This may be due to the fact that mental illnesses often 1) present differently from one individual to the next, 2) lack precise definition, 3) cut across policy and service areas, and 4) require multi-faceted solutions (Safran, 2009); thus, patients who most need easy access to health care, have little money or struggle to navigate the system, encounter limited insurance coverage and provider support (Gary, 2005).

Suicide

Suicide is often the outcome for people with severe mental illness. Suicide is the eighth leading cause of death in the U.S. On average, 81 people commit suicide every day (CDC, 2012g). In 2007, in Pennsylvania, non-Hispanic African-Americans had the lowest suicide rate (5.1 per 100,000 population, age adjusted), compared to non-Hispanic Caucasians, who had the highest suicide rate (13.6 per 100,000 population, age adjusted) [PA DOH, 2010b]. However, since 1980, suicide has doubled among young, African-American males in the U.S. (CDC, 2012g).

Quality of Life

Poor mental health has a tremendously negative effect on a person's quality of life, their ability to care for and interact within the family unit, maintaining productive employment and attending to other health matters. People with mental health issues are also at higher risk for poverty, homelessness and social rejection. A person with a mental illness is in a unique situation because the disease can render him or her utterly alone and ostracized in both perception and reality, even within his or her own culture and family (Healthy People 2020, 2012c).

Individuals who do not obtain treatment or support are at much greater risk for certain unhealthy and unsafe behaviors, including alcohol or drug abuse, violent or self-destructive behavior, and suicide. Additionally, mental health disorders are inexorably linked to physical disorders and place people at a higher risk for certain chronic diseases, such as decreased immune function, diabetes, heart disease, cancer, hypertension and stroke (Healthy People 2020, 2012c).

People with mental illness are also highly represented among homeless populations. In 2008, in a survey of homeless people in 23 major cities, 26 percent of respondents were severely mentally ill. Among unmarried individuals, mental illness is the cause of homelessness in 48 percent of cases. In Philadelphia in particular, mental illness was the leading cause of homelessness among this population. Homeless people specifically with schizophrenia are at much greater risk of experiencing physical and sexual abuse (U.S. Conference of Mayors, 2008).

Substance Abuse

There is a distinct correlation between those with mental health issues and illicit drug and alcohol abuse. Among the 45.1 million adults ages 18 or older with any mental illness in the past year, 19.7 percent met criteria for substance dependence or abuse, compared with only 6.5 percent among those who did not experience signs of mental illness in the past year. Among those adults ages 18 or older with serious mental illnesses in the past year, 25.7 percent were dependent upon or had abused drugs or alcohol during that time. For youths ages 12-17 in 2009 who had a major depressive episode (MDE) during the past year, 35.7 percent used illicit drugs, compared with 18 percent of youths who did not have a MDE in the past year (U.S. DHHS, 2010b).

Access to Psychiatric Care

Today's mental health professionals have an extensive supply of treatments to draw upon. Between 80 and 90 percent of mental disorders are treatable using medication and other therapies (CDC, 2012g). Still, the majority of people with mental health disorders do not receive any treatment (U.S. DHHS, 2001). The problem remains how to get people to the clinic and, secondly, how to help them comply with a prescribed treatment plan. Among the population with any mental illness in 2009, 37.9 percent received mental health services in the past year. Among those adults with severe mental illness (SMI) in 2009, 60.2 percent received mental health services in the past year (U.S. DHHS, 2010b). That leaves nearly 4.4 million people with serious mental illness, self-medicating through alcohol and illicit drugs or suffering on their own with little or no relief.

The discouragement many people with mental illness feel toward seeking professional assistance is multiplied among minority groups who want to avoid increased stigma that may weaken their place in society (U.S. DHHS, 2001). Obtaining care from a mental health facility or even admitting there is a problem carries the heavy burden of stigmatization. The fear of stigma is a powerful barrier that often pushes people to reject or abort treatment even after they have initially sought it (Gary, 2005).

In addition, the very nature of mental illness can serve as a barrier in and of itself to getting mental health and physical health care. Across the board, individuals with mental illnesses receive fewer medical services than persons with similar conditions who do not have mental illnesses (U.S. DHHS, 2001; U.S. DHHS, 2010b).

Finally, cost is a major barrier for obtaining mental health services. In the federal SAMHSA national survey on mental health in the U.S., 42.5 percent of the people who had experienced a mental health issue in the past year did not obtain treatment because they could not afford it (U.S. DHHS, 2010b).

Veterans

With over one million veterans (vets), Pennsylvania is ranked fifth among states with residents who are vets in 2008 (U.S. Census Bureau, 2012d). As of 2011, 91.7 percent of total U.S. vets are male (National Center for Veterans Analysis and Statistics, 2011).

In 2009, including Puerto Rico and the territories, Pennsylvania ranked eighth in the number of female vets it had, containing 63,593 female vets (U.S. Dept. of Veterans Affairs, 2009). As of 2011, 8.3 percent of total U.S. vets are female. Veterans Affairs projects that by 2035, women will have reached 15 percent of all living veterans in the U.S.

Nearly half of all female vets served during the Gulf War Era, which includes the period between August 1990 and the present. In 2009, a greater percentage of African-American women were vets (19 percent) than civilians in the general population (12 percent). On the other hand, 7 percent of vets were Hispanic women compared to 14 percent of Hispanic women in the civilian population (National Center for Veterans Analysis and Statistics, 2011).

Almost 12 percent of Pennsylvania's adult rural populations are vets. In both Forest and Potter counties, 15 percent of the populations are vets, the highest number as a percentage of total adult population in the commonwealth (Center for Rural Pennsylvania, 2012c).

Healthcare Access

A vast majority of these men and women have significant and ongoing health and medical issues, often requiring some type of specialty care. In fact, 32 percent of rural vets have a serious service-connected disability. Especially in rural areas, vets may have to travel long distances to reach their provider. The limited availability and handicapped accessibility of public transportation in rural areas creates substantial barriers for many vets to obtain needed care (Center for Rural Pennsylvania, 2012c).

Though women vets tend to have higher education and live above the poverty level, there is often a divide between Veterans Affairs benefits and female vets' enrollment. In 2009, about 32 percent of female vets that were eligible for the Veterans Health Administration (VA) healthcare system were enrolled. Even then, not all women who enroll in the healthcare system ultimately become healthcare users. Of the 485,398 enrolled women vets, only 60 percent actually used VA health care in 2009. Also, only about 19 percent of the total population of women vets used their Montgomery GI Bill benefits (National Center for Veterans Analysis and Statistics, 2011).

According to the U.S. Department of Labor, Women's Bureau (WB), female veterans struggle to obtain and access benefits because they tend to distrust the VA and their

superior officers. Also, most of the benefits and programs are geared toward men's needs. Furthermore, there is no centralized or highly publicized source of information or delivery for veteran services to women (U.S. Department of Labor, 2009).

Mental Health

Veterans may suffer from extreme mental health issues that often go unaddressed or that are difficult and expensive to treat. PTSD is a very serious and common psychological ailment among vets returning from any generation of American wars, including the most recent ones in Iraq and Afghanistan. Studies have shown that 12 to 20 percent of vets returning from Iraq and Afghanistan screen positive for PTSD and veterans from Vietnam demonstrate a lifetime prevalence rate of 18.7 percent (Strom, et al., 2012).

PTSD significantly increases the risk for premature mortality many years after vets have returned home. Increased risk-taking behaviors can account for a large portion of the morbidity and mortality linked to PTSD. PTSD is strongly correlated with substance abuse disorders, interpersonal violence, weapons possession, weapon-related aggressive behavior, thrill seeking behaviors, sexual risk taking and acquisition of HIV. In one study of male Vietnam vets, 62.4 percent of all Vietnam vets' deaths could be considered "preventable behavioral causes," including "accidents (29.4 percent), chronic substance abuse (14.7 percent), and intentional death by suicide, homicide, or police (13.8 percent)." [Strom, et al., 2012]. In a study of recently arrived vets, the most common risky behaviors of those seeking help for PTSD included aggressive driving practices, drunk driving, suicidal thoughts and sexual risk taking (Strom, et al., 2012).

Cognitive behavioral therapy (CBT) is one of the most common clinical treatments against PTSD. In one study that documented the barriers preventing people with trauma from initiating and sustaining CBT treatment, researchers found that only 8.5 percent were able to complete the program. The most prevalent barriers included patient engagement, shame and stigma, clinical and logistical barriers, and overcoming substance abuse, a requirement for program participation. The authors suggest that there is an enormous need for "alternative delivery strategies, including those which dismantle traditional office-based, multi-session CBT into stepped, deliverable components" for victims of PTSD (Trusz, et al., 2011).

Homelessness

Due to the difficult transition from service life to civilian life and few resources for female vets, they disproportionately end up homeless. In fact, female vets are up to four times more likely to be homeless than civilian women (Hamilton, et al., 2011). A multifaceted set of factors contribute to homelessness among women vets, including unemployment, lack of public benefits, legal trouble, mental health issues, disabilities, divorce, domestic violence and substance abuse (U.S. Department of Labor, 2009).

In 2009, the WB conducted a health assessment listening session among homeless female vets and found that they encounter many barriers in seeking services. The women listed "not knowing where to turn for help, lack of awareness/understanding of vets benefits (especially education benefits) and eligibility requirements, mistrust of authority, shame, pride, lack of transportation and a resistance to self-identify as 'vets.'" The women also explained how there is a deterrent in seeking medical care prior to discharge because it may delay the separation process. Furthermore, if they reported substance abuse or mental problems, they put themselves at risk for a less than honorable discharge (U.S. Department of Labor, 2009).

Women are among the most vulnerable of homeless subpopulations. Compared with homeless male vets, female vets have very different needs with respect to "privacy, gender-related health care, treatment for physical and sexual trauma, housing support and care for dependent children." (Washington, et al., 2010)

Violence

Women in the military experience sexual violence in disproportionate amounts and severity compared to the general public. Studies estimate that 25-49 percent of women in the military have been sexually assaulted during childhood and 23-30 percent are assaulted during their military service (Sadler, et al., 2011).

The risk factors for sexual assault, which include younger age during first sexual intercourse, number of sexual partners, sexually transmitted infections and smoking, are associated with higher rates of abnormal pap tests and cervical cancer. All of these risk factors are highly prevalent in military women. In fact, 20 percent of American women have had at least one abnormal pap test in their lifetime, while 57 percent of military women in one study's sample self-reported an abnormal pap test in their lifetime (Sadler, et al., 2011).

Conclusions

Many of the health disparities previously discussed cross racial/ethnic groups, class and social structures. We only chose to highlight the major disparities for each group, although many are dealing with similar issues.

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