2019

COMMUNITY HEALTH **NEEDS ASSESSMENT**

Main Line Health Acute Care Hospitals

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Main Line Health Acute Care Service Area
Community Health Needs Assessment At-A-Glance 2019

KEY HEALTH FINDINGS

ADULT HEALTH STATUS & BEHAVIORS*

One out of 3 residents are overweight

31% of residents are obese

60% of residents report exercising 3 or more days a week for at least 30 minutes

12% of residents currently smoke cigarettes

About one-half of smokers have tried to quit in the past year

Less than 8% used e-cigarettes once or more in past month

About 1 in 5 residents have been diagnosed with asthma

About 1 in 4 residents have been diagnosed with a mental health condition, and

60% of them are receiving treatment for a mental health condition

83% report "Good" to "Excellent" health

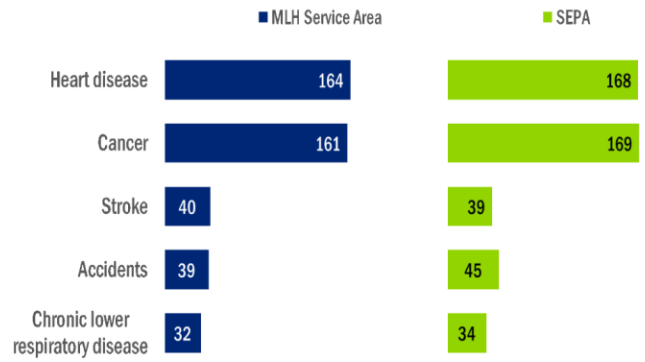
89% have visited a health care provider in the past year

26% eat 4 or more servings of fruits and vegetables a day

LEADING CAUSES OF DEATH IN THE ACUTE CARE SERVICE AREA, 2012-2016**

The overall age-adjusted mortality rate in the service area was 690 deaths per 100,000 population, representing 13,115 deaths.

MLH acute care service area's age-adjusted mortality rates are below SEPA's rates of the top five leading causes of death except for stroke:



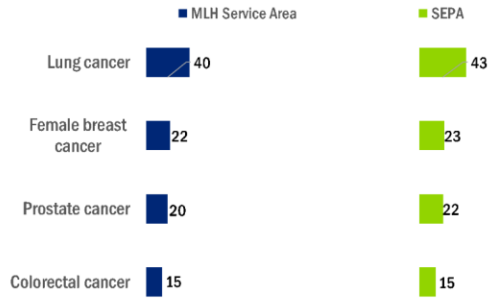
Notes: Age-adjusted mortality rates are calculated per 100,000 population utilizing the Standard 2000 U.S. population distribution.

Sources: *PHMC's 2018 Southeastern Pennsylvania Household Health Survey; **2018 CHDB Demographic Product with primary data sources: 2012-2016 mortality data from PA Department of Health, Bureau of Health Statistics and Registries, Claritas 2018 Pop-Facts Data Base. These data were provided by the Pennsylvania Department of Health (PADOH). The PADOH specifically disclaims responsibility for any analyses, interpretations, or conclusions.

RESEARCH & EVALUATION GROUP at PHMC

AGE ADJUSTED CANCER MORTALITY RATES, 2012-2016**

MLH acute care service area's cancer mortality rates are comparable to that of the SEPA region:



Sources: 2018 CHDB Demographic Product with primary data sources: 2012-2016 mortality data from PA Department of Health, Bureau of Health Statistics and Registries, Claritas 2018 Pop-Facts Data Base.

MLH ACUTE CARE SERVICE AREA AND SEPA: SELECT HEALTH INDICATORS*

MLH's acute care service area is performing better along a number of health indicators when compared to the remainder of SEPA.

- **9.5%** of adults are uninsured in the **MLH acute care service area**
- **23.6%** of adults 50 years or older have not had a sigmoid/colonoscopy in the past 10 years
- **16.8%** of women ages 50 to 74 have not had a mammogram in the past 2 years

VS

- **11.7%** of adults are uninsured in the **remainder of SEPA region**
- **28.6%** of adult 50 years or older have not had a sigmoid/colonoscopy in the past 10 years
- **21.7%** of women ages 50 to 74 have not had a mammogram in the past 2 years

MLH acute service area is performing below remainder of SEPA region for the following:

7.4% of adults 65+ in MLH acute report speaking to friends or relatives less than once a week

vs

4.9% of adults 65+ in the remainder of SEPA region report speaking to friends or relatives less than once a week

Older adults are a special population, at greater risk of social isolation.

UNMET HEALTH NEEDS: MLH ACUTE CARE SUB-REGIONS †

Of the 3 sub-regions, Central is performing better than the remainder of SEPA region, while the Northwest and Eastern regions *are not* performing better than remainder SEPA region.

Smoking status	MLH Northwest region	Remainder of SEPA Region
Smokes and used an e-cigarette in the past month	10% ↑	7.7% ↓
Smokes and has not tried to quit in the past year	58.5% ↑	48.3% ↓

Health behaviors	MLH Eastern region	Remainder of SEPA Region
In fair/poor health	23.8% ↑	18.4% ↓
Currently obese	37.6% ↑	28.7% ↓
Ever told by a health professional had high BP	36.8% ↑	30.6% ↓

† *These comparisons were derived from PHMC's 2018 SEPA HHS, and are statistically significant at least at the p < .05 level*

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EXECUTIVE SUMMARY

This report presents the findings from the Main Line Health (MLH) acute care hospitals' Community Health Needs Assessment (CHNA) for fiscal years 2020-2022 (July 2019-June 2022). MLH conducted this CHNA to inform population health and social services planning across the communities it serves. MLH, a not-for-profit health system, serves portions of Philadelphia and its western suburbs. MLH's acute care hospitals include:

- Bryn Mawr Hospital (Montgomery County)
- Lankenau Medical Center (Montgomery County)
- Paoli Hospital (Chester County)
- Riddle Hospital (Delaware County)
- Physicians Care Surgical Hospital (Montgomery County, Joint Venture)

The MLH acute care service area population size is 1,590,230 and includes large portions of Chester and Delaware counties, nearly one-third of Montgomery County, and a small section, (far west), of Philadelphia. To better understand the health needs across the acute care service area, the MLH community was divided into three "distinct" regions, including Central, Northwest, and Eastern. MLH's acute care service area is generally affluent – the 2018 median household income was $81,073; 43% have at least a bachelor's degree; and 7% of area residents are unemployed. The majority of area residents are adults (78%), white (64%), and female (52%).

Community health needs

According to the 2018 Southeastern Pennsylvania (SEPA) Household Health Survey (HHS), the MLH acute care service area is performing better than the remainder of the SEPA region along many health indicators, including insurance status, sigmoid/colonoscopy screening, as well as mammogram testing for women aged 50 to 74, to name a few. This CHNA report identified unique areas and opportunities where MLH can focus efforts to maintain and elevate its area residents' health status, including: **1) Chronic disease management (asthma, diabetes, obesity), 2) Mental health care, 3) Access to affordable health care and prescription pain medication, 4) Older adult well-being** (e.g. daily living, mental health care, social isolation), **5) Health behaviors** (e.g. nutrition, sugary beverage consumption and smoking cessation) **and considering 6) Health inequities in its broad community, and specifically in cancer and heart disease mortality** (e.g. and as a result of geographic area and demographics).

Chronic diseases are on the rise in the U.S., with asthma, diabetes, obesity, as well as smoking-related health issues amongst the top 10 chronic conditions with high costs to health payers[1], as well as to individuals, families, and communities, particularly given comprehensive, ongoing and long-term health, social, and other needs. **Chronic disease management** was identified as a community health need given its disparate impact to the Eastern region and variable impact across the three regions. For example, more adults in the Eastern region have been diagnosed with asthma compared to the remainder SEPA region and adults across Pennsylvania (17%).[2,3] Additionally, the percentage of adults with diabetes (14%) was higher for the Eastern region compared to the remainder SEPA region (12%).

[1] Centers for Disease Control and Prevention (CDC). (2019). Health and Economic Costs of Chronic Diseases. Retrieved from https://www.cdc.gov/chronicdisease/about/costs/index.htm
[2] Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention.
[3] PHMC's 2018 Southeastern Pennsylvania Household Health Survey

Mental health care was identified as an unmet and growing health need in the MLH service area and one of the most pressing issues impacting MLH community health as stated by MLH community constituents themselves.[4] In addition, prevalence of a diagnosed mental health condition is the same across regions and the acute care service area (23% for each); and 22% for the remainder SEPA region.[5] Among those diagnosed with a mental health condition, 63% are receiving treatment in the Eastern region, 62% in the Central region, and 54% in the Northwest region, compared to 60% in the MLH acute care service area and 57% in the SEPA region. Notably, the Northwest region, which is generally affluent (e.g. income, education levels), has the lowest percent of individuals receiving treatment for a mental health condition (54%), and coincidentally, the highest suicide rate.

Access to affordable health care, including prescription pain medication, remains a persistent barrier for individuals seeking health care, in receiving adequate health care, and utilizing healthcare continuously, which is well-known to disparately impact certain communities.[6] For example, Eastern area adult residents are more likely to be uninsured (13%) compared with the remainder SEPA region (10%) – this can subsequently lead to higher utilization of emergency room (ER) care. Also, 35% of residents in the Eastern region visited the ER in the past year compared to 26% of remainder SEPA region residents.

Older adult well-being was identified as a health need for the MLH acute care service area since the 65+ older adult population is projected to increase 15% between 2018-2023- underscoring the need and likely increase in demand for expansion of partnerships, services and programming focused on aging and older adult well-being. In addition, older adults are at increased risk of depression and social isolation. One indicator of social isolation, talking with friends or relatives less than once a week, was higher for the MLH acute care service area (7%) when compared to remainder SEPA region (5%). In addition, 10% of older adults (65+) in the MLH acute care service area report having four or more signs of depression.[7]

Health behaviors were identified as a health need given variability between regions with smoking for example, consumption of sugary beverages, and obesity. While more adults in the Northwest region report good or excellent health, have health insurance, and a regular source of care compared to the remainder of SEPA, among smokers (13% of adult Northwest region residents), 59% did not try to quit in past year and 10% used an e-cigarette in the past month compared to remainder SEPA region (48% of smokers did not try to quit in past year; 8% used an e-cigarette in past month). Smoking is a risk factor for heart disease and cancer, which are the two leading causes of death in the MLH acute care service area and nationally. In the Eastern region, 38% of adult residents are obese (BMI 30+), compared to 29% in the remainder SEPA region. Similarly, in the Eastern region, consumption of sugary beverages, such as soda, fruit drinks, or bottled tea once a day or more in the past month, by adult residents was much higher than in the remainder SEPA region (31% compared to 26%, respectively).

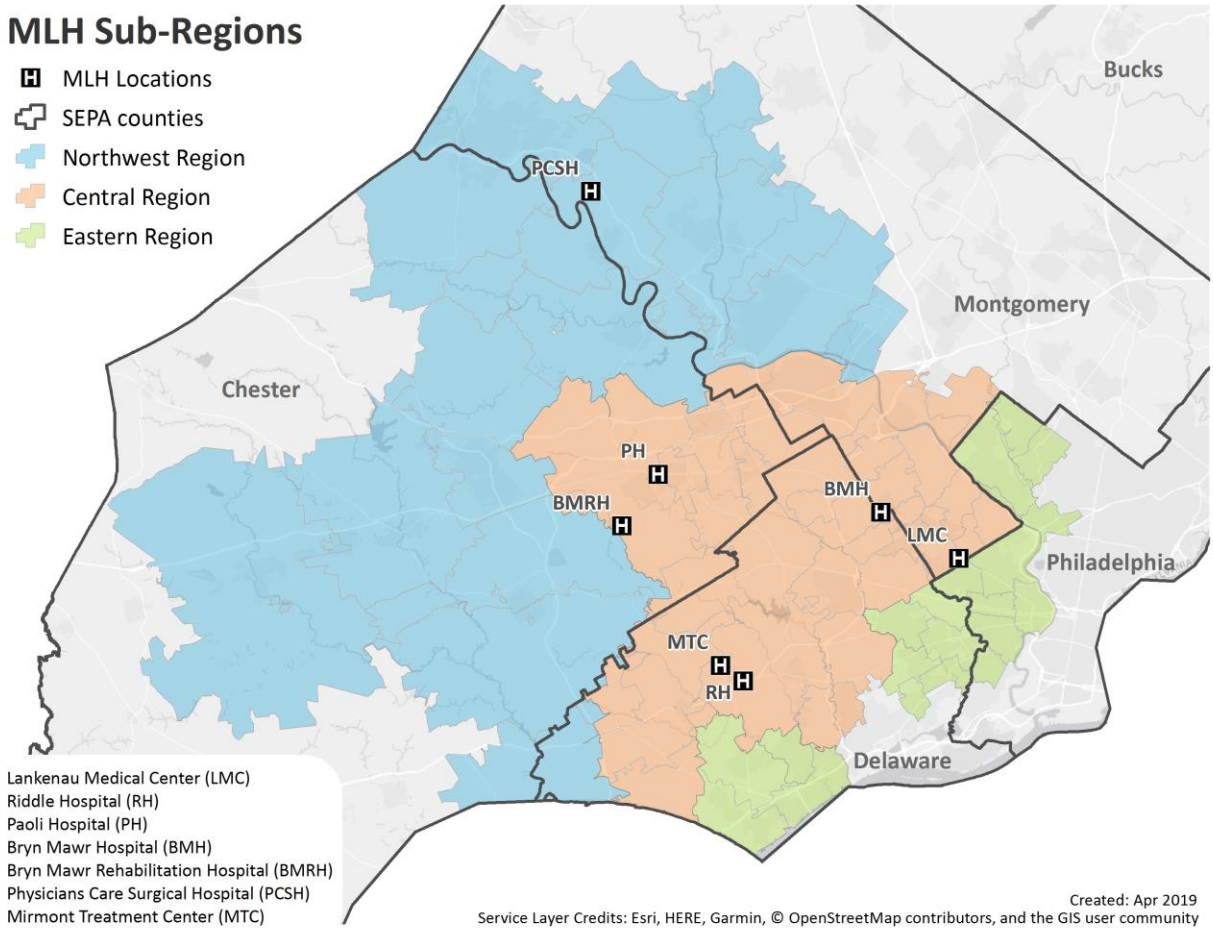
Health inequities was identified as a health need for the MLH acute care service area given differences in and across regions, between racial groups, and income levels. For example, blacks are disproportionately impacted by cancer as well as heart disease mortality when compared to other racial and ethnic groups, according to the SEPA HHS. Relatedly, heart disease and cancer were the top two leading causes of death for the MLH acute care service area, accounting for 48% of all deaths from 2012-2016.

[4] Online survey of community leaders and members. Members said mental health was the second most pressing issue.
[5]PHMC's 2018 Southeastern Pennsylvania Household Health Survey
[6] World Health Organization (2018). Health Impact Assessment [webpage]. Retrieved from https://www.who.int/hia/about/glos/en/index1.html
[7] As measured on the CES-D 10-Item Depression Scale

INTRODUCTION

MLH includes five hospitals located throughout the SEPA region, a large multi-specialty network, a treatment center for drug and alcohol recovery, health centers, as well as a homecare and hospice program. In addition, it includes Bryn Mawr Rehab Hospital, the focus of a separate CHNA report. MLH regularly maintains and develops strong community-based partnerships and is highly committed to the communities it serves. Additional information about MLH and its services is available at: mainlinehealth.org/about.

The MLH acute care service area population size is 1,590,230. MLH, a non-profit health system, serves portions of Philadelphia and its western suburbs, including, large portions of Chester and Delaware counties, nearly one- third of Montgomery County, and a small section (far west) of Philadelphia. For this CHNA report, the MLH acute care service area includes 69 ZIP codes served by MLH's acute care facilities, divided into three "distinct" regions - Eastern, Central, and Northwest (service area map illustrated below).



Key demographic facts:

- Eastern is home to a majority of the racial and ethnic diversity in the community
- Central has the highest median household income ($114,506); Eastern region has the lowest ($49,839)
- Central region has the highest percentage (20%) of older adults (65+);Northwest has the highest percentage of youth (23% aged 0-17)

DATA COLLECTION SOURCES AND METHODS

This CHNA was completed using a data and partnership driven approach to inform its development. As part of this process, MLH contracted with Public Health Management Corporation's (PHMC) Research & Evaluation Group (REG) to collect and analyze data, as well as engage MLH acute care community residents and community partners (PHMC qualifications in Appendix C). Additionally, the CHNA partnership team (including MLH and PHMC) was highly multi-disciplinary and maintained ongoing communication to review and identify gaps in data, align approaches to community engagement, discuss preliminary findings, and monitor report progress.

This CHNA incorporates broad measures related to health and well-being, and a combination of evidence-based sources, methods and approaches, including:

- Administering the **2018 Southeastern Pennsylvania Household Health Survey (SEPA HHS)** to 2,964 adult residents (including 1,197 older adults age 65+) in the community, then analyzing and comparing the results with the remainder SEPA region (N = 4,466, including 1,890 older adults age 65+)
- Comparing national **Healthy People 2020 goals (HP2020; national benchmark data)** to mortality rates and birth outcomes drawn from **vital statistics** data from the Pennsylvania Department of Health[8]
- Identifying demographic indicators (such as race, income, employment status) based on **2018 United States Census data estimates provided by Claritas Pop-Facts® Premier** and preparing corresponding maps to inform geographical relationships and demographic social determinants of health thought to disproportionately impact certain communities
- **Conducting focus groups and key informant interviews with community members and partners**, such as patients, service area residents, business and government stakeholders, faith-based stakeholders, and representatives from social services organizations; MLH also conducted focus groups with providers
- Developing and administering a **community leader and community member online survey** to a convenience sample of respondents (identified via MLH community member newsletter and community partners through MLH CHNA team) to understand perspectives about community health needs

More detail on data sources and methods can be found in Appendix B.

[8] Pennsylvania Department of Health, Bureau of Health Statistics and Registries. (2018). *2012-2016 Mortality* [Data file].

MLH ACUTE CARE COMMUNITY HEALTH PRIORITY NEEDS

The MLH acute care service area is performing better across most health indicators when compared to the remainder SEPA region.[9] For example, 83% of acute care service area residents said their health was good to excellent (compared to 79% in remainder SEPA region), and 10% of MLH service area residents are uninsured compared to 12% of SEPA region (adults aged 18-64).

Interestingly, the MLH service area spans a wide geographic area and a vastly diverse set of communities. This CHNA report reveals notable variation in and across regions, increasing likelihood that there are "pockets" of area residents with distinct health needs and experiences with the healthcare system. MLH is well positioned to focus on unique priority areas to maintain and elevate residents' health status, community health, and quality of life, highlighted below.

Chronic disease management

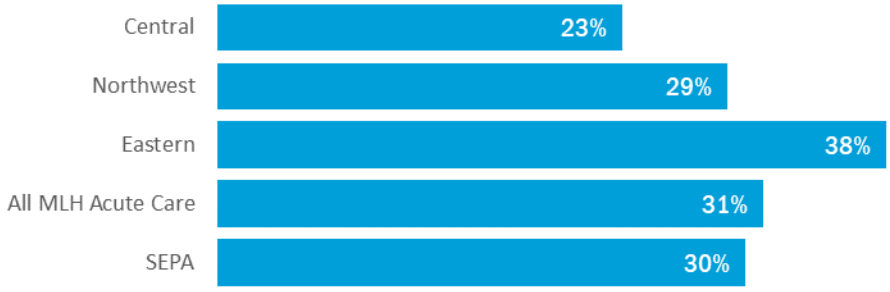
Chronic diseases are on the rise in the U.S., with asthma, diabetes, obesity, as well as smoking-related health issues amongst the top 10 chronic conditions with high costs to health payers[10] as well as to individuals, families, and communities, particularly given comprehensive, ongoing and long-term health, social, and other needs. **Chronic disease management** was identified as a community health need given its disparate impact on the Eastern region and variable impact across regions.

In the Eastern region:

- More adults have been diagnosed with asthma (21%) compared to the remainder SEPA region (18%)[11] as well as to adults across Pennsylvania (17%)[6,12]
- 38% of adults residing in the Eastern region are obese (BMI 30+), compared to 29% in the remainder SEPA region[13]
- The percentage of adults with diabetes (14%) in the Eastern region was higher than the remainder SEPA region (12%)[14] and when compared to Pennsylvania (11%)
- The HP2020 goal to reduce the percentage of adults who are obese to 31% is not being met (38% Eastern region)

[9] PHMC's 2018 Southeastern Pennsylvania Household Health Survey
[10] Centers for Disease Control and Prevention (CDC). (2019). Health and Economic Costs of Chronic Diseases. Retrieved from https://www.cdc.gov/chronicdisease/about/costs/index.htm
[11] Chi square test p<.01
[12] Centers for Disease Control and Prevention (CDC). *Behavioral Risk Factor Surveillance System Survey Data*. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, [2018].
[13] Chi square test p<.001
[14] Chi square test p<.05

The Eastern region has the highest percentage of obese adults compared to Central and Northwest, as well as SEPA and the all acute care service area.

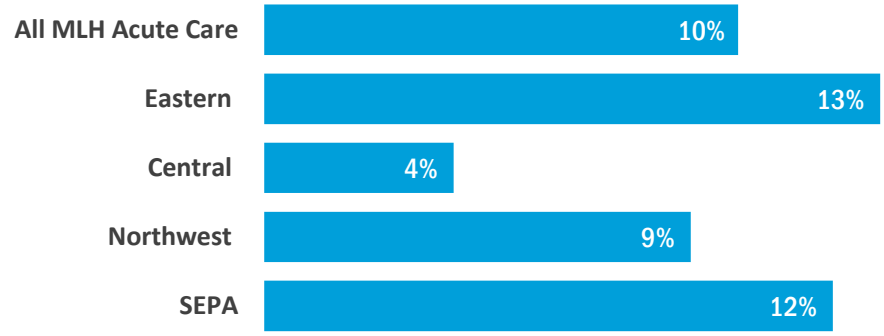


Access to affordable healthcare and prescription pain medication

Access to health care, including prescription pain medication, remains a persistent barrier (e.g. low socio-economic status, educational attainment, literacy levels) or facilitator (e.g. high household income, educational attainment) of affordable and adequate health care. The MLH acute care service area has fewer uninsured adults (18-64 years old) when compared to the remainder SEPA region (10% vs. 12% respectively). However, the variation in access to such care across the service areas can disparately impact certain communities and MLH can strategically focus efforts and priorities in this area since:

- The MLH acute care service area does not meet HP2020 goal of heaving health insurance coverage for *all* adults (ie, zero percent uninsured)
- In the Eastern region, among adults 18-64 years, 13% lack health insurance compared to adult residents in Northwest (9%) and Central (4%) regions

The Eastern region has the highest percentage of uninsured adults and the Central region has the lowest.



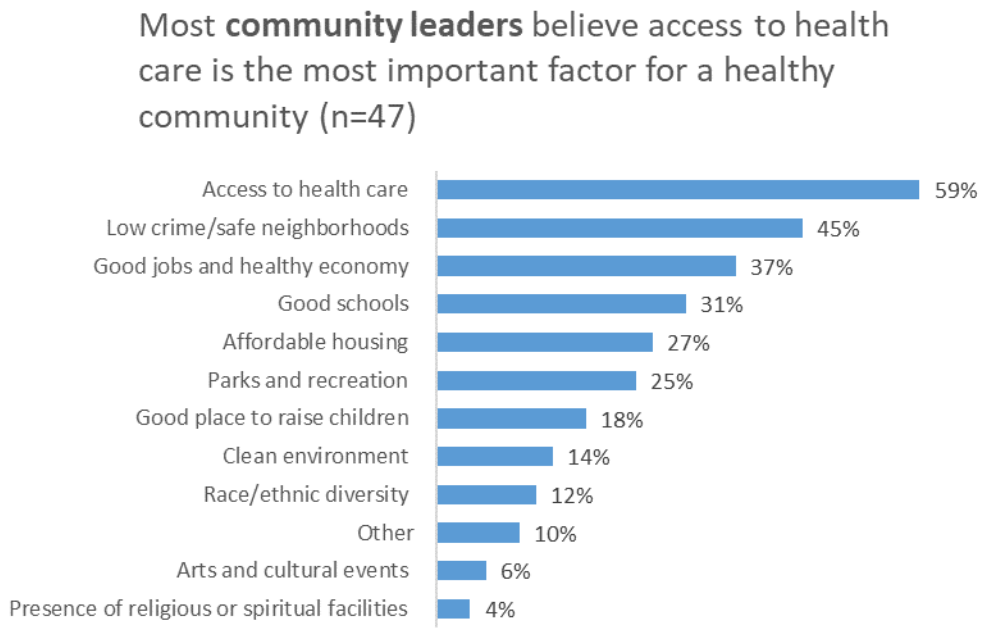
Relatedly, having a regular source of health care is associated with better health outcomes, less frequent emergency room visits, lower costs, and fewer health disparities.

- 13% of MLH area residents vs. 14% remainder SEPA region residents reported that they do not have a usual person or place of care to go to when they are sick or in need of health advice
- More adults in the Eastern (15%) and Central (14%) regions reported that they do not have a usual source of care compared to the Northwest region (11%)
- 35% of Eastern region area residents visited the emergency room in the past year compared to 26% of residents in the remainder SEPA region

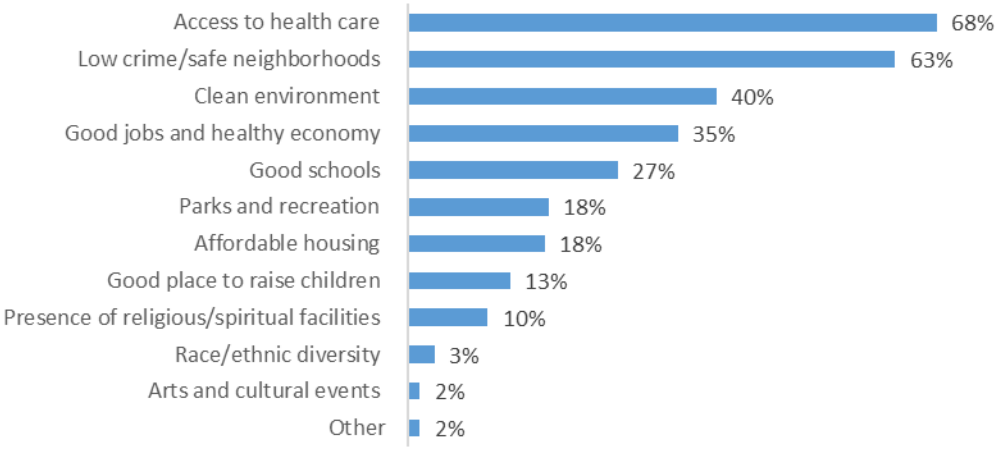
The Eastern region has the highest percentage of residents without a regular source of health care

In considering community perception of access to healthcare:

- Results of an online survey of community health administered separately for community residents and leaders revealed access to health care as the most important factor for a healthy community (59% of community leaders and 68% of community members)

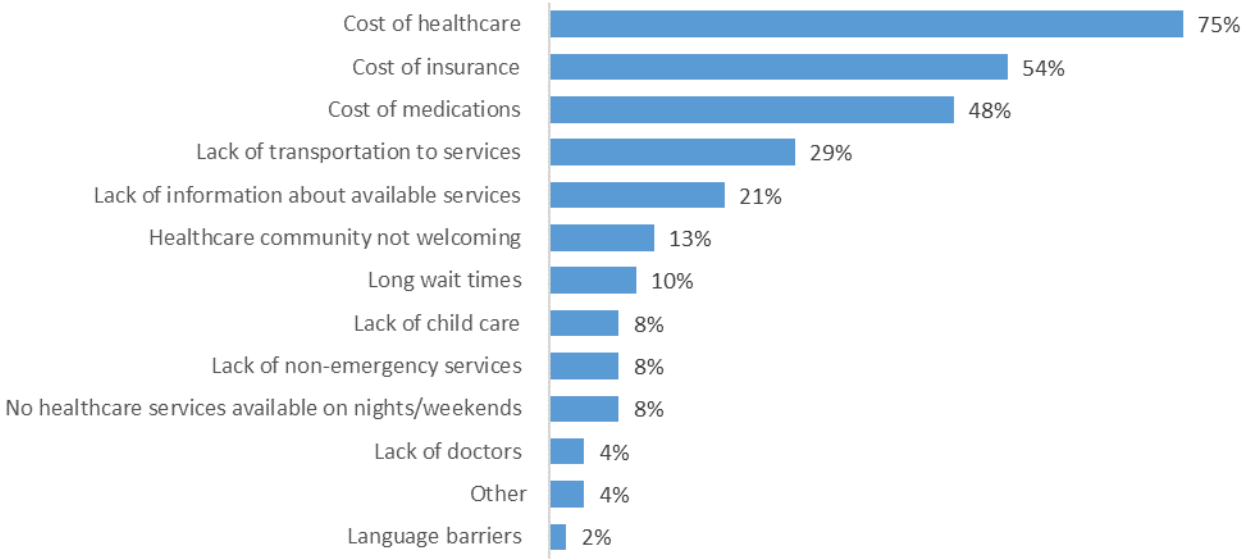


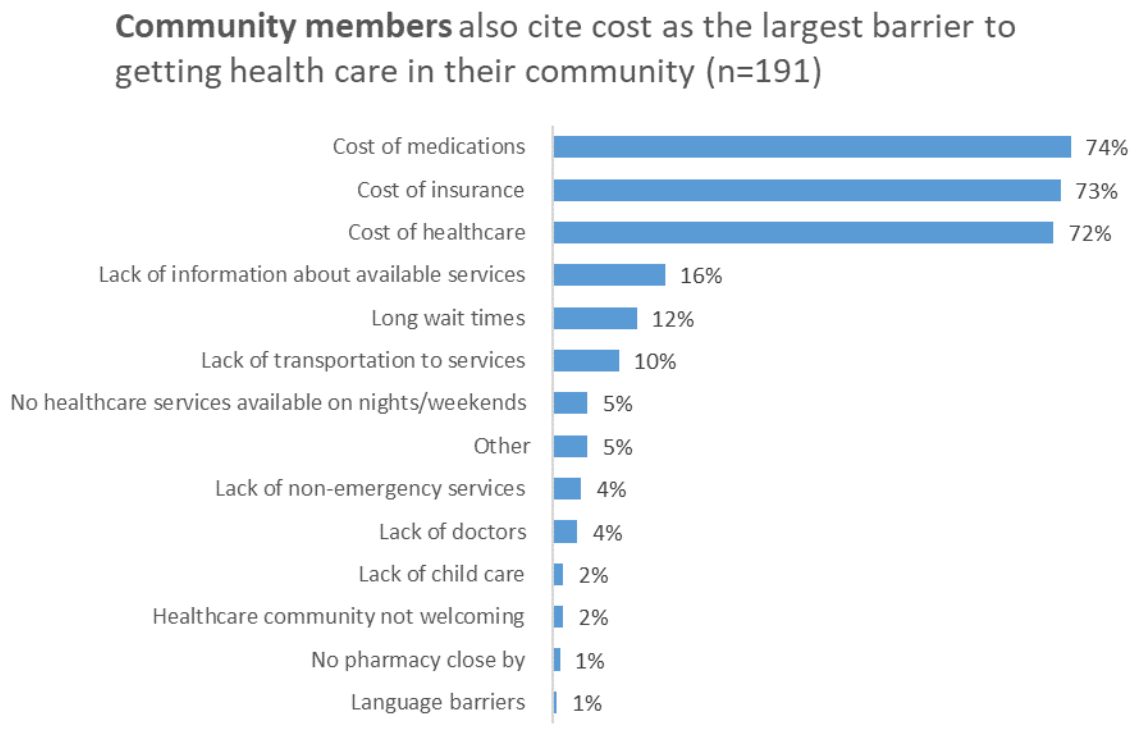
Most **community members** also believe access to health care is the most important factor for a healthy community (n=191)



Relatedly, both community partners and members cite costs as the top barrier to getting health care.

Community leaders cite cost as the largest barrier to getting health care in their community (n=47)





Health behaviors

Health behaviors are integral in shaping the well-being of individuals, communities, and entire populations. Understanding and addressing these behaviors present a pro-active opportunity to improve quality of life, enhance quality of care, and allocate financial and other resources efficiently and effectively. Overall, the Northwest region is doing better on most health indicators compared to the remainder of SEPA. More adults in the Northwest region report good or excellent health, have health insurance, and have a regular source of care compared to the remainder of SEPA. Tobacco use, however, was identified as a health concern in the Northwest region:

- 13% of adults report that they are current smokers, slightly higher than the HP2020 goal of 12%
- Among residents who smoke, those who did not try to quit in the past year (59%) and used an e-cigarette in the past month (10%) are higher than the remainder SEPA region (48% and 8% respectively)

Additionally, smoking is a risk factor for heart disease and cancer, two leading causes of death in the MLH acute care service area.[15] In the Eastern region:

- Consumption of sugary beverages, such as soda, fruit drinks, or bottled tea once a day or more in the past month, by adults in Eastern region was significantly higher than in the remainder SEPA region (31% vs. 26% respectively)

[15] Pennsylvania Department of Health, Bureau of Health Statistics and Registries. (2018). *2012-2016 Mortality* [Data file].

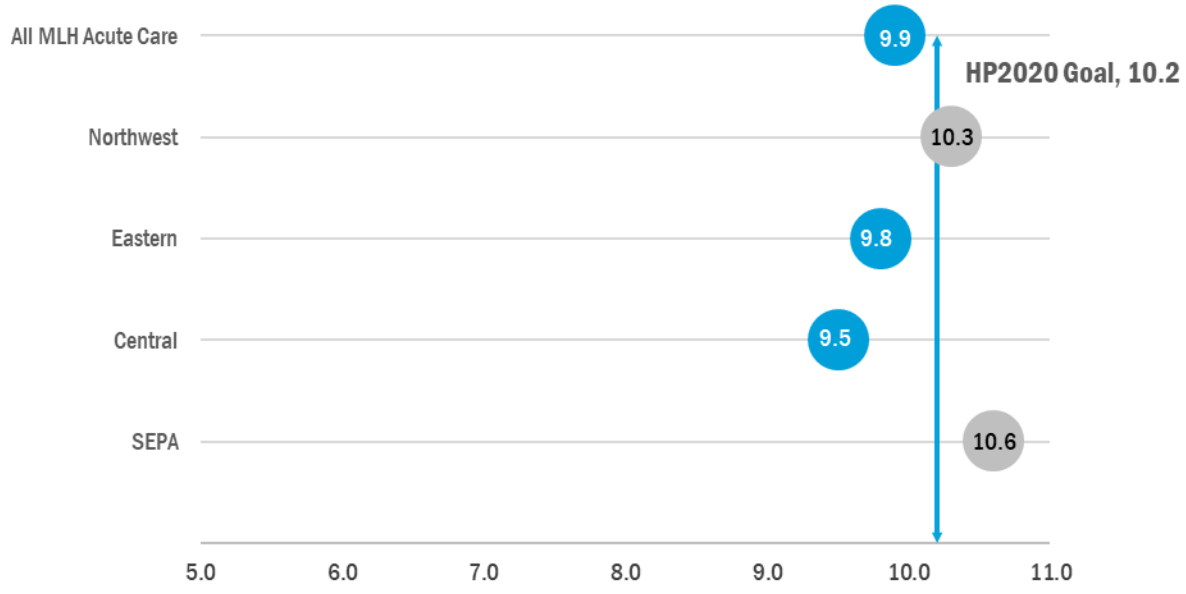
Mental health

Mental health is an increasing public health concern with impacts to individuals across the life span, and whole communities.[16] Mental health is inextricably linked to physical health, interpersonal relationships, and the ability to live a fulfilling and productive life. Addressing mental health such as by means of early detection and ongoing care is critical to optimizing quality of life and health outcomes. Prevalence of a diagnosed mental health condition is the same for all three regions and the acute care service area (23% for each), and 22% for the remainder SEPA region.[17] Among those diagnosed with a mental health condition, over half are receiving treatment in each of the regions (Eastern, 63%; Central, 62%; and Northwest, 54%), compared to 60% in the MLH acute care service area and 57% in the SEPA region. Of note, the Northwest region, generally affluent (e.g. income, education levels), has the lowest percent of individuals receiving treatment for a mental health condition (54%), and coincidentally, has the highest suicide rate (all forms and by firearm), described below.

Suicide

Untreated or undetected mental health conditions may lead to violent or self-destructive behavior, such as suicide. Suicide is a leading cause of death for all Americans with no single factor contributing to its cause, indicating a vital need for prevention efforts across all regions. Considering all forms of suicide, between 2012-2016, the HP2020 goal of 10.2 deaths per 100,000 people is not being met in the SEPA region or the Northwest region of the service area:[18]

Considering all forms of suicide, the HP2020 goal of 10.2 deaths per 100,000 people is not being met in the Northwest and SEPA regions.



[16] U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. Healthy People 2020. Maternal, Infant, and Child Health Objectives. Healthy People 2020. Retrieved from https://www.healthypeople.gov/2020/leading-health-indicators/2020-lhi-topics/Mental-Health

[17] PHMC's 2018 Southeastern Pennsylvania Household Health Survey

[18] Pennsylvania Department of Health, Bureau of Health Statistics and Registries. (2018). *2012-2016 Mortality* [Data file].

With suicide by firearm, the Northwest region had the highest suicide by firearm rate (4.4 deaths per 100,000 people), compared to the SEPA region (4.0 deaths per 100,000 people), as well as Central and the overall acute care service area. Central had the lowest suicide by firearm rate (3.1 deaths per 100,000 people) and the overall acute care service area comparable rate was 3.7 deaths per 100,000 people.

Drug overdose mortality rate

Co-occurring mental illness and substance use disorders are increasing significantly in the US, with deaths due to suicide and overdose posing a growing major public health concern.[19] Drug overdose is the 6th leading cause of death in the MLH acute care service area (347 deaths per 100,000 people between 2012-2016)[20]. In terms of drug overdose mortality:[19]

- The Eastern region drug overdose mortality rate (29.4 deaths per 100,000 people) exceeded that of SEPA (26.0 deaths per 100,000 people)
- The Central region had the lowest drug overdose rate (15.5 deaths per 100,000 people), followed by the Northwest (19.5 deaths per 100,000 people)
- The drug overdose rate was 21.8 deaths per 100,000 people in the all acute care service area, higher than the Central and Northwest regions, though lower than the Eastern region and SEPA

Prescription pain medication and use

The patterns in which people use prescription pain medications are associated with their psychological functioning.[21] Ongoing pain and coinciding prescription medications can tremendously impact a person's quality of life and mental health.

- 32% of adult PA residents reported using a prescription pain medication in the past year,[22] compared to 31% of all MLH acute care service area residents[23]
- Percent of prescription pain medication use was highest in the Eastern region (36%), compared to the Central and Northwest regions (28%)[24]
- 14% of all service area residents reported taking pain meds that were not prescribed, which is the same for the SEPA region[25]
- 34% of MLH service area adult residents reported taking pain meds in the past 7 days, compared to 43% of residents in the Eastern region, 28% in the Northwest region and 25% in the Central region

[19] Bohnert, A., & Ilgen, M. (2019). Understanding links among opioid use, overdose, and suicide. *The New England Journal of Medicine, 380,* 71-79.

[20] Heron, M. (2018). Deaths: Leading causes for 2016. National Vital Statistics Reports; vol 67 no 6. Hyattsville, MD: National Center for Health Statistics. 2018.

[21] Skinner, M., Lewis, E., & Trafton, J. (2012). Opioid use patterns and association with pain severity and mental health functioning in chronic pain patients. *Pain Medicine Journal, 13(*4), 507-517.

[22]Centers for Disease Control and Prevention (CDC). *Pennsylvania Behavioral Risk Factor Surveillance System Survey Data* [2018] https://www.health.pa.gov/topics/HealthStatistics/BehavioralStatistics/BehavioralRiskPAAdults/Documents/State%20Report/2017/2017trends.aspx#trends

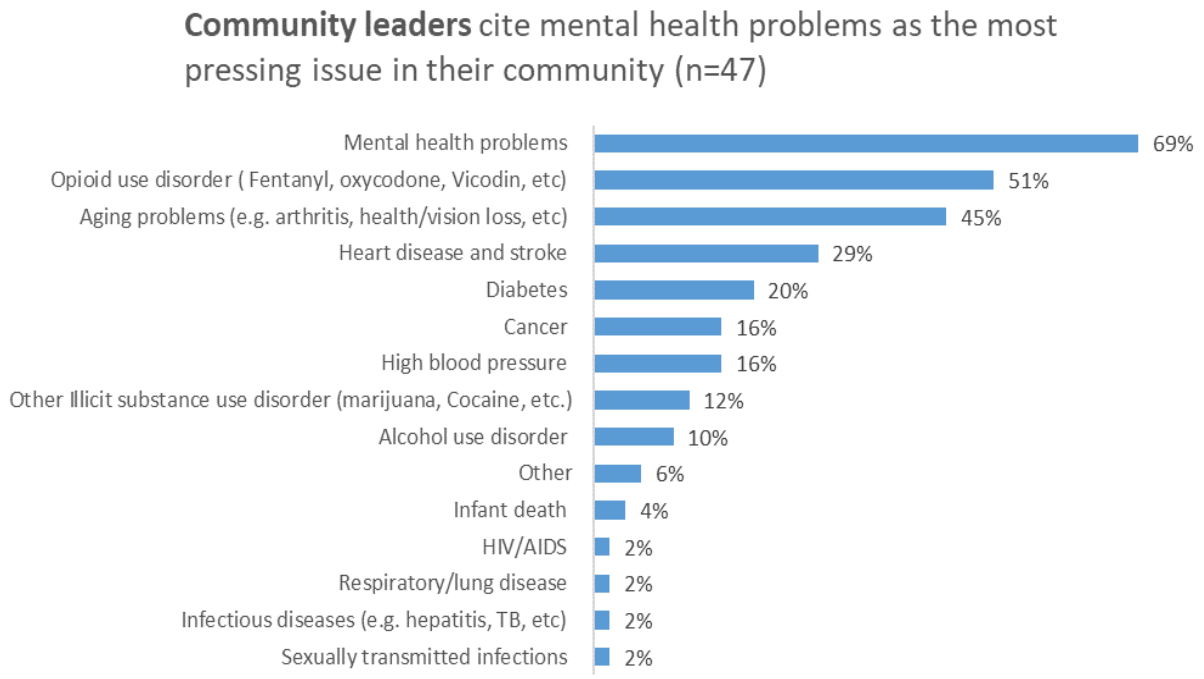
[23]PHMC's 2018 Southeastern Pennsylvania Household Health Survey.

[24] PHMC's 2018 Southeastern Pennsylvania Household Health Survey

[25] Adults who took prescription pain medication that was not prescribed by region: Central 17%; Eastern 17%, Northwest 7%

Community perception of mental health

Community members and leaders chose the same three health conditions as the most pressing in their community, with slightly different ordering. Community leaders cite mental health problems, opioid use disorder, and aging problems as their top three most pressing health issues. Community members cite aging problems, mental health problems, and opioid use disorder as the top three most pressing issues in their communities.



Health inequities in cancer and heart disease mortality

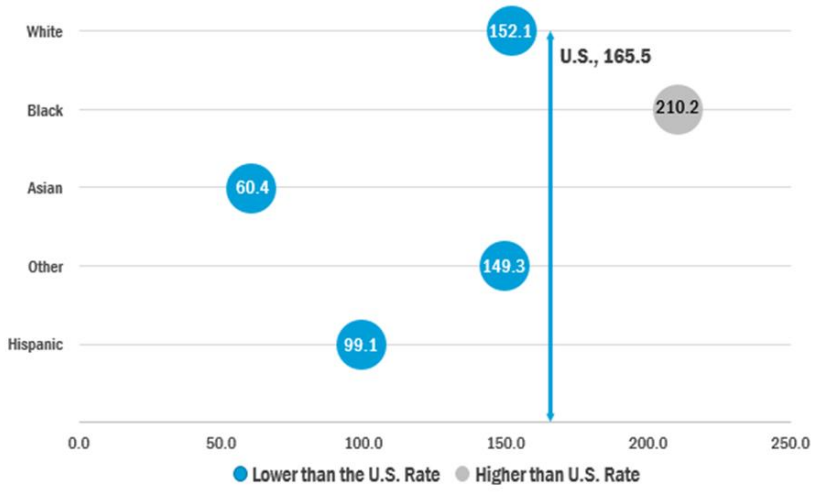
According to the World Health Organization, health inequality refers to differences in health status or in the distribution of health determinants between different population-level groups (such as differences in mortality rates between people from different racial groups or social or economic classes).[26] Some health inequalities are attributable to the external environment and other conditions mainly outside the control of the individuals concerned.

Health inequity in cancer and heart disease mortality was identified as a health need for the MLH acute care service area given clear differences between racial groups.

- The heart disease mortality rate was higher among blacks living in the MLH acute care service area (210.2 individuals per 100,000 people) compared to whites (152.1 individuals per 100,000 people), Asians (60.4 individuals per 100,000 people) and self-identified other (149.3 individuals per 100,000 people)

[26] World Health Organization (2018). Health Impact Assessment [webpage]. Retrieved from https://www.who.int/hia/about/glos/en/index1.html

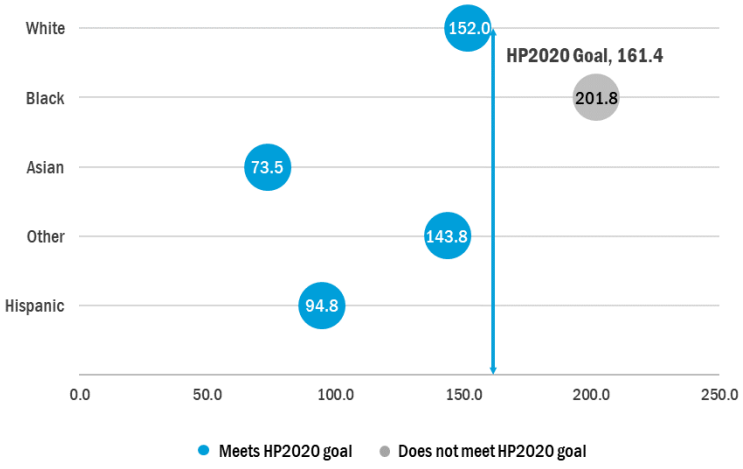
The heart disease mortality rate is highest for blacks compared to whites, Asians and self-identified "other" individuals in the MLH acute care service area.



Cancer mortality rates also differ by racial and ethnic groups.

- The cancer mortality rate among blacks in the MLH acute care service area is higher than the mortality rate among whites, Latinos and self-identified "other" adults, and does not meet the HP2020 goal (161.4 individuals per 100,000 people); however, the cancer mortality rate for blacks in the MLH acute care service area is lower than the same rate across SEPA (211.4 per 100,000)

The cancer mortality rate is highest for blacks in the MLH acute care service area, and does not meet the HP2020 goal.



DEMOGRAPHIC INDICATORS

Population size and trends impact the number of persons using and needing services in an area and are important to consider in characterizing and prioritizing health needs. Relatedly, demographic characteristics, such as age, gender, race/ethnicity, and language, can disparately affect the prevalence of specific diseases, morbidity and mortality, and create barriers to care. Similarly, educational attainment, employment, and income impact health status and access to care. For example, high levels of educational attainment are related to health literacy, healthier behaviors, and improved health status.[27] Employment and income affect insurance status and the ability to pay for out of pocket for health care expenses. These demographic characteristics are highlighted below.

Population size

The MLH acute care service area population size is 1,590,230. Thirty-eight percent of area residents live in the Eastern region, 35% in the Northwest, and 26% live in the Central region.[28] The 65 and older age group is predicted to grow 15% between 2018-2023. Programming involving the needs of older adults will continue and likely increase in demand in the near future given projected population growth for this age group.

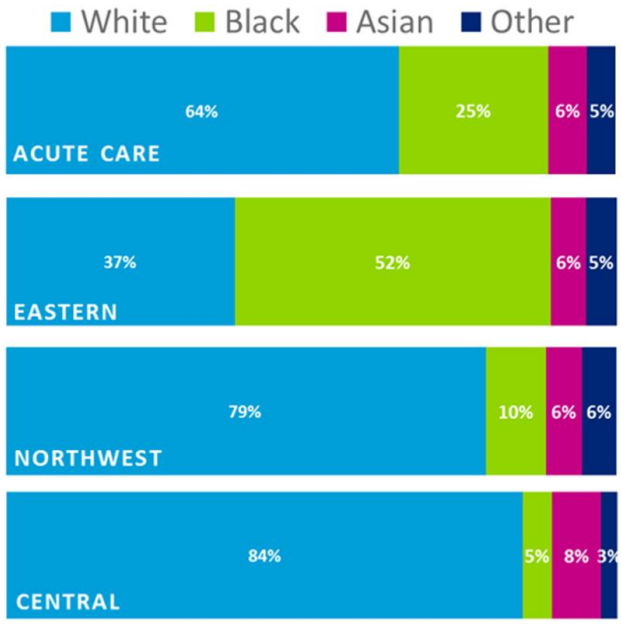
Gender, race/ethnicity, age distribution

The MLH acute care service area gender distribution is the same as SEPA (48% male and 52% female for both). Twenty-two percent of residents in this service area are under 18 years old, 24% are 18-34, 38% are between 35-64, and 16% are 65 and older; the Central region has the greatest percentage of adults 65+ (20%).

Sixty-four percent of MLH acute care service area residents are white, 25% are black, 6% are Asian, and 5% identify as another race; 6% identify as Latino, which is similar to the SEPA region (64% white, 22% black, 7% other, 9% Latino).[29] Central has the highest percentage of white residents (84%) and lowest percentage of black and Latino residents (5% and 3%, respectively), compared with the other two regions. Conversely, the Eastern region is the most racially diverse; 52% of residents identify as black, 37% as white, 5% identify as Asian, and 5% Latino. (See Appendix H for tables of demographics by region).

[27] Mirowsky, J, Ross, CE. *Education, Social Status, and Health*. New York, NY: Aldine de Gruyter: 2003.
[28] 2018 Claritas Pop Facts Data Base. Calculations by PHMC.
[29] The 2010 U.S. Census reports that people of Hispanic origin may be of any race and that ethnic origin is considered to be a separate concept from race.

The Eastern region of the acute care service area is the most racially diverse compared to the Central and Northwest regions.

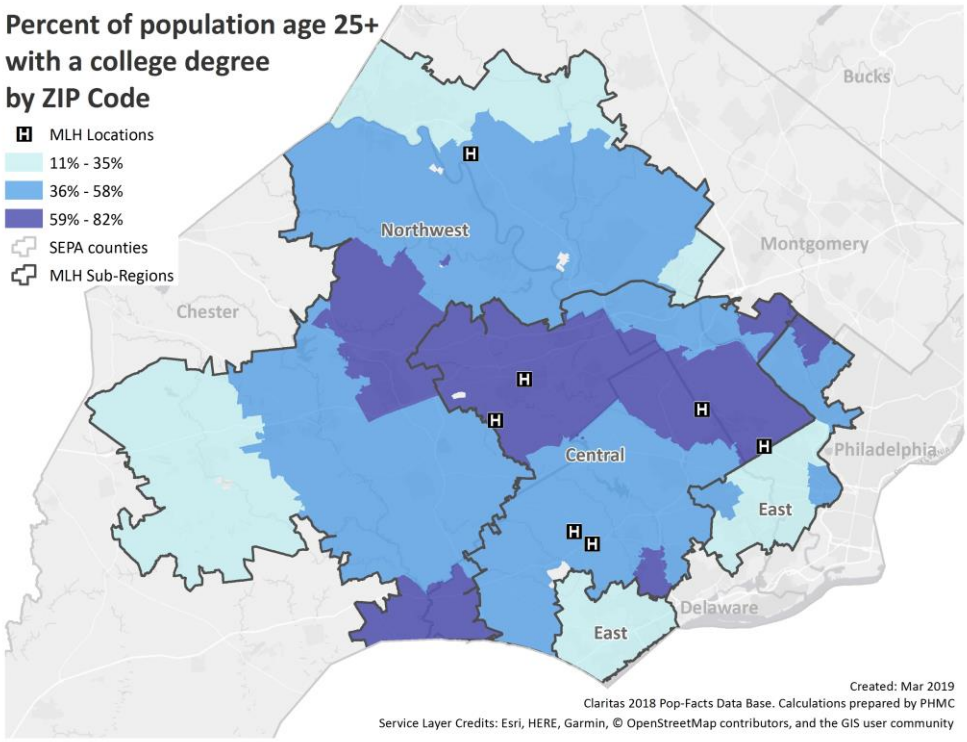


Income, poverty, employment, education

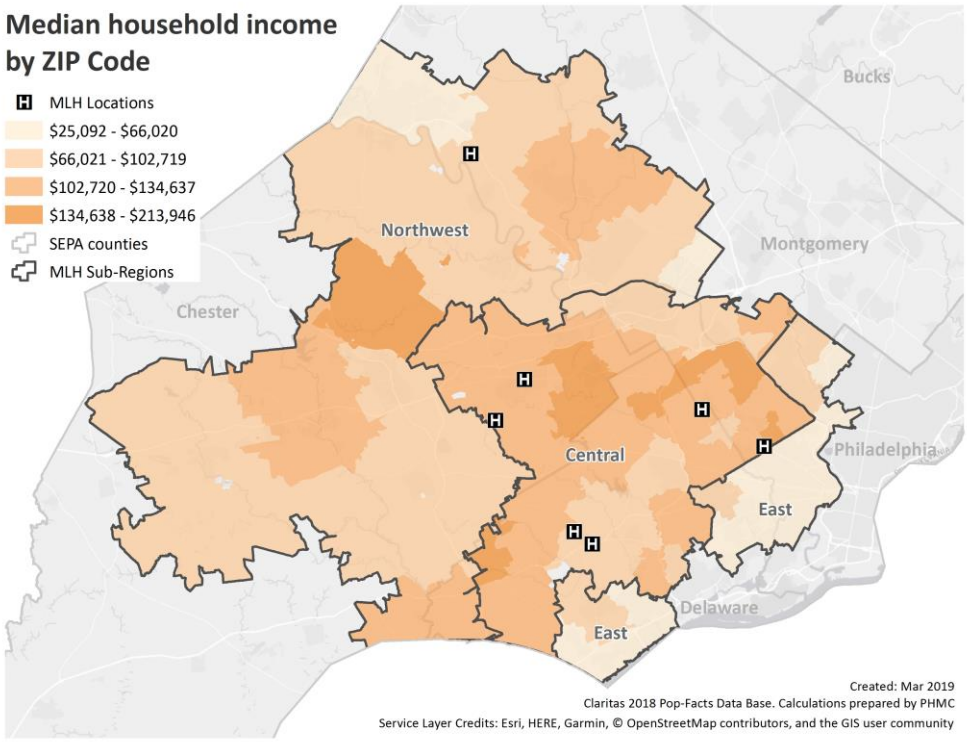
MLH's acute care service area has a higher level of educational attainment, employment, and income, as well as lower poverty rates compared with SEPA, with variation seen in its regions, notably, Eastern.

- The 2018 median household income in the acute care service area was $81,073 compared to SEPA ($70,807) and Pennsylvania ($60,993)[24]
- Among families *with children* in the acute care service area, 13% are living in poverty compared with 16% living in poverty across SEPA; 5% of families *without children* live in poverty in the acute care service area, while 5% of those same families live in poverty across SEPA
- Among adults 16 years and older, 7% are unemployed in the acute care service area, which is slightly lower than SEPA (8%), but comparable to Pennsylvania state and national percentages (7%)[30]
- There are more adults with a bachelor's degree or higher in the acute care service area (43%) compared to SEPA (37%), Pennsylvania (30%), and the U.S (31%);[16] the Central and Northwest regions have higher percentages of adults with a four-year college degree or higher (60% and 46% respectively) compared to the MLH acute care service area (43%) and SEPA (37%)

[30] 2018 Claritas Pop Facts Data Base. Calculations by PHMC.; US Census Bureau. Quick Facts Pennsylvania. 2013-2017. https://www.census.gov/quickfacts/pa



MLH's acute care service area is generally affluent; the 2018 median household income was $81,073 and 7% of area residents are unemployed. The map below reveals substantially lower median household income levels in the Eastern region compared to the other two regions.

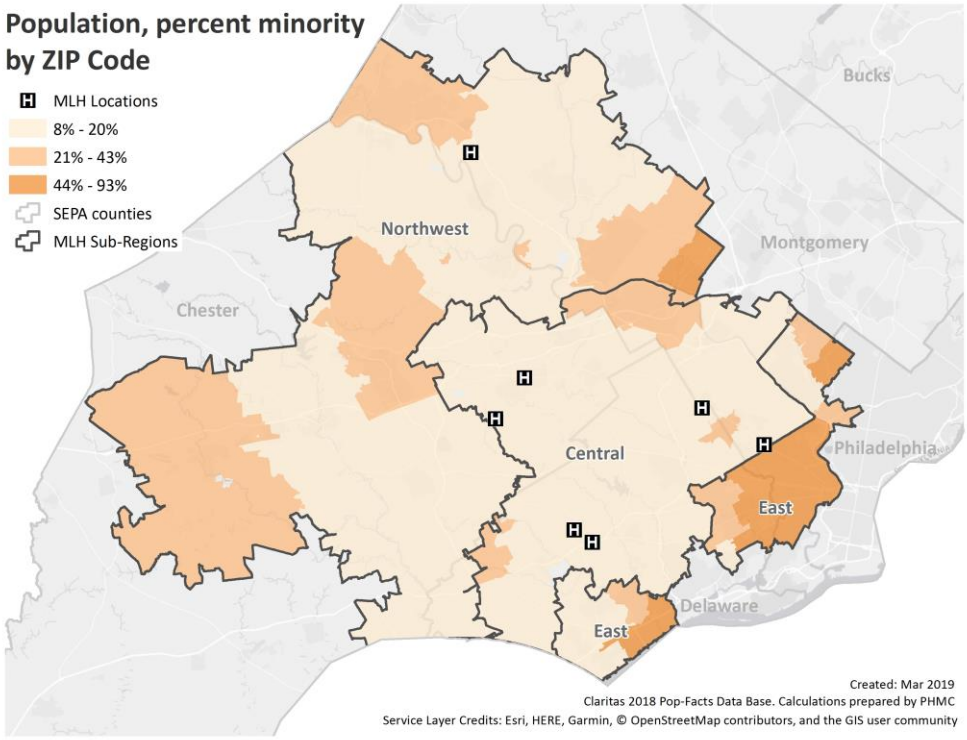


Social determinants of health

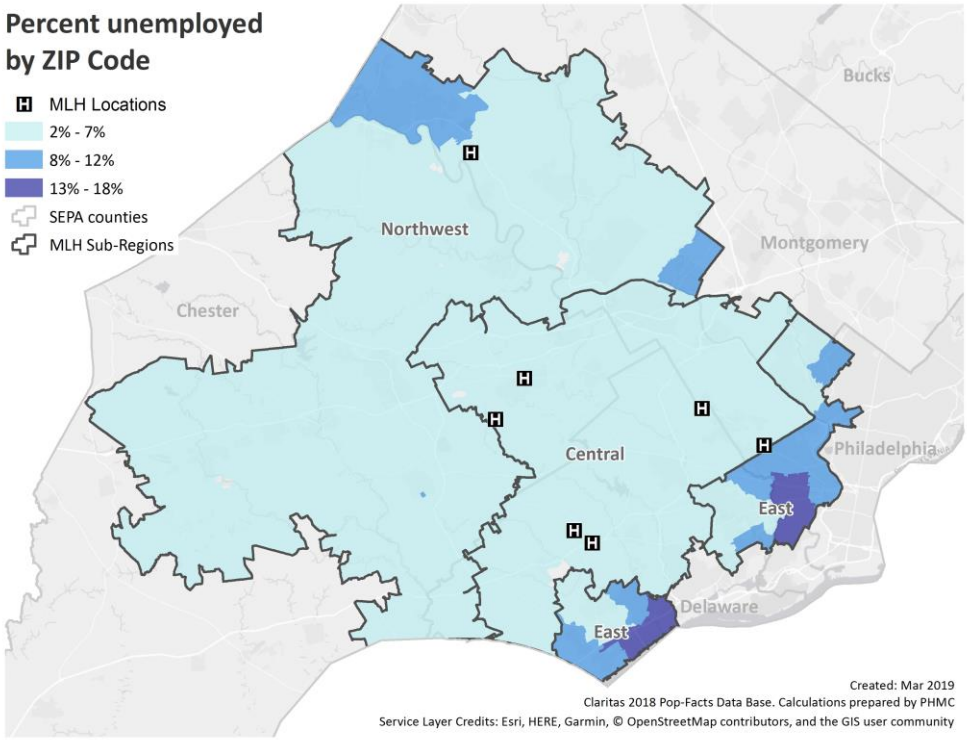
Social determinants of health such as education, income, and employment in a community impact health risks and outcomes. While the MLH acute care service area is generally affluent and performing better than SEPA along a number of demographic indicators, the Eastern region of the service area is notably different. MLH can position itself to better assess available community assets and infrastructure in the Eastern region, and consider expanding cooperative partnerships. It can also focus programming, services, and workforce and patient education as well as concentrate resources in this region, considering that:

- The lowest concentration of people with at least a college degree reside in the Eastern region of the MLH acute care service area (see map above); there are 28% with at least a college degree in the Eastern region compared to the Central and Northwest regions (60% and 46%, respectively)
- Within the MLH community there are “pockets” of poverty, primarily in the Eastern region, where one in four families with children live in poverty (25%) compared to only 8% in the Northwest and 4% in the Central region
- Between regions a large variance in income exists, ranging from $49,839 in the Eastern region to over double that amount in the Central region ($114,506). Overall, median income shows more variation than other indicators between and within regions
- The Eastern region of the service area (i.e., West Philadelphia and south central Delaware County) has higher levels of unemployment when compared to the rest of the MLH acute care service area; coinciding with the same areas having a higher percentage of minorities (anyone identifying as non-white)

The Eastern region of the acute care service area has the highest percentage of non-whites.



Unemployment is an indicator of socio-economic status and a risk factor for poor health outcomes. Additionally, those who are unemployed may lack health insurance making it difficult to access quality health care and preventive care. While the overall service area is doing consistently well with unemployment rates, unemployment rates are highest among the east and north borders of the service area (see map below).

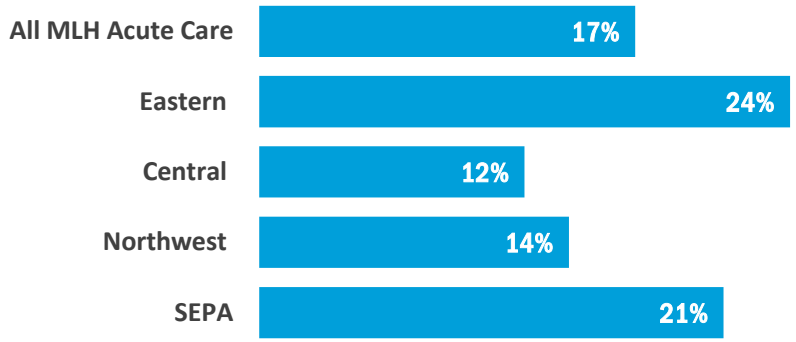


HEALTH STATUS AND HEALTH OUTCOMES

Health status

Self-assessed health is a commonly used measure of quality of life and a predictor for mortality.[31] Within the MLH acute care service area, a higher percentage of adults in the Eastern region rated their health as poor or fair (24%) compared to the Northwest (14%) and Central (12%) regions.

The Central region has the lowest percentage of adults reporting poor or fair health while the Eastern region has the highest percentage.



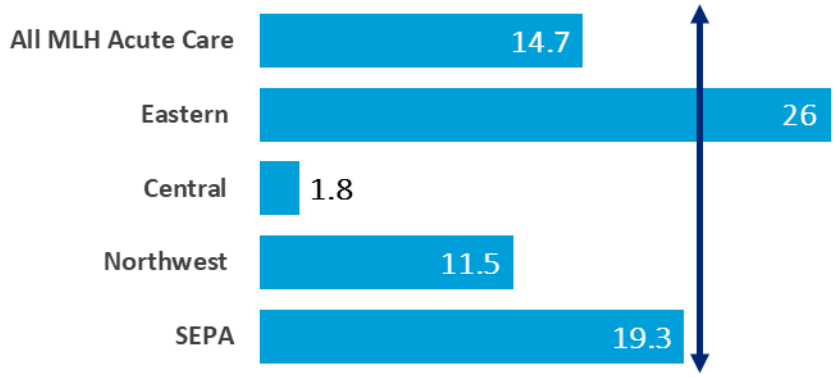
Adolescent fertility rate

The teen birth rate in the MLH acute care service area was 14.7 births per 1,000 adolescent females aged 15–19, which is lower than SEPA teen birth rates from 2012-2016 for the same age group (19.3 births per 1,000 teens) as well as across the US (20 births per 1,000 teens).[32,33] The teen birth rate in the Eastern region (26 births per 1,000 teens) was the highest compared to Central and Northwest regions.

Among racial and ethnic groups in the MLH acute care service area, black teenage females had the highest birth rate (37.5 births per 1,000 teens), Latinas slightly less, (34.8 births per 1,000 teens) and whites (4.3 births per 1,000 teens) the lowest.

[31] Zhao G, Okoro C, Hsia J, Town M. Self-perceived poor/fair health, frequent mental distress, and health insurance status among working-aged U.S. adults. *Prev Chronic Dis*. 2018;15:170523. DOI: https://doi.org/10.5888/pcd15.170523.
[32] Martin JA, Hamilton BE, Osterman MJK, Driscoll AK, Drake P. Births: Final data for 2016. National Vital Statistics Reports; vol 67 no 1. Hyattsville, MD: National Center for Health Statistics. 2018.
[33] Pennsylvania Department of Health, Bureau of Health Statistics and Registries. (2018). *2012-2016 Birth outcomes* [Data file]. Calculations by PHMC.

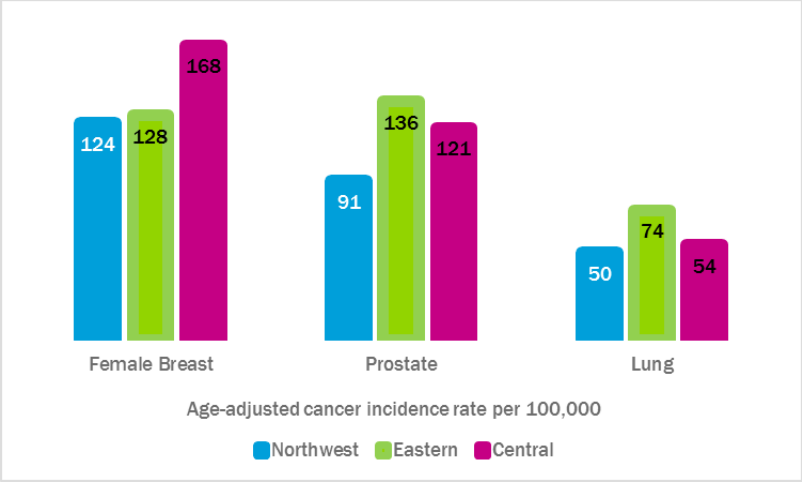
The MLH acute care service area has a lower teenage birth rate compared to the U.S.



Cancer incidence and screenings

Between 2012-2016, the age-adjusted cancer incidence rate for the MLH acute care service area was 480 people per 100,000 residents, which is lower than SEPA during the same period (491 people per 100,000 residents).[34] Of note,

- The Northwest region has the lowest cancer incidence rate (421 people per 100,000 residents) when compared to the Eastern (500 people per 100,000 residents) and Central (529 people per 100,000 residents) regions
- The Central region has the highest incidence rate of female breast cancer (168 people per 100,000 residents) compared to Eastern (128 people per 100,000 residents) and Northwest (124 people per 100,000 residents)
- The Eastern region has the highest rate of prostate cancer (136 individuals per 100,000 people) and lung cancer (74 people per 100,000 residents)

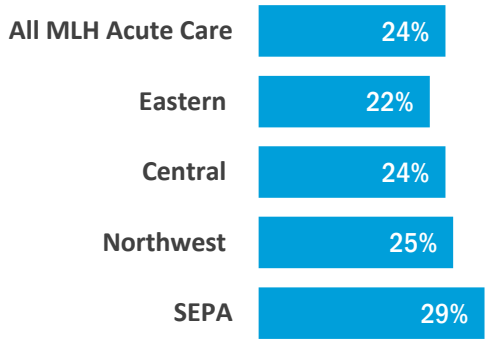


[34] Pennsylvania Department of Health, Bureau of Health Statistics. (2018). *2012-2016 Cancer incidence* [Data file] Calculations by PHMC.

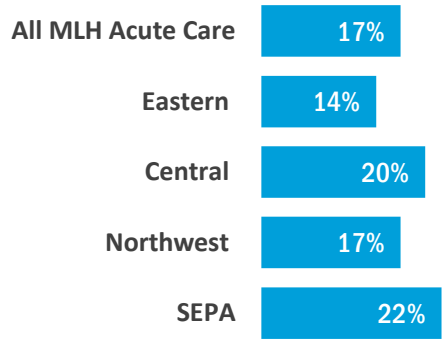
The MLH acute care service is doing significantly better than the remainder of SEPA for sigmoid or colonoscopy[35] and mammogram[36] screenings.

- Among adults 50 years and older in the service area, 24% have not had a sigmoid colonoscopy screening within the past 10 years compared to 28% of same aged adults in SEPA region[37]
- 17% of women between 50 and 74 years have not had a mammogram within the past two years compared to 22% of women in the remainder SEPA region[38]
- Compared to the Central and Northwest regions, fewer adults 50 years and older in the Eastern region report not having had a sigmoid colonoscopy in the past 10 years (24% Central vs. 25% Northwest vs. 22% Eastern)
- Fewer women between 50-74 report that they have not had a mammogram in the past 2 years in the Eastern region (14%) compared to the Central (20%) and Northwest (17%) regions

25% of adults 50+ in the Northwest region did not have a sigmoid/colonoscopy in the past 10 years.



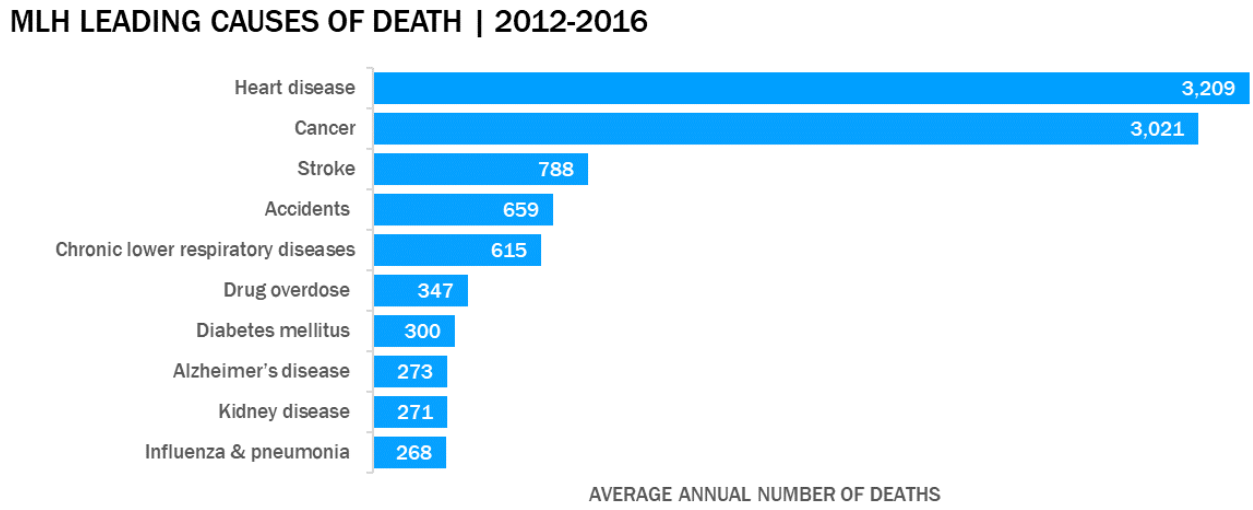
20% of women 50-74 years in the Central region did not have a mammogram in the past 2 years.



Leading causes of death: Heart disease, cancer, stroke

Heart disease cancer and stroke were the top three leading causes of death for the MLH acute care service area, accounting for nearly half (48%) of all deaths from 2012-2016. Cerebrovascular disease (CVD), commonly known as "stroke," was ranked higher in the MLH acute care service area than it was nationally (i.e., 3rd vs. 5th, respectively).

[35] Pearson's chi square p<.001
[36] Pearson's chi square p<.01
[37] Pearson's Chi square test p<.001
[38] Pearson's Chi square test p<0.1



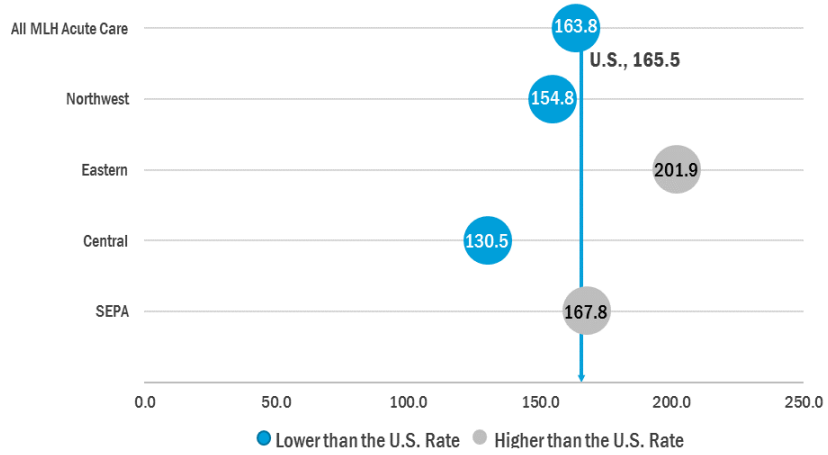
The mortality rates of the top five leading causes of death in the MLH community are slightly lower than the SEPA region, with the exception of stroke, which is slightly higher.[39] The overall MLH service area had a lower age-adjusted death rate (690.0 deaths per 100,000 residents) than SEPA (732.4 deaths per 100,000 residents), as did the Central (566.8 deaths per 100,000 residents) and Northwest (640.4 deaths per 100,000 residents) regions. The death rate in the Eastern region was higher (840.8 deaths per 100,000 residents) when compared to the other two regions, the overall MLH service area, and to SEPA - a pattern observed in specific causes of death as well, such as heart disease and cancer.[40]

Heart disease

The heart disease mortality rate in the MLH acute care service area (163.8 deaths per 100,000 residents) is comparable to the U.S. rate (165.5 deaths per 100,000 residents); however, the rate in the Eastern region (201.9 deaths per 100,000 residents) is higher than the U.S. rate and SEPA (167.8 deaths per 100,000 residents).

[39] Heron, M. (2018). Deaths: Leading causes for 2016. National Vital Statistics Reports; vol 67 no 6. Hyattsville, MD: National Center for Health Statistics. 2018.
[40] Age-adjusted death rates are used here to account for differences in age distribution.

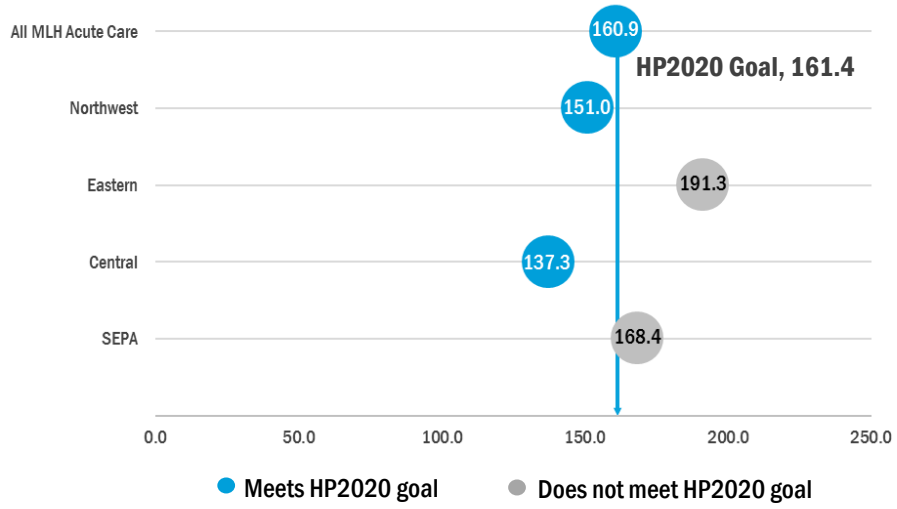
The overall MLH acute care service area, Central and Northwest regions have a lower rate of heart disease mortality than the U.S.



Cancer

The cancer mortality rate in the MLH acute care service area (160.9 deaths per 100,000 residents) meets the HP2020 goal (161.4 deaths per 100,000 residents). The SEPA region does not meet HP2020 goals for cancer mortality (168.4 deaths per 100,000 residents) and the rate in the Eastern region (191.3 deaths per 100,000 residents) is notably higher than the Northwest and Central regions, the all acute care service area, and the SEPA region, illustrated below.

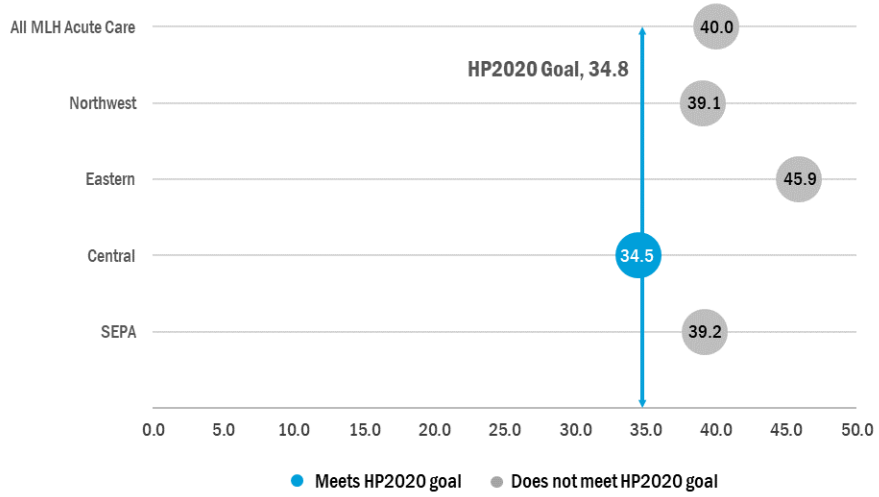
The Eastern region experiences the highest rates of cancer mortality when compared to Northwest and Central regions and also did not meet the HP2020 goal.



Stroke

The overall MLH acute care service area does not meet the HP2020 goal of reducing stroke mortality rate to 34.8 individuals per 100,000 residents). Stroke mortality rate was highest in the Eastern region (45.9 individuals per 100,000 residents).

The Central region meets the HP2020 goal for stroke mortality rate, unlike the rest of the service area and SEPA.



POPULATIONS OF INTEREST

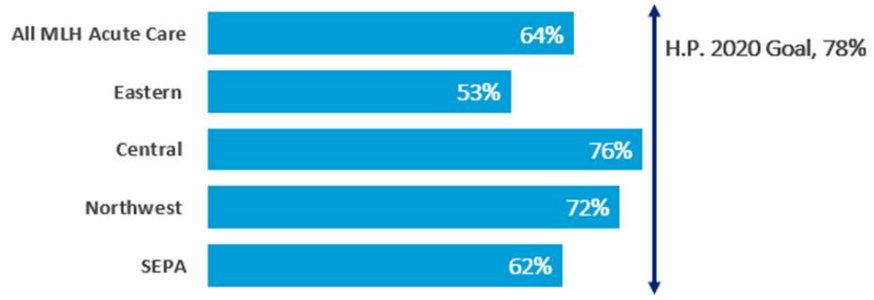
Maternal health

Among white women, 75% started prenatal care in the first trimester, and 67% of Asian women and 48% of black women initiated prenatal care in the first trimester. Sixty-four percent of women (all child bearing ages) in the MLH acute care service area initiated “on-time” prenatal care (i.e. began prenatal care in the first trimester of pregnancy), which is lower than the US (77%),[41] and slightly above SEPA region totals (62%). None of the regions meet the HP2020 goal; however, the Central service area was the closest (76%).[42]

[41] Osterman MJK, Martin JA. Timing and adequacy of prenatal care in the United States, 2016. National Vital Statistics Reports, vol 67 no 3. Hyattsville, MD: National Center for Health Statistics. 2018. Retrieved from: https://www.cdc.gov/nchs/data/nvsr/nvsr67/nvsr67_03.pdf

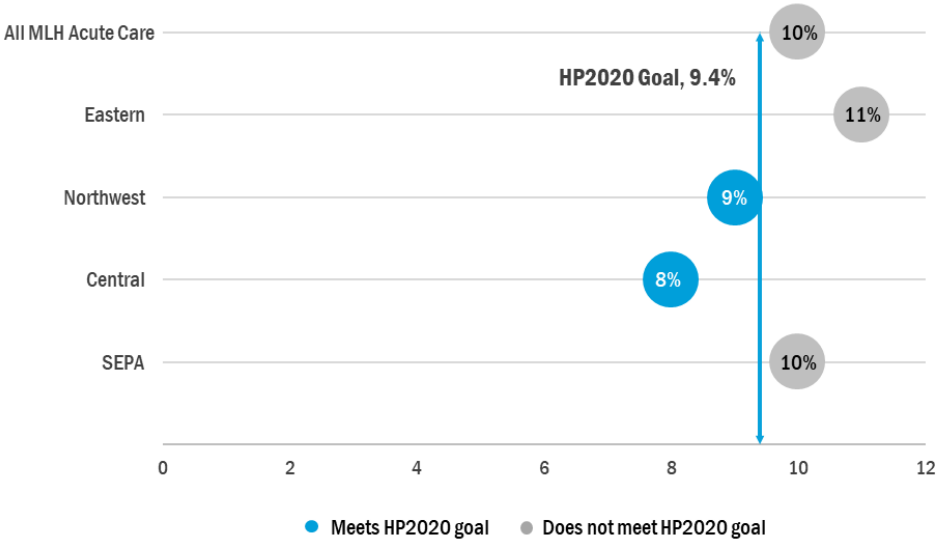
[42] U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. Healthy People 2020. Maternal, Infant, and Child Health Objectives. Healthy People 2020. Retrieved from https://www.healthypeople.gov/2020/topics-objectives/topic/maternal-infant-and-child-health/objectives

Including SEPA and the acute care service area, all regions fall short of meeting the HP2020 goal for prenatal care, with Central coming closest to meeting this goal, shown below.



The percentage of infants born preterm (less than 37 weeks gestation) in the MLH acute care service area is the same as SEPA and the U.S. (10% for each). The MLH acute care service area as a whole did not meet the HP2020 goal of no more than 9% of live births born preterm. The Northwest (9% of live births) and Central sub-region areas (8% of live births) met the HP2020 goal, while the Eastern region did not (11% of live births).

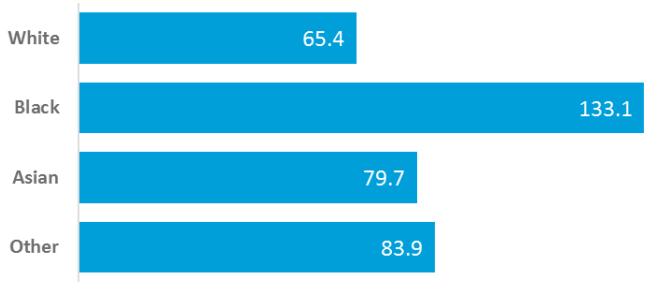
The Eastern region and MLH acute care service area did not meet the HP2020 goal for preterm births.



In the MLH acute care service area, there were 65.4 births per 1,000 white infants born at a low birth compared to 133.1 births per 1,000 black infants born at a low birth weight and 78.2 births per 1,000 Latino/a infants born at a low birth weight.[43]

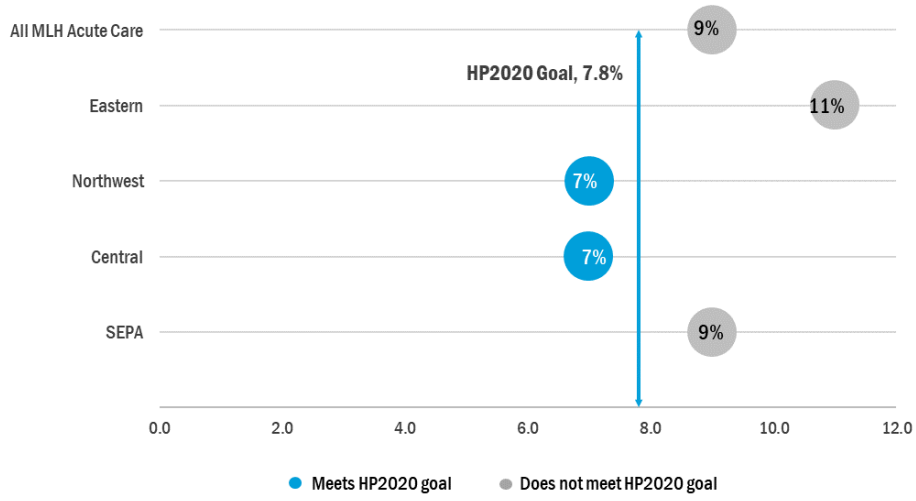
[43] Low birth weight is defined as an infant weighing less than 2,500 grams (5.5 lbs.) at birth.

Low birth weight rate is higher for black infants compared to other racial and ethnic groups.



The percentage of infants born low birth weight (born at less than 2,500 grams or 5 pounds) in the MLH acute care service area and SEPA was the same, at 9%, and slightly higher than the US (8%). Two of the regions, Northwest (7%) and Central (7%), performed better than the HP2020 goal for low birth weight.

The MLH acute care service area did not meet the HP2020 goal for low birth weight.



Complications during pregnancy

Early diagnosis of certain conditions during pregnancy, such as gestational diabetes and hypertension, is important to informing treatment, monitoring, and planning as well as for informing educational resourcing and efforts for especially vulnerable populations. In addition, high blood glucose levels can be harmful to a developing fetus even before pregnancy is known; high blood glucose levels also increase risk of miscarriage and stillbirth.[44,45]

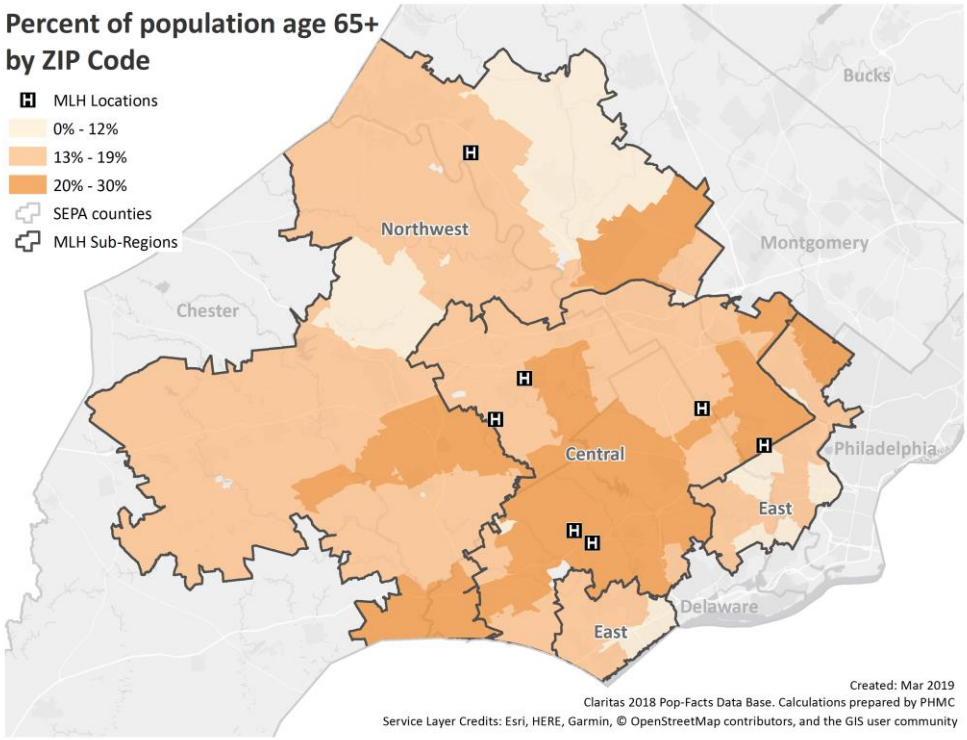
Prevalence of gestational diabetes in the acute care service area is 5% and similar for gestational diabetes, at 6%, though variation by region exists. Of note, the Eastern region had the highest percentage of gestational hypertension diagnosis (8%) compared to Central (5%) and Northwest (4%); which is, similarly, the region of the service area where median household income, education

[44] ACOG Committee on Practice Bulletins. ACOG Practice Bulletin. Clinical management guidelines for obstetrician-gynecologists. Number 60, March 2005.
[45] Pregestational diabetes mellitus. Obstetrics and Gynecology. 2005;105(3):675–685. Reaffirmed 2014: www.acog.org/Resources-And-Publications/Practice-Bulletins-List

levels, and other pertinent social, economic, and comparable determinants of health generally vary (and are notably lower).

Older adults

In 2012-2016, there was an average of 250,553 adults 65+ in the acute care service area. As mentioned, the older adult population in this service area is projected to grow 15% between 2018-2023. The Central region has the highest concentration of ZIP codes where roughly 25% of the population is 65 and older. Across the MLH acute care service area, 22% of older adults (60+ years old) report being in fair or poor health. The Eastern region has the highest percentage of older adults in fair or poor health (30%); the Central region has the lowest (16%).



Additionally, 33% of older adults in the acute care service area have at least one limitation in the Instrumental Activities of Daily Living (IADL) (e.g., cleaning and maintaining a home, managing money), and 16% of older adults have at least one limitation in the Activities of Daily Living (ADL) (e.g., eating, bathing, dressing) in the MLH acute care service area.[46] ADLs contribute to the health status and well-being for older adults, and a higher percentage of older adults in the Eastern region have ADL (21%) and IADL limitations (44%) compared to the Northwest (13% have ADL; 26% have IADL) and Central (8% have ADL; 19% have IADL).

Adults with ADLs and IADLs often receive informal help with their personal care needs, such as eating, dressing, bathing, and going to the bathroom. This informal help can come from family members, friends, neighbors, or others. When informal assistance from family or friends is not

[46] PHMC's 2018 Southeastern Pennsylvania Household Health Survey

available or otherwise insufficient to meet their needs, older adults may opt to pay for formal care services in their home. This can be from someone from an agency or hired support, and these services may include medical injections, bandage changes, grooming, cooking, or shopping. Additional disparate impact can occur as a result of co-experiencing ADL limitations with socioeconomic constraints. For example, formal care services are often expensive, making it difficult for low-income individuals with ADL limitations without family or other informal social supports in place to access.

Regardless of whether or not assistance is formal or informal, support can be valuable for older adults living independently and for those who wish to return to or maintain independence, and to mitigate increased risk of social isolation among older adults. ADL and IADL limitations put older adults at risk for unintentional injury, social isolation, and decline in their physical health.

One indicator of social isolation, "talking with friends or relatives less than once a week," was 7% for the MLH acute care service area when compared to remainder SEPA region (5%).[47] Additionally, 10% of older adults in the MLH acute care service area reported having four or more signs of depression.[48] Older adults are at greater risk of depression and social isolation. MLH is in a position to target programming, education and rehabilitation services to meet the needs of older adults in its acute care service area.

LGBTQ COMMUNITIES

While efforts to socially accept and affirm LGBTQ communities in the US are improving, these communities disproportionately experience stigma and discrimination as well as inconsistent access to affirming and informed health care at multiple levels.[49] As mentioned, the MLH acute care service area is affluent and performing better than SEPA along a number of indicators, and global health status is generally good. For example, 82% of adults identifying as LGBTQ compared to 83% of cisgender, heterosexual peers reporting "good to excellent health."[50]

However, LGBTQ communities experience more issues with access to care—and some subpopulations may be particularly vulnerable. In the MLH acute care service area:

- Fewer adults identifying as LGBTQ say they have a regular source of care (83% compared to 87% of cisgender, heterosexually identifying adults)
- Fewer adults identifying as LGBTQ have visited a health care provider in the past year (84% compared to 89% of cisgender, heterosexually identifying adults)[51]
- Among adults identifying as LGBTQ with a regular source of care, more go to a community health center or public clinic than non-LGBT adults (11% compared to 5% cisgender, heterosexually identifying adults)
- More adults identifying as LGBTQ go to a hospital outpatient clinic (11% compared to 7% of cisgender, heterosexually identifying adults)

[47] PHMC's 2018 Southeastern Pennsylvania Household Health Survey
[48] As measured on the CES-D 10-Item Depression Scale
[49] National LGBT Health Education Center's Understanding the Needs of LGBT People
[50] To create LGBTQ category, two variables were used. Those who answered the question "What is your gender?" as "transgender man", "transgender woman", "do not identify as either/non-binary/gender non-conforming" or "another identity" were coded as LGBTQ. Those who answered question about sexual identity as "gay or lesbian", "bisexual", or "another identity" were coded as LGBTQ.
[51] Pearson's chi square $p<.05$

- Fewer adults identifying as LGBTQ in the acute care service area use a private doctor's office as a regular source of care (70% compared to 82% of cisgender, heterosexually identifying adults)
- More adults identifying as LGBTQ are uninsured (16%) compared to 9% of cisgender, heterosexually identifying adults [52]
- More adults identifying as LGBTQ have gone without health care due to cost (18% compared to 9% of cisgender, heterosexually identifying adults)
- More adults identifying as LGBTQ have gone without prescription medication due to costs (18% vs. 12% of cisgender, heterosexually identifying adults)

MLH can position itself to better assess available community assets, infrastructure, and inclusivity scope and efforts for LGBTQ acute care service area residents. MLH is also well-positioned to consider expanding community-based partnerships serving and advocating with LGBTQ communities, as well as focusing programming, services, and workforce education (e.g., provider training) within the MLH system about LGBTQ communities.

NEXT STEPS AND RECOMMENDATIONS

The MLH acute care service area remains an affluent community with a stable population and growing older adult community, supported by effective programming locally and regionally (such as Cruisin' Smart, with tri-state presence and reach, and Deaver Wellness Farm, which cultivates the connection between food insecurity and health, generating more than 13,000 pounds of produce since 2016).

MLH is firmly positioned to broadly target awareness efforts, outreach and education to its workforce, patients and community, particularly given overall, "good" community health. MLH should consider:

- Expanding scope of acute care services focused on mental health care across the service area, with special attention to older adults and women of child-bearing age, as well as the Northwest region
- Strengthening linkages and coordination of care between usual (or physical health care) and mental health care where possible
- Assessing priorities around access to affordable healthcare and identifying areas of opportunity and partnerships to increase access to care for uninsured and under-insured
- Strengthening cross-sector collaborations and partnerships with local health departments, police force, schools, transportation, sanitation, etc., to leverage shared assets across community given impact to individual and community health
- Increasing partnerships with the American Cancer Association to provide education around cancer risk and to provide resources to survivors of stroke
- Educating patients about risk factors for stroke, such as obesity, smoking, high blood pressure, diabetes
- Expanding community programming for chronic disease management or partnerships with organizations who do so, with particular attention to the Eastern region

[52] Pearson's chi square p<.001

- Expanding collaborations with organizations that provide services and programs for older adults specifically and service area broadly that bring the hospital to the community(ies) it serves
- Concentrating efforts and partnerships with grassroots community-based organizations to mitigate health disparities; consider pockets of Eastern service area where low socioeconomic status and other social determinants of health are persistently present
- Providing education to patients about acute care treatment and services, as well as how it differs from rehabilitation care
- Assessing Eastern region infrastructure, and expanding prevention services (particularly to areas or sub-populations disproportionately impacted by sociodemographic or other health disparities)
- Strengthening hospital discharge process and continuity in coordination of care to mitigate return to hospital and transitional care from hospital to home

MLH is well-positioned to globally focus on community health in its service area, given general affluence, available resources, and community infrastructure (i.e., strong school, police, local business, civic association engagement and presence). A 2018 report in Modern Healthcare spotlights some important concepts:[53]

- Efforts to improve communities have largely been siloed across the country and little collaboration exists; hospitals would benefit from a cooperative approach
- Evidence shows that health fairs and screenings don't make a big difference, working on access and health equity and impacting social conditions does
- Hospitals are doing a better job of communicating with the community through these CHNAs, though without frequent re-assessments, "the disconnect between a hospital's mission and the community's expectations will likely grow"

MLH can take a "deep dive" approach about its existing programs and, between CHNA cycles, conduct more deliberate and ongoing evaluation of its programs to understand program effectiveness, impact, and potential to be replicated and/or sustained. MLH may also want to consider priority areas and opportunities across acute care and rehab CHNA reports, and moving beyond goal setting in developing strategic implementation plans separately to develop multiple metrics assessing areas where the needle may be moved overall.

[53] Kacik, A. Flaws in reporting create knowledge vacuum regarding community benefits. Modern Healthcare InDepth. 2018; 20-26.