

2019

COMMUNITY HEALTH **NEEDS ASSESSMENT**

Bryn Mawr Rehab Hospital



Main Line Health®
Bryn Mawr Rehab Hospital

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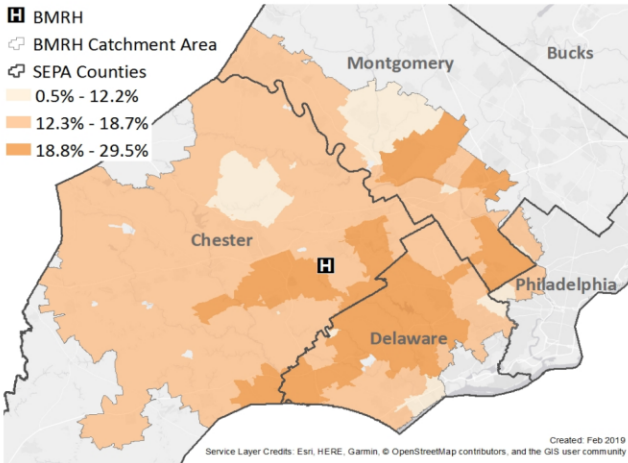
Main Line Health Bryn Mawr Rehab Service Area Community Health Needs Assessment At-A-Glance 2019

KEY HEALTH FINDINGS

MLH BRYN MAWR REHAB SERVICE AREA: OLDER ADULT HEALTH ¹

The 65+ older adult population is projected to increase 15% between 2018-2023.

There is a high concentration of older adults living in close proximity to BMRH.



Partnerships and programming should target expansion in Chester and Montgomery counties where higher concentrations of younger adults live.

HEALTH STATUS ²

80% of older adults reported good to excellent health †

10% reported having a limitation in activities of daily living (ADLs) †

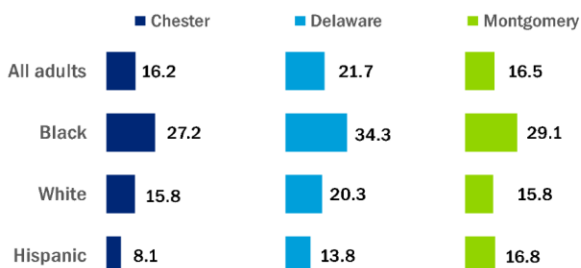
23% reported having a limitation in instrumental activities of daily living (IADLs) †

27% have fallen in the past year

63% would like to remain in their current home for ten or more years

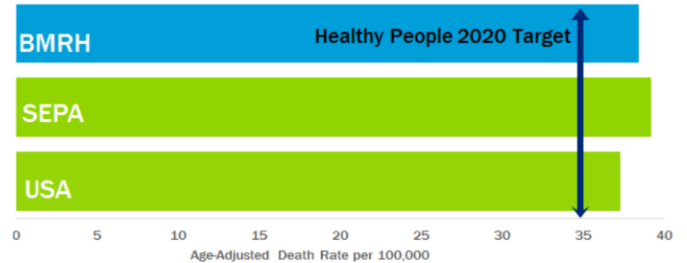
† When compared to remainder of SEPA region, BMRH is doing significantly better along each of these indicators ($p < .05$).

Of the 3 counties BMRH serves, Delaware county had the highest stroke hospitalization rate among Medicare beneficiaries (65+) when compared to Montgomery and Chester counties. Black adults had higher rates of stroke hospitalization among Medicare beneficiaries when compared to other race and ethnicities. This is especially true for Delaware county, which has a higher percentage of minorities, and higher levels of low-income households.



AGE ADJUSTED STROKE MORTALITY RATES, 2012-2016

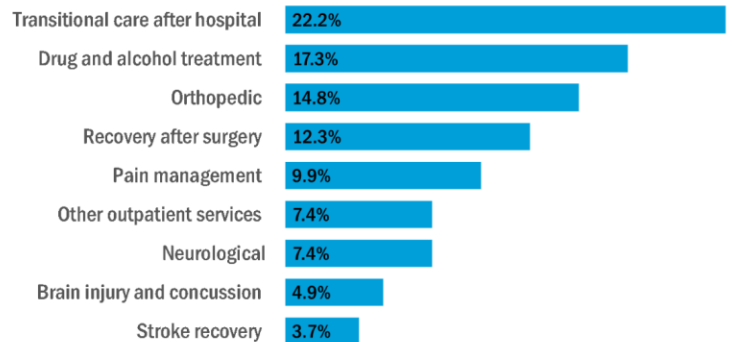
Bryn Mawr Rehab service area's stroke mortality rate is lower than the SEPA region, but does not meet Healthy People 2020 goal (34.8)^{4,5}



COMMUNITY MEMBER - IDENTIFIED NEEDS FOR REHAB SERVICES ⁶

Spotlights from an online survey of BMRH service area residents below reveal a list of rehab services seen as important to community members. This survey was administered through an MLH patient community newsletter.

Community members often cite transitional care as a service that is needed in the community.



COMMUNITY HEALTH PRIORITY NEEDS

- Stroke** is a leading cause of disability and death and ranked higher as a cause of death in the BMRH service area than nationally (3rd vs. 5th, respectively). It is also leading cause of serious long-term disability, and reduces mobility in more than half of stroke survivors age 65 and over.
- Injury prevention:** Injuries are a leading cause of death nationally for children and adults < 44 years old. Falls among older adults is one common cause of injury in the rehab population; 27% of older adults in the BMRH service area report falling within the past year.
- Health inequities:** Differences in mobility or in morbidity and mortality rates may differ for age, racial/ethnic or socio-economic groups, pointing to health inequities uniquely impacting communities receiving rehabilitation services and care.

Sources:

1. 2012-2016 U.S. Census Bureau American Community Survey, 2018 Claritas Pop-Facts®. Calculations prepared by PHMC. 2. PHMC's 2018 Southeastern Pennsylvania Household Health Survey, N=7501. Due to sampling, data about falls, IADLs, ADLs, and home care represent only older adults in Montgomery and Philadelphia counties. 3. Stroke Hospitalization Rates, 2013-2015, Adult Medicare beneficiaries, age 65+. CDC Division for Heart Disease and Stroke Prevention. https://www.cdc.gov/dhsp/maps/national_maps/stroke_hospitalization_all.htm; 4. 2018 CHDB Demographic Product with primary data sources: 2012-2016 mortality data from PA Department of Health, Bureau of Health Statistics and Registries; These data were provided by the Pennsylvania Department of Health (PA DOH). The PA DOH specifically disclaims responsibility for any analyses, interpretations, or conclusions. Claritas 2018 Pop-Facts®, American Community Survey, 2012-2016. 5. Healthy People 2020 [Internet]. Washington, DC: U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion [cited February 25, 2019]. Available from: <https://www.healthypeople.gov/2020/topics-objectives/topic/heart-disease-and-stroke/objectives> 6. 2019 MLH Community Member Survey; N=84 respondents.

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EXECUTIVE SUMMARY

This report presents the findings from the Bryn Mawr Rehabilitation Hospital (BMRH) 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 in the BMRH service area. BMRH, a specialized rehabilitation hospital located in Malvern, Pennsylvania, provides specialized inpatient and outpatient services for amputations, brain injuries, spinal cord injuries, neurological conditions, and orthopedics.

The BMRH service area population size is 1,378,665 and includes large portions of Chester and Delaware County, nearly one-third of Montgomery County, and a small section (far west) of Philadelphia. BMRH's service area is generally affluent – the 2018 median household income was \$89,308, 46% have at least a bachelor's degree, and 6% of area residents are unemployed. Majority of BMRH service area residents are adults (78%), white (73%), and female (52%).

Community Health Needs

The CHNA identified unique areas and opportunities where MLH can focus efforts to maintain and elevate BMRH area residents' health status, including: **1) Stroke**, considering that is a leading cause of disability and death, **2) Injury prevention**, and **3) Health inequities**, in access to rehabilitation care and services.

Stroke is the 5th leading cause of death nationally and the **3rd leading cause of death in the BMRH service area**. Stroke mortality rates in the BMRH service area have increased since the previous CHNA (38.4 per 100,000 in 2012-2016 vs. 35.3 per 100,000 in 2009-2012). **Nationally, for every one person that dies from a stroke, four additional people experience and survive a stroke.**¹ Stroke is a leading cause of serious long-term disability, and **reduces mobility in more than half of stroke survivors' aged 65 and over.**²

Injury prevention was identified as a community health need because it is a leading cause of morbidity and mortality in children and adults. Injuries are a leading cause of death nationally for children and adults aged 44 years and younger.³ Those who survive a severe injury often require physical, occupational and other rehabilitation services to regain skills and strengthen physical and mental health. Accidents were the fourth leading cause of death in the BMRH service area from 2012-2016, causing 563 deaths annually. **Falls among older adults is a common cause of injury in the rehab population.** Interestingly, the 65+ older adult population is projected to increase 15% between 2018-2023 in the BMRH service area - underscoring the need and likely increase in demand for fall prevention services and programming. According to the 2018 South Eastern Pennsylvania Household Health Survey (SEPA HHS), 27% of older adults in the BMRH service area reported falling within the past year.

¹ The Internet Stroke Center (2018). Stroke Statistics [webpage]. Retrieved from <http://www.strokecenter.org/patients/about-stroke/stroke-statistics/>

² Benjamin EJ, Blaha MJ, Chiuve SE, et al. on behalf of the American Heart Association Statistics Committee and Stroke Statistics Subcommittee. Heart disease and stroke statistics—2017 update: a report from the American Heart Association. *Circulation*. 2017;135:e229-e445.

³ Centers for Disease Control and Prevention (2018). Key Injury and Violence Data [webpage]. Retrieved from https://www.cdc.gov/injury/wisqars/overview/key_data.html

Differences in morbidity and mortality rates between people from different racial groups, social or economic classes point to **health inequities broadly and also those uniquely impacting communities receiving rehabilitation services and care**. While the BMRH service area is generally affluent (in terms of income and education levels), variation in certain health indicators among racial and age groups is notable. For example, blacks have the highest rate of death due to stroke and black adults had disparately higher rates of stroke hospitalization among Medicare beneficiaries (adults 65+). Delaware County had the highest stroke hospitalization rate when compared to Montgomery and Chester counties, coinciding with DE County having a higher percentage of minorities and higher levels of low-income households.

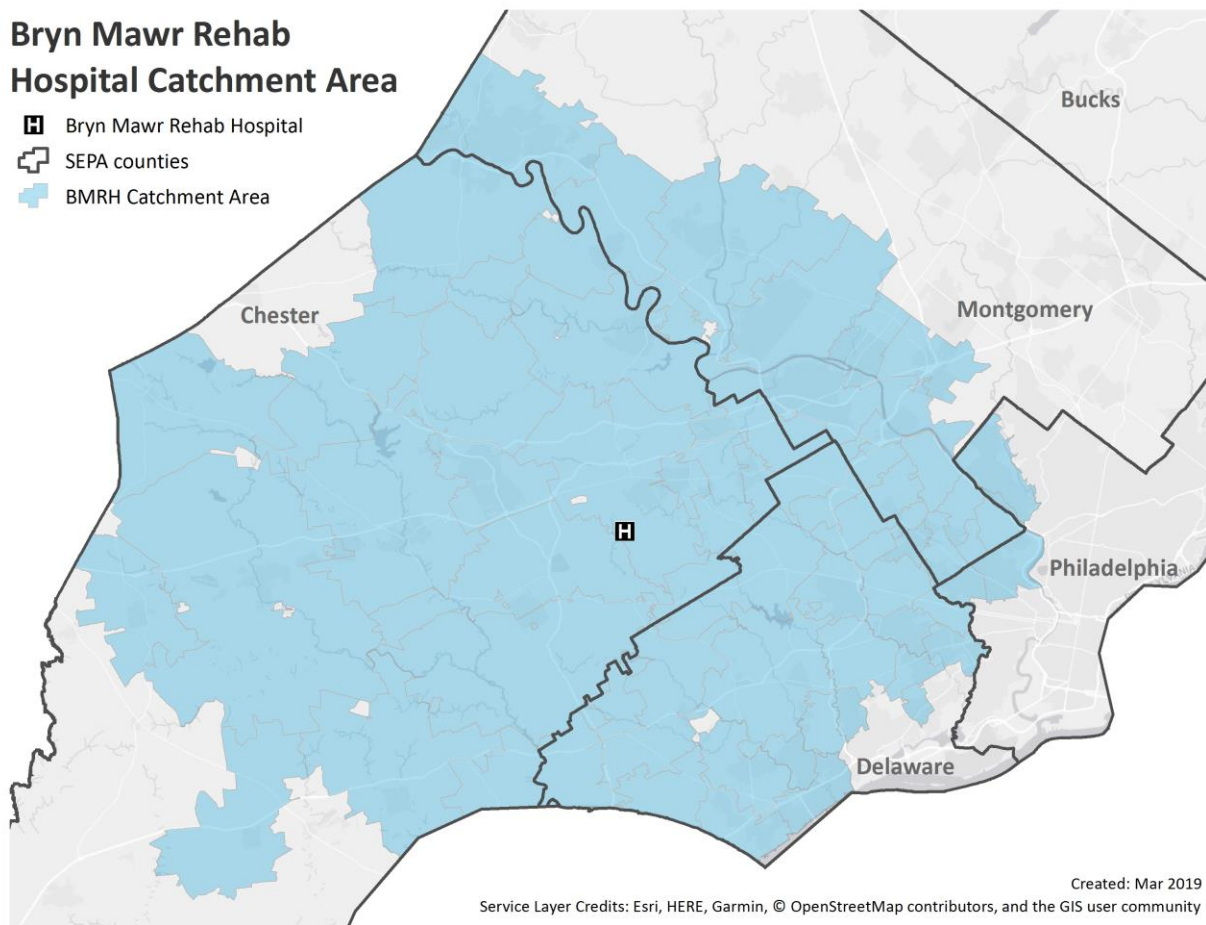
Among older adult BMRH service area residents, according to the SEPA HHS, blacks report disproportionately higher limitations in activities of daily living (ADLs) when compared to whites. Of note, the older adult population is more likely to experience social isolation than younger adults and also more likely to experience injuries as a result of falls.

Local programming and partnerships in the MLH BMRH service area are highly valued in the organization and effective. To further address community health needs for BMRH service area residents, findings from this CHNA analysis suggest expanding partnership and programming reach to counties where health outcomes are disparately impacted by stroke morbidity and mortality and to older adults across BMRH service area.

INTRODUCTION

MLH includes four hospitals located throughout the Southeastern Pennsylvania (SEPA) region, a large multi-specialty network, a treatment center for drug and alcohol recovery, health centers, as well as a home care and hospice program. MLH is also an equity holder in Physicians Care Surgical Hospital. In addition, it includes BMRH, the focus of this CHNA. BMRH, a specialized rehabilitation hospital located in Malvern, Pennsylvania, includes specialized inpatient and outpatient services for amputations, brain injuries, spinal cord injuries, neurological conditions, and orthopedics, to name a few. MLH maintains and develops strong community-based partnerships regularly, and is highly committed to the communities it serves. Additional information about the health system, BMRH, and its services is available at: mainlinehealth.org/about.

The BMRH service area population size is 1,378,665. MLH, a non-profit health system, serves portions of Philadelphia and its western suburbs, including, large portions of Chester and Delaware County, nearly one-third of Montgomery County, and a small section (far west) of Philadelphia (BMRH service area map illustrated below).



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 BMRH service area community residents and community partners (PHMC qualifications in Appendix C). Additionally, the CHNA partnership team (including MLH and PHMC) was highly multidisciplinary, 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 2,529 adult residents (including 1,370 60+ years old adults) in the BMRH service area, then analyzing and comparing the results with the remainder SEPA region (N = 4,901, including 2,050 60+ year old adults)
- Comparing to national **Healthy People 2020 (HP2020) targets** (national benchmark data) for fatal injury rates, as well as accident, stroke and cancer mortality rates, using the **vital statistics** data from the Pennsylvania Department of Health⁴
- Comparing county-level data about stroke hospitalization rates and data about mobility and cognitive disabilities, using the **Centers for Disease Control and Prevention, Division for Heart Disease and Stroke Prevention**⁵ and the **2013-2017 American Community Survey**⁶
- **2018 United States Census data estimates provided by Claritas Pop-Facts® Premier** identifying state-level demographic indicators (such as race, income, employment status) and corresponding maps to inform geographical relationships and demographic determinants thought to disproportionately impact certain communities
- Conducting a **patient focus group** with BMRH users and service area residents as well as **key informant interviews** with community partners
- 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, and including questions specifically addressing rehab populations

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

⁴ Pennsylvania Department of Health, Bureau of Health Statistics and Registries. (2018). *2012-2016 Mortality* [Data file]. Calculations by PHMC.

⁵ Centers for Disease Control and Prevention, Division for Heart Disease and Stroke Prevention. (2018). *2013-2015 Stroke hospitalization all* [Data file] https://www.cdc.gov/dhdsp/maps/national_maps/stroke_hospitalization_all.htm

⁶ U.S. Census Bureau American Community Survey, 2013-2017 5 year estimates. *Disability characteristics*. <https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>

BMRH COMMUNITY HEALTH PRIORITY NEEDS

The BMRH service area is performing better across most health indicators when compared to the remainder SEPA region according to the 2018 SEPA HHS.⁷ For example, 85% of residents said their health was good to excellent (compared to 79% in remainder SEPA region), only 24% visited the emergency room in the past year (compared to 29% in remainder SEPA region), and a large majority (90%) of older adults live without limitations to their activities of daily living (compared to 84% remainder SEPA region). However, there are unique priority areas where MLH can focus efforts to maintain and elevate BMRH area residents' health status, highlighted below.

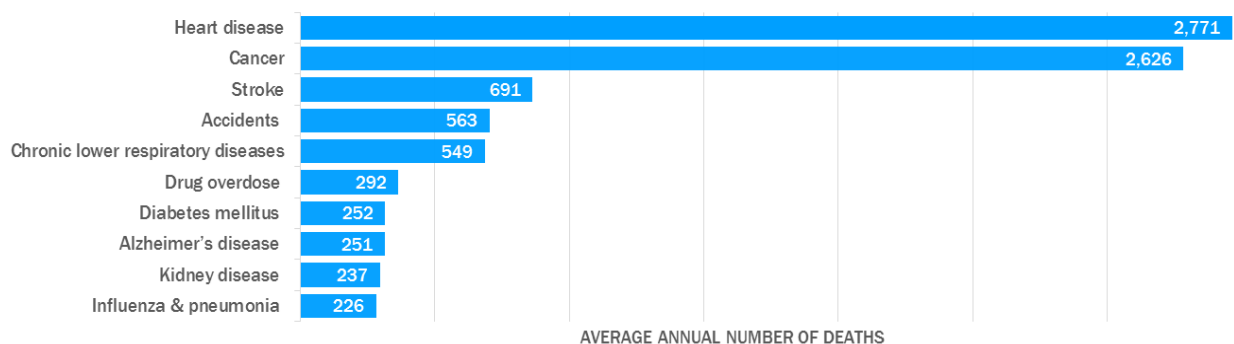
Stroke – Leading Cause of Death and Disability

Stroke was identified as a health need for the BMRH service area considering the following:⁸

- Stroke is ranked higher as a cause of death in the BMRH service area than nationally (3rd vs. 5th, respectively)
- The mortality rate (38.4 per 100,000) due to stroke is higher than the H.P. 2020 goal (34.8 per 100,000)
- Stroke mortality rates in the BMRH service area have increased since the previous CHNA (38.4 per 100,000 in 2012-2016 vs. 35.3 per 100,000 in 2009-2012)
- Compared to all causes of death, a higher percentage of stroke deaths in BMRH service area occur in females (62% vs. 52%) and those aged 85 and older (54% vs. 39%)

Stroke was the third-leading cause of death in the BMRH service area causing 691 deaths annually between 2012-2016.

BMRH LEADING CAUSES OF DEATH | 2012-2016

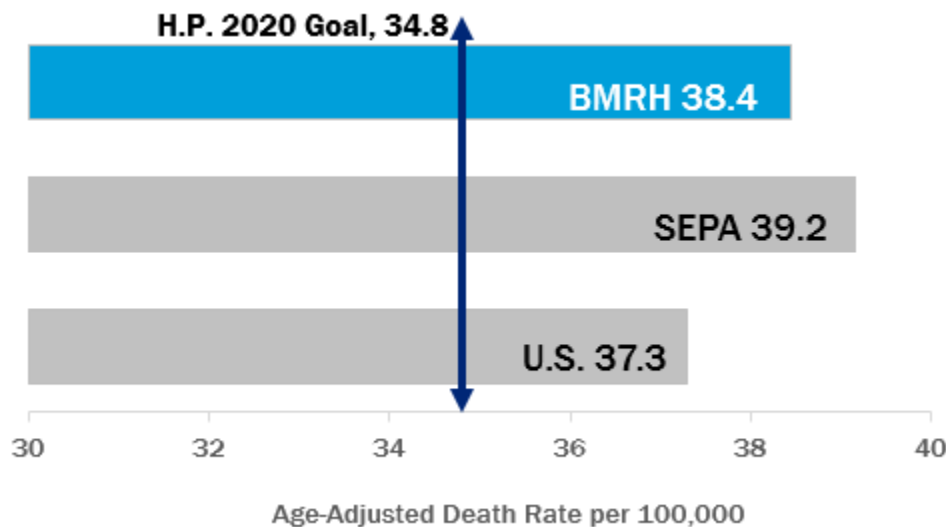


The BMRH service area has a higher stroke mortality rate (38.4 per 100, 000) than the U.S. (37.3 per 100,000), although it is lower than SEPA (39.2 per 100,000).⁹

⁷ PHMC's 2018 Southeastern Pennsylvania Household Health Survey.

⁸ Pennsylvania Department of Health, Bureau of Health Statistics and Registries. (2018). *2012-2016 Mortality* [Data file]. Calculations by PHMC.; Xu JQ, Murphy SL, Kochanek KD, Bastian B, Arias E. Deaths: Final data for 2016. National Vital Statistics Reports; vol 67 no 5. Hyattsville, MD: National Center for Health Statistics. 2018.

Neither the BMRH service area nor SEPA reach the HP2020 goal of having no more than 34.8 stroke deaths per 100,000 in the population.



Stroke costs in the U.S., including cost of medications to treat stroke, missed days of work, and health care service costs (e.g., hospitalization), are an estimated \$34 billion each year.¹⁰ Stroke is a leading cause of serious long-term disability, and reduces mobility in more than half of stroke survivors age 65 and over.¹¹ Patients who are hospitalized for stroke are often in need of rehabilitation services to help them relearn skills, in particular when they experience damage to the brain. Depending on the severity of the stroke, patients may need ongoing in- or outpatient rehabilitation.

Disabilities

As mentioned, stroke is a leading cause of serious, long-term disability. Disabling conditions such as stroke, spinal cord injury, and multiple sclerosis are often treated in an inpatient or outpatient rehabilitation setting. Along these lines, 43% of traumatic brain injury acute hospitalization discharges will end up having long-term disabilities, and an ongoing need for rehabilitation services.¹² While BMRH has a lower percentage of individuals with disabilities than the SEPA region (11% vs. 12%), racial minorities and older adults are notably impacted in this service area¹³ (see Appendix K for definitions of disabilities).

⁹ Pennsylvania Department of Health, Bureau of Health Statistics and Registries. (2018). *2012-2016 Mortality* [Data file]. Calculations by PHMC.

¹⁰ Centers for Disease Control and Prevention (2018). Stroke Facts [webpage]. Retrieved from <https://www.cdc.gov/stroke/facts.htm>

¹¹ Benjamin EJ, Blaha MJ, Chiuve SE, et al. on behalf of the American Heart Association Statistics Committee and Stroke Statistics Subcommittee. Heart disease and stroke statistics—2017 update: a report from the American Heart Association. *Circulation*. 2017;135:e229-e445.

¹² Ma, V. Y., Chan, L., & Carruthers, K. J. (2014). The Incidence, Prevalence, Costs and Impact on Disability of Common Conditions Requiring Rehabilitation in the US: Stroke, Spinal Cord Injury, Traumatic Brain Injury, Multiple Sclerosis, Osteoarthritis, Rheumatoid Arthritis, Limb Loss, and Back Pain. *Archives of Physical Medicine and Rehabilitation*, 95(5), 986-995.e1. <https://doi.org/10.1016/j.apmr.2013.10.032>

¹³ U.S. Census Bureau American Community Survey, 2013-2017 5 year estimates. *Disability characteristics*. <https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml> Calculations by PHMC.

- In SEPA and BMRH, Blacks have the highest percentage of individuals with disabilities when compared to Whites (SEPA: 16% Black and 12% White respectively; BMRH: 14% Black and 10% White respectively)
- 14% of Blacks have a disability compared to 10% of whites and 5% of Asians in the BMRH service area
- Adults 65+ years old have the highest percentage of individuals with an ambulatory disability when compared to adults 18-64 (BMRH: 19% vs. 6% respectively)
- Those with ambulatory disabilities are more likely to have difficulties performing self-care and living independently; 24% of older adults (75+ years old) in the BMRH service area experiences difficulties living independently, and 11% have difficulties with self-care

Injury Prevention

Injuries are a leading cause of death nationally for children and adults aged 44 years and younger.¹⁴ Those who survive a severe injury often require physical, occupational and other rehabilitation services to regain skills and strengthen physical and mental health. Injury prevention was identified as a health need for the BMRH service area since:

- The BMRH service area has a fatal injury mortality rate of 55.0 deaths per 100,000 people, which, exceeds the HP2020 goal of 53.7 per 100,000 people. The SEPA region, with 65.7 per 100,000 fatal injury deaths in the population, is falling short of meeting the HP2020 goals as well.^{15,16}
- The BMRH service area has a fatal brain injury rate of 9.84 per 100,000 and fatal spinal cord injury rate of 0.24 per 100,000 people
- Accidents were the fourth leading cause of death in the BMRH service area from 2012-2016, causing 563 deaths annually
- The age-adjusted mortality rate due to falls (multiple causes of death) in the BMRH service area was 8.8 per 100,000 people, or 157 fall deaths on average each year, which is comparable to the fall mortality rate in Pennsylvania (8.9 per 100,000 people).¹⁷ The BMRH service area and Pennsylvania both fail to meet the HP2020 goal of 7.2 per 100,000 people in population
- The BMRH service area has a lower accident mortality rate (37.6 per 100,000 people) than SEPA (44.9 per 100,000) and the U.S. (47.4 per 100,000), although neither of these areas meet the HP2020 target of 36.4 deaths per 100,000 in the population – illustrated below

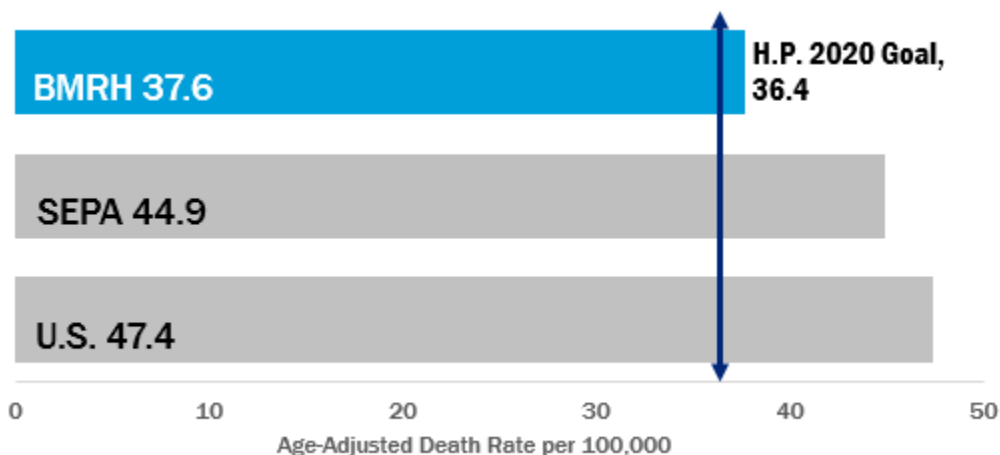
¹⁴ Centers for Disease Control and Prevention (2018). Key Injury and Violence Data [webpage]. Retrieved from https://www.cdc.gov/injury/wisqars/overview/key_data.html

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

¹⁶ The calculations for BMRH service area are likely lower than reality because some injuries (e.g., due to motor vehicle accidents) occur out-of-state and therefore would not be included in the Pennsylvania mortality vital statistics. Motor vehicle accident deaths outside PA in 2012-2016, by county: Chester: 19%, Delaware: 21%, Montgomery: 7%, Phila: 7%. <https://www.health.pa.gov/topics/HealthStatistics/VitalStatistics/DeathStatistics/Pages/death-statistics.aspx>

¹⁷ Bridged-race Population Estimates; Centers for Disease Control and Prevention, National Center for Health Statistics and U.S. Census Bureau (CDC/NCHS and Census) National Vital Statistics System-Mortality (NVSS-M); Centers for Disease Control and Prevention, National Center for Health Statistics (CDC/NCHS). <https://www.healthypeople.gov/2020/data/map/4752?year=2016>

BMRH has a lower age-adjusted accident mortality rate than SEPA and the U.S., but does not meet the HP2020 goal.



Health Inequity

According to the World Health Organization, health inequality refers to differences in health status or in the distribution of health determinants between different population groups.¹⁸ For example, differences in mobility between elderly people and younger populations or differences in mortality rates between people from different racial groups, or social or economic classes. Some health inequalities are attributable to the external environment and conditions mainly outside the control of the individuals concerned. These resulting health inequalities also lead to inequity in health.

Health inequity was identified as health need for the BMRH service area given the following:

- Variation can be seen among racial groups about perception of health status. According to the SEPA HHS:
 - Among white (non-Latino) BMRH service area residents, 86% rate their health good to excellent, where 80% and 71% of black and Latino respondents respectively noted good to excellent health
 - Among those living below 150% of poverty line, 64% rate their health as good to excellent, while 88% of residents living at or above 150% of poverty line rated their health as good to excellent
 - According to SEPA HHS, significant variation can be seen by race for older adults reporting an activity of daily living (ADL) limitation (whites, 10%; blacks 15%; other, 28%)¹⁹
- Stroke is a leading cause of death and disability, disparately impacting certain sub-populations within the BMRH service area, including blacks, low-income households, and older adults resulting in greater need and utilization of rehabilitation treatment and services as well as patient, community, and societal costs incurred. Within the three counties that BMRH serves:

¹⁸ World Health Organization (2018). Health Impact Assessment [webpage]. Retrieved from <https://www.who.int/hia/about/glos/en/index1.html>

¹⁹ Chi square test of significance, $p < .01$

- Black adults had disparately higher rates of stroke hospitalization among Medicare beneficiaries (adults 65+) (see table below)
- Delaware County had the highest stroke hospitalization rate compared to Montgomery and Chester counties, coinciding with DE County having a higher percentage of minorities, and higher levels of low-income households

Stroke Hospitalization Rate per 1,000 Medicare Beneficiaries, Adults, 65+, 2013-2015²⁰

County	All Adults	White	Black	Hispanic
Chester	16.2	15.8	27.2	8.1
Delaware	21.7	20.3	34.3	13.8
Montgomery	16.5	15.8	29.1	16.8

²⁰ Centers for Disease Control and Prevention, Division for Heart Disease and Stroke Prevention. (2018). *2013-2015 Stroke hospitalization all* [Data file] https://www.cdc.gov/dhdsp/maps/national_maps/stroke_hospitalization_all.htm; *Blacks* [Data file] https://www.cdc.gov/dhdsp/maps/national_maps/stroke_hospitalization_blacks.htm ; *Hispanics* [Data file] https://www.cdc.gov/dhdsp/maps/national_maps/stroke_hospitalization_hispanics.htm ; *Whites* [Data file] https://www.cdc.gov/dhdsp/maps/national_maps/stroke_hospitalization_whites.htm

HEALTH STATUS AND 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, conditions, and 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.²¹ Employment and income affect insurance status and the ability to pay for out-of-pocket health care expenses.

Population Size

The BMRH service area population size is 1,378,665. Between 2010-2018 the population increased 3% overall and is estimated to increase another 1% by 2023. 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 BMRH service area gender distribution (48% male; 52% female) is the same as SEPA (48% male; 52% female). Twenty-two percent of residents in the BMRH service area are between 0-17 years old, 22% are 18-34, 39% are between 35-64, and about 17% are 65 and older. Seventy-three percent of BMRH service area residents are white, 16% are black, 6% are Asian, and 5% identify as another race. Six percent of the population identifies as Latino.²² The population distribution of SEPA compared to the BMRH service area differs somewhat, with SEPA having a slightly larger black population (22% vs. 16%, respectively).



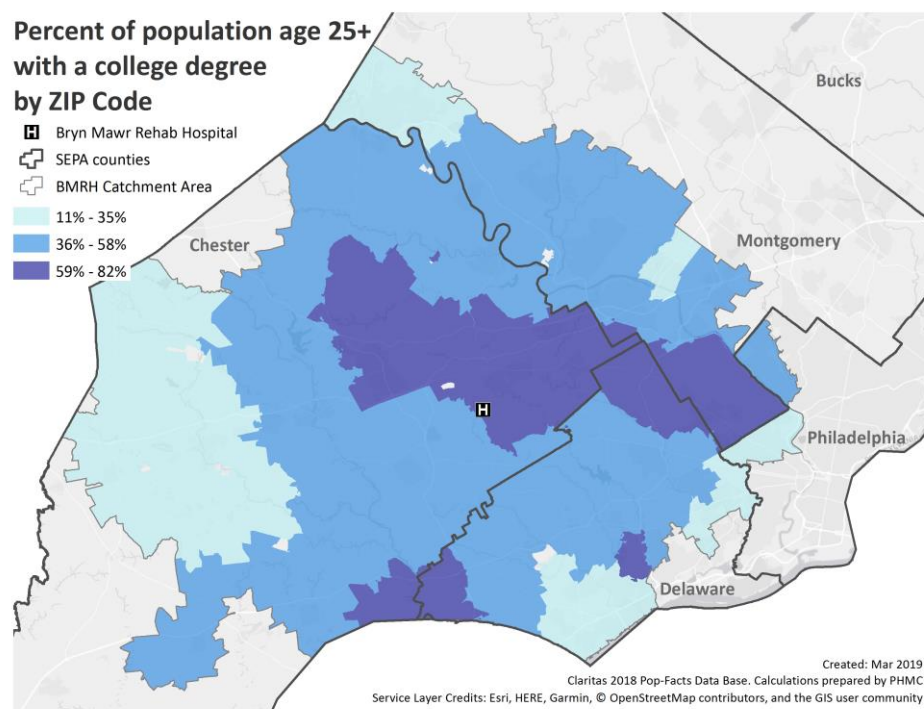
²¹ Mirowsky, J, Ross, CE. *Education, social status, and health*. 2003. New York, NY: Aldine de Gruyter.

²² 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.

Income, Poverty, Employment, Education

The BMRH service area has a higher level of educational attainment, employment, and income as well as lower poverty rates compared with SEPA.

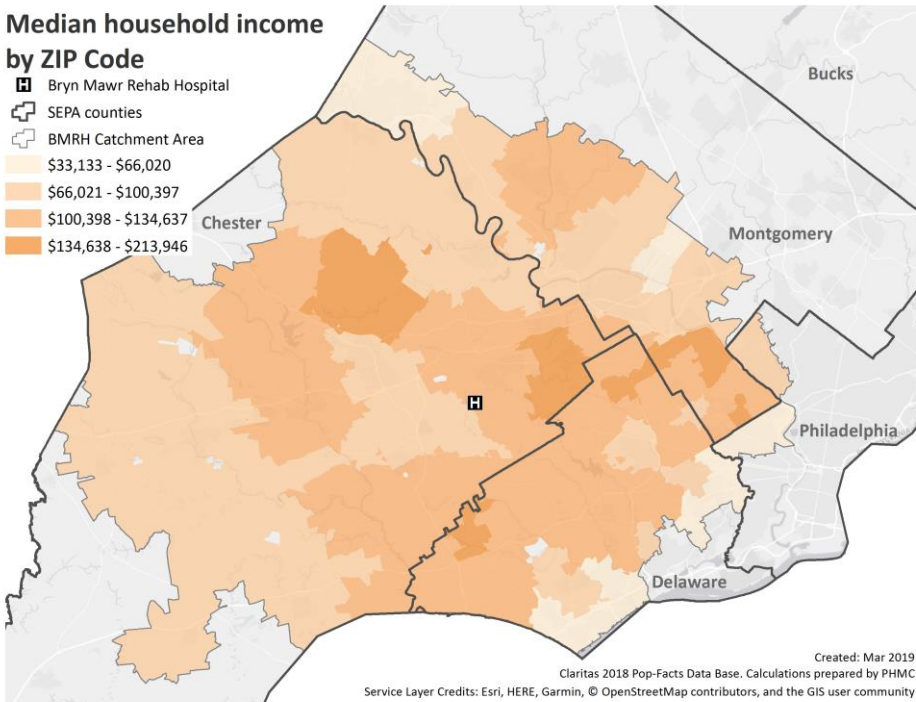
- The 2018 median household income in the BMRH service area was \$89,308 compared to SEPA (\$70,807) and Pennsylvania (\$60,993)²³
- Among families *with children* in the BMRH service area, 10% are living in poverty compared with 16% living in poverty across SEPA; 3% of families *without children* live in poverty in the BMRH service area, while 5% of those same families live in poverty across SEPA
- Among adults 16 years and older, 6% are unemployed in the BMRH service area, which is slightly lower than SEPA (8%) and Pennsylvania (7%)²³
- There are more adults with a bachelor's degree or higher in the BMRH service area (46%) compared to SEPA (37%), Pennsylvania (30%), and the U.S (31%)



As seen above, BMRH's service area is generally affluent – the 2018 median household income was \$89,308, 46% have at least a bachelor's degree, and 6% of area residents are unemployed. However, the map below reveals geographic areas with substantially lower median household income levels. Residents of Delaware County have less financial resources compared to residents of Chester and Montgomery counties. The per capita income in Delaware County is \$39,374 compared to Chester (\$50,008) and Montgomery (\$47,468) counties. Delaware County has a higher percent of households with an annual income less than \$35,000 (23%) compared to Chester (15%) and Montgomery (18%) counties.²⁴

²³ US Census Bureau. Quick Facts Pennsylvania. 2013-2017. <https://www.census.gov/quickfacts/pa>

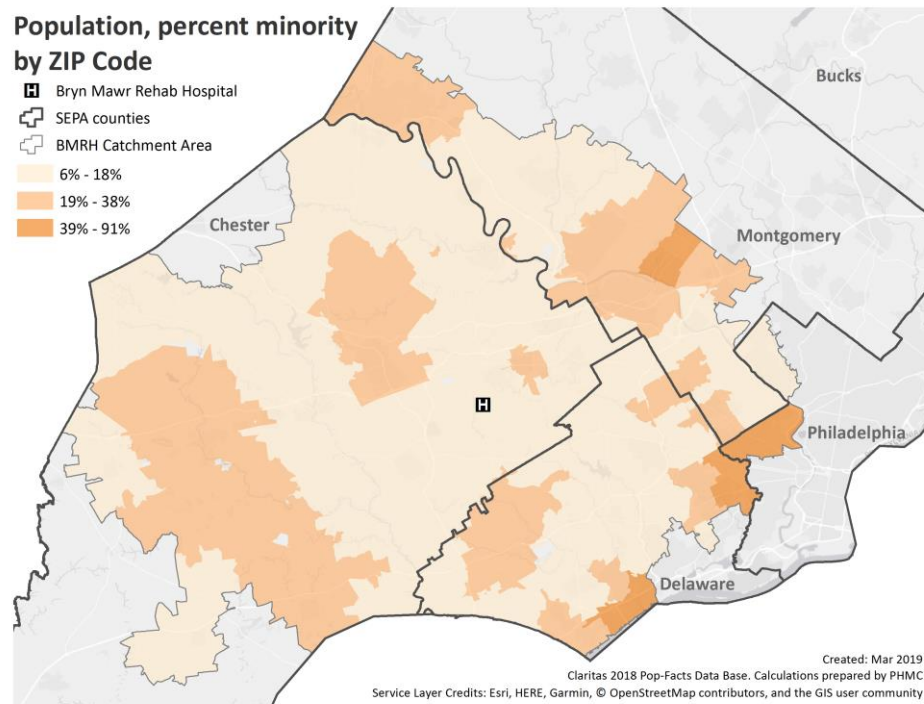
²⁴ 2012-2016 U.S Census Bureau American Community Survey. 2018 CHDB Demographic Product. Calculations by PHMC.



Social Determinants of Health

Social determinants of health such as education, income, and employment in a community impact health risks and outcomes. While the BMRH service area is generally affluent and performing better than SEPA along a number of demographic indicators, there are sections of the service area with lower social determinants of health. BMRH can position itself to expand partnerships in the community, as well as expand programming, services, and workforce and patient education by "targeting" these specific geographical areas, considering that:

- The highest concentration of people with at least a four-year college degree is in the central part of the BMRH service area (see map below)
- The highest concentration of minorities (anyone identifying as non-white) are toward the eastern edges of the BMRH service area
- Those living closer to BMRH tend to have a higher median household income, while families with a lower median household income are along the eastern border
- The eastern border 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 BMRH service area, coinciding with the same areas with a higher percentage of minorities

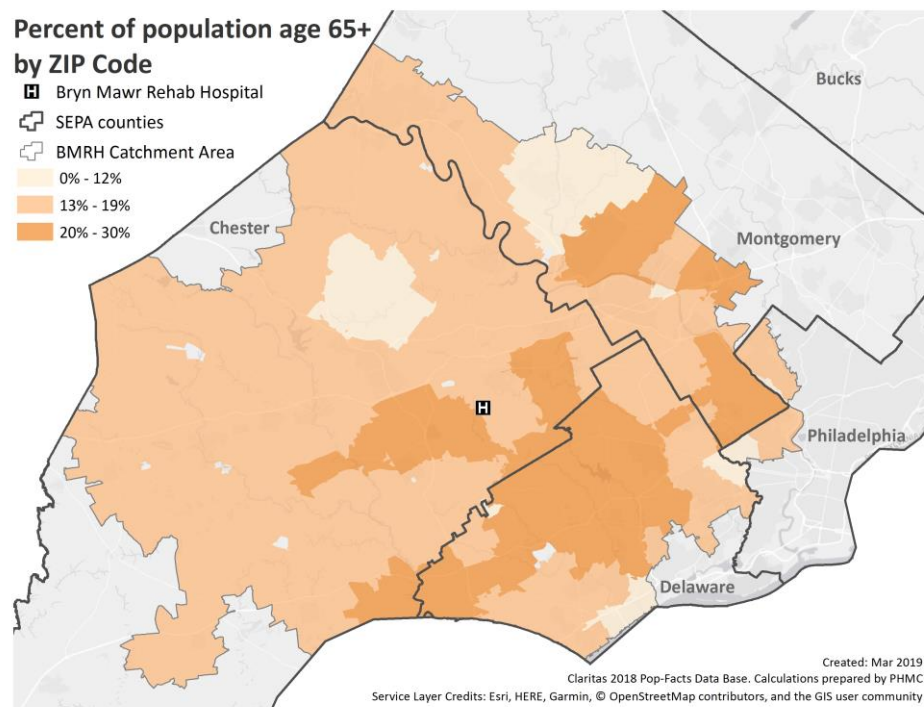


MLH is in a position to target programming along the outer edge of its service area, and specifically the eastern portions, where median income is lower, there are higher levels of unemployment, and greater percentages of minorities reside than the remainder BMRH service area.

POPULATIONS OF INTEREST AND COMMUNITY IMPACT

Older adults

There are sections of Delaware, Montgomery, and Chester counties in which approximately 25% of the population is 65 and older (see Percent population 65+ by ZIP code map below). In 2012-2016, there was an average of 394,922 adults 65+ in the BMRH service area. As mentioned, the older adult population is projected to grow 15% between 2018-2023.



Community Impact

In the BMRH service area 20% of older adults 65+ are in fair or poor health compared to 24% of older adults in SEPA. Although older adult (65+) BMRH service area residents report being in better health compared to older adults in the remainder SEPA region (20% of BMRH service area residents vs. 24% of remainder SEPA region),²⁵ MLH should still consider focusing efforts on the older adult population in the BMRH service area, given the projected 15% growth of the older adult population between 2018-2023, and that older adults are more likely to need rehabilitation services (as a result of increased risk of injury due to falls, elevated stroke risk, for example), which broadly impacts community health and formal/informal supports. Community members and partners also expressed a need to focus strategic programming, services and partner expansion efforts on older adults. The discussion below focuses on key findings from the SEPA HHS specific to older adults as well as results from the community member survey.

²⁵ PHMC's Southeastern Pennsylvania Household Health Survey. See Appendix H for statistical significance testing.

Injury prevention

- Falls among older adults is one common cause of injury in the rehab population; 27% of older adults (60+) in the BMRH service area report that they have fallen within the past year
- In the BMRH service area, among older adults (60+) living below 150% of poverty line, 35% report they have fallen in the past year compared to 26% of those living at or above 150% of poverty line, reflecting the persistently disparate impact to health for certain sub-populations

Aging in place

- 60% of older adults (60+) in the BMRH service area prefer to remain in their current homes for 10+ years, 20% prefer to remain in their home up to 5 more years, while another 20% prefer to remain 5-10 years

For many older adults, “aging in place” and living in one’s own home is important to maintaining independence. Patient focus-group participants also elaborated about aging in place, noting that this is something many older adults strive towards, but also note that this is contingent upon ongoing coordination and collaboration between community organizations and home care services. Services like formal home care are a safety net for keeping older adults in good health and preventing hospitalization, according to BMRH patient focus group participants.

BMRH service area: Activities of daily living (ADL) and instrumental activities of daily living (IADL)

- 23% of older adults (60+) in the BMRH service area have at least one limitation in IADLs, such as house cleaning or grocery shopping
- Ten-percent of older adults have at least one limitation in ADLs, such as bathing or dressing
- The community member survey revealed that, among 6 community members (of 84 respondents) that experience a limitation in ADLs, mobility is most often cited (4 respondents), followed by working and social interactions (3 respondents each), then wheelchair mobility and self-care (2 respondents each)
- According to HHS, among older adults (60+), ADL limitations exist disproportionately between races (whites, 10%; blacks 15%; other, 28%)²⁶
- One of the most prominent ADL limitations, ability to walk, also varies by household poverty status (below 150% of poverty line, 18% need assistance to walk; at or above 150% of poverty line, 7% need assistance to walk)²⁶

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 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.

²⁶Chi square test of significance, $p < .01$

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 isolation²⁷ among older adults. MLH is in a position to target programming, education and rehabilitation services to meet the needs of older adults in its community.

Formal/informal supports and sources of information

- Approximately 38% of older adults (60+) report using informal help with ADLs and 36% report using informal help with IADLs
- Eight percent of older adults in the BMRH service area report having formal care services in their home
- Thirty percent of older adults (60+) who need home care services cite their physician or other health care professional as their primary source for information, 21% find home care information primarily through internet searches, and 19% report that family members serve as their source of information
- 21 community members responded that they or a family member/significant other had discussed the need for respite care

Considering that 30% of older adults cited their physician as the primary source from which they would get information about home or transitional care (described below), how well informed or prepared are physicians to share information about available resources, and do physicians know what rehab-specific services exist for the communities they serve ongoing?

Some community partners who work with lower-income older adults echoed that these individuals rely on their physician and senior centers to connect them with necessary resources to continue living independently. Physicians are recognized as a critical community stakeholder; they are trusted and respected sources of information. Similarly, patients expect that physicians should have places to refer people to for help.

Perception of Community Impact

MLH is well-positioned to expand local partnerships, workforce and patient education programs around pertinent rehabilitation topics, as well as outreach and awareness efforts for the BMRH service area. Over the course of this CHNA report process, key informant interviews, patient focus groups, and online surveys with community members and partners elicited more data about community perception of health needs and “real world” impact. This section highlights some key themes from BMRH service area community constituents.

Transportation

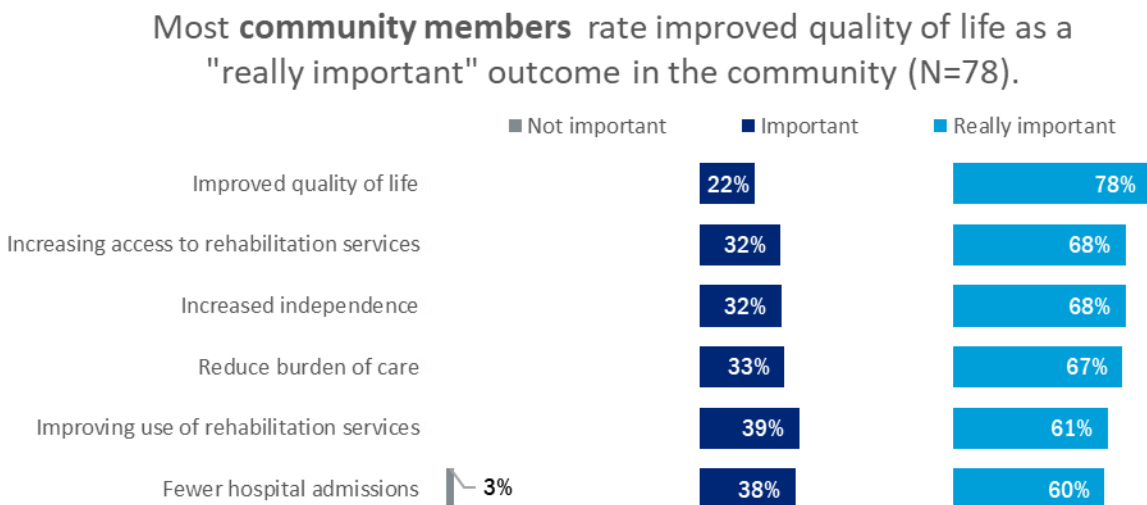
Having available transportation and convenient access to it are well-known facilitators (or barriers) to health care. It is also well-recognized that limited or no access to transportation can disparately impact certain populations. Community members and partners perceive that BMRH can better address transportation. Based on engaging community members and leaders in conversations about community health, there is a perceived need to better address access to and continuity of care between health and transportation systems. Key themes that emerged include:

²⁷ PHMC's 2018 Southeastern Pennsylvania Household Health Survey

- Increasing available transportation and access to public transportation in targeted areas (i.e., further out in BMRH service area; or by county)
- Concentrating efforts to increase availability and access to transportation on especially vulnerable communities (such as older adults, individuals with mobility limits, and those with socioeconomic constraints)
- Increase access to health care services in the community and make them more convenient for patients
- Expanding awareness and education about different types of available transportation (i.e., Uber or Lyft)
- Promote community engagement in health care through transportation (offering transportation on evenings and weekends, bringing people together, and decreasing social isolation)

Disabilities

Community members and partners were asked, “How important are the following outcomes to people living with or caring for someone with a disability,” a majority of community members cited “improved quality of life” (78%) and “increasing access to rehabilitation services” (68%) as really important outcomes to people living with or caring for someone with a disability.



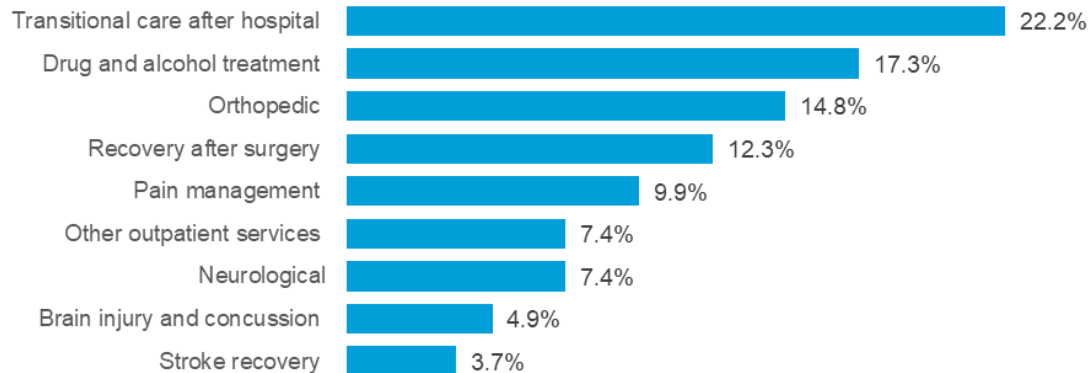
While results are not generalizable, there is a striking difference between community member and partner perception about outcomes that are really important to communities in need of rehab specific services. Among community partners, *fewer hospital admissions, increased independence, and reduced burden of care* were most frequently mentioned as “really important” (with 4 of 8 community partner respondents citing these). On the other hand, increasing access to rehabilitation services and improving use of rehabilitation services were most frequently mentioned by community partners as “not important,” (5 of 8 community partner respondents and 6 of 8 community partner respondents, respectively) which, is strikingly different than community member responses.

Transitional care

Transitional care, the care and coordination involved when a patient moves from one setting (e.g., hospital) to another (e.g., rehabilitation facility or home) was a need identified by community

members. When asked the question, “Which of the following rehabilitation services are needed in your community,” BMRH community residents cited transitional care most frequently (see table below). While this question was not directed solely at older adults, literature suggests that older adults are especially affected by disintegration of care and thus have the highest need for transitional care. This becomes especially important to consider when determining needs for transitional care. Inadequate “handoff” of older adults and their caregivers from hospital to home is tied to adverse events, dissatisfaction with care, and increased rehospitalization rates.²⁸ Transitional care becomes important when considering rehabilitation and return to the community (i.e., back home) as well, particularly for older adults. This population would benefit from an improved process that includes more information, additional reassurance and emotional support, and more assistance in the household.²⁹

Community members often cite transitional care as a service that is needed in the community (N=76).



Mental Health Rehab

Looking ahead, MLH should begin to establish priority areas and goals to tackle the unique challenges and complexities that come with accessing mental health care and needing rehabilitation care and services at the same time. Based on online community member survey feedback, there is a perceived need in the community to better address this intersection (mental health and rehab), including:

- Recognizing the need for greater access to mental health services (broadly) in the community and expressed concerns about accessing behavioral health services given long wait lists
- Increased availability of facilities to support individuals (and their caregivers) with ADL limitations
- Increasing education to physicians and residents about the importance of continuity of care for patients transitioning from acute to sub-acute care³⁰

²⁸ Naylor, M, Keating, S A. . Transitional care. *Am J Nurs*. 2008;108(9 Suppl):58-63; quiz 63.

²⁹ Weaver FM, Perloff L, Waters T. Patients' and caregivers' transition from hospital to home: needs and recommendations. *Home Health Care Serv Q*. 1998;17(3):27-48. PubMed PMID: 10351068.

³⁰ Definition of sub-acute care from Joint Commission on Accreditation of Healthcare Organizations: “Subacute care is comprehensive inpatient care designed for someone who has had as acute illness, injury or exacerbation of a disease process”

- Increased awareness to the public about the unique challenges for health care for mental health patients with physical ailments and/or disabilities

Mental Health Rehab: Older Adults and Cognitive Disabilities

Also, BMRH services currently include access to neuropsychology specialists and specialized therapies addressing cognitive disabilities that occur along with physical injuries (such as traumatic brain injury, concussions). MLH is positioned to consider expanding services scope and focusing on older adults with cognitive disabilities. According to ACS 2013-2017 disabilities data, adults 65+ years old are more likely to have a cognitive disability than other adults (18-34 years old), and 8% of BMRH area residents 65+ have a cognitive disability. Having expanded mental health rehabilitation services for older adults is important for maintaining thinking and problem solving skills as well as independence. It is equally important for their caregivers and family members to have strategies that support maintenance of cognitive ability at home. Additional recommendations are outlined in the section below.

NEXT STEPS AND RECOMMENDATIONS

The BMRH 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. To mitigate the health impact of its identified community health needs (stroke, injury prevention, health inequities), MLH should consider:

- Increasing partnerships with the American Heart Association to provide education around risk for stroke and to provide resources to survivors of stroke
- Educating patients about risk factors for stroke, such as obesity, smoking, and high blood pressure
- Expanding partnerships with safety programs in local health departments and police departments to reduce pedestrian, bicycle and motor vehicle injuries
 - Encourage use of the following: bicycle and motorcycle helmets, seat belts, and pedestrian-designated crossing walks
 - Engage community members through pedestrian education programs, and teen and older adult driver education and testing programs
 - Supporting infrastructure development to create additional safe pedestrian crossings and bicycle lanes
- Collaborating with organizations that provide services and programs for older adults to implement fall prevention classes
- Concentrating efforts and partnerships with grassroots community-based organizations to mitigate health disparities and target pockets of BMRH service area where low socioeconomic status and other social determinants of health are persistently present
- Providing education to patients about rehab treatment and services, as well as how it differs from acute care
- Expanding rehabilitation prevention services (particularly to areas or sub-populations disproportionately impacted by sociodemographic or other health disparities)
- Strengthening hospital discharge process and continuity with sub-acute care to mitigate adverse events around transitional care from hospital to home

MLH should also consider more intentional efforts around preventive rehabilitation and expansion of services and scope. For example, the breast cancer incidence rate in the BMRH service area (139 per 100,000) is higher than in SEPA (134 per 100,000) and does not meet the HP2020 goal (124.8 per 100,000). An estimated one in five women with breast cancer will be diagnosed with lymphedema,³¹ making it more likely that they will need rehab services. Relatedly, obesity and low physical activity levels are risk factors for developing lymphedema: the age-adjusted obesity rate among women in the BMRH service area is 28%, and 41% of women exercise less than 3 times per

³¹ DiSipio T, Rye S, Newman B, Hayes S. Incidence of unilateral arm lymphedema after breast cancer: a systematic review and meta-analysis. *Lancet Oncology*. 2013; 14(6):500–515.

week.³² Ultimately, MLH is in a position to consider the unique challenges associated with prevention and rehabilitation and can explore opportunities (such as breast cancer rehabilitation) to focus prevention efforts, both on disease management and community health as unique to area residents in need of rehabilitation care and services.

MLH is similarly positioned to focus on mitigating health disparities resulting from inequity(ies). One finding from the 2018 SEPA HHS, as mentioned earlier, revealed that, in the BMRH service area, among older adults (60+) living below 150% of poverty line, 35% reported having fallen in the past year compared to 26% of those living at or above 150% of poverty line, reflecting the persistently disparate impact to health for certain sub-populations. 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:³³

- 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.

³² Paskett ED, Dean JA, Oliveri JM, Harrop JP. Cancer-related lymphedema risk factors, diagnosis, treatment, and impact: a review. *Journal of Clinical Oncology*. 2012; 30(30):3726–3733.

³³ Kacik, A. Flaws in reporting create knowledge vacuum regarding community benefits. *Modern Healthcare InDepth*. 2018; 20-26.