St. Mary Medical Center (St. Mary) and St. Mary Rehabilitation Hospital (SMRH) completed a comprehensive Community Health Needs Assessment (CHNA) that was adopted by both Board of Directors on 5/21/2019. St. Mary and SMRH performed the CHNA in adherence with certain federal requirements for not-for-profit hospitals set forth in the Affordable Care Act (ACA) and by the Internal Revenue Service (IRS). The assessment took into account a comprehensive secondary data analysis of patient outcomes, community health status, and social determinants of health, as well as primary data including input from representatives of the community, community members, and various community organizations.

The complete CHNA report is available electronically at https://www.stmaryhealthcare.org/communityhealth, or printed copies are available at St. Mary Medical Center, 1201 Langhorne-Newtown Rd., Langhorne, PA.

HOSPITAL INFORMATION
St. Mary is a 371-bed hospital providing care to generations of families in Bucks County and nearby communities. St. Mary offers advanced non-invasive treatments, adult and pediatric emergency services, inpatient medical and rehabilitation facilities, along with supportive health and wellness programs. St. Mary provides advanced care across four primary Centers of Excellence - Cardiology, Oncology, Orthopedics, and Emergency and Trauma Services.

St. Mary Rehabilitation Hospital is a free-standing 50 bed inpatient rehabilitation facility which offers highly specialized and comprehensive care to patients facing the challenges of recovering from complex illness or injury. St. Mary Rehabilitation Hospital is accredited by both The Joint Commission (TJC) and the Commission for the Accreditation of Rehabilitation Facilities (CARF), with CARF accreditation in Stroke, Brain Injury and Amputee Specialty Programs. The rehab hospital has achieved Uniform Data System (UDS) Top 10% rehabilitation hospitals in the nation for the past 3-years based on its superior patient outcomes. The state-of-the-art hospital opened in spring 2014 and is a joint venture partnership between St. Mary Medical Center (59%) and Kindred Healthcare (41%).

The St. Mary service area population size is 414,400 residents in the southern end of Bucks County. The community (2015 Pop 414,400) for purposes of this needs assessment was defined as the 17 ZIP codes in the southern end of Bucks County as follows: 18940, 18954, 18966, 18974, 18976, 18977, 19007, 19020, 19021, 19030, 19047, 19053, 19054, 19055, 19056, 19057, and 19067. This represents 88% of St. Mary ED visits and admissions.
THE COMMUNITY WE SERVE

POPLATION SIZE
St. Mary’s service area population size is 414,400.
- The 65+ age group is estimated to increase 13% between 2018-2023
- The child population (age 0-17 years) is predicted to decrease 6% between 2018-2023

AGE DISTRIBUTION

<table>
<thead>
<tr>
<th>St. Mary’s service area (%)</th>
<th>20</th>
<th>19</th>
<th>42</th>
<th>19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southeastern Pennsylvania (SEPA) (%)</td>
<td>22</td>
<td>24</td>
<td>39</td>
<td>16</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age Group</th>
<th>0-17</th>
<th>18-34</th>
<th>34-64</th>
<th>65+</th>
</tr>
</thead>
<tbody>
<tr>
<td>St. Mary’s service area (%)</td>
<td>20</td>
<td>19</td>
<td>42</td>
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</tr>
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<td>22</td>
<td>24</td>
<td>39</td>
<td>16</td>
</tr>
</tbody>
</table>

ST. MARY SERVICE AREA MAP INCLUDING ZIP CODE
The St. Mary service area encompasses the southern half of Bucks County in Southeastern Pennsylvania.

POVERTY STATUS
One in 14 families with children (7%) in the SMMC service area are living in poverty compared to 16% of families with children across SEPA.

ADDITIONAL SOCIO-DEMOGRAPHIC CHARACTERISTICS

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>SMMC</th>
<th>SEPA whole</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>SMMC</td>
<td>SEPA whole</td>
</tr>
<tr>
<td>Less than HS</td>
<td>7%</td>
<td>11%</td>
</tr>
<tr>
<td>High school graduate</td>
<td>57%</td>
<td>52%</td>
</tr>
<tr>
<td>College graduate</td>
<td>36%</td>
<td>37%</td>
</tr>
<tr>
<td>Employment (16+ years old)</td>
<td>SMMC</td>
<td>SEPA whole</td>
</tr>
<tr>
<td>Employed</td>
<td>94%</td>
<td>92%</td>
</tr>
<tr>
<td>Income</td>
<td>SMMC</td>
<td>SEPA whole</td>
</tr>
<tr>
<td>Median Household Income</td>
<td>$87,960</td>
<td>$70,807</td>
</tr>
<tr>
<td>Housing Unit Type</td>
<td>SMMC</td>
<td>SEPA whole</td>
</tr>
<tr>
<td>Renter-occupied</td>
<td>25%</td>
<td>34%</td>
</tr>
<tr>
<td>Owner-occupied</td>
<td>75%</td>
<td>66%</td>
</tr>
</tbody>
</table>

MISSION
We, St. Mary Medical Center and Trinity Health, serve together in the spirit of the Gospel as a compassionate and transforming healing presence within our communities. As a community of caring people, we are committed to extending and strengthening the healing ministry of Jesus.
HEALTH NEEDS OF THE COMMUNITY

The CHNA conducted on 6/30/2019 identified the significant health needs within the St. Mary Medical Center community. Those needs were then prioritized based on both perceived and measured importance and alignment with St. Mary mission and objectives. The significant health needs identified, in order of priority include:

1. ACCESS TO QUALITY MENTAL HEALTH TREATMENT
   - Of residents with a mental health condition, 40.3% are not currently receiving treatment.[4] ... Prevalence of anxiety and depression: 19,752 cases. [2]
   - External stakeholders consistently noted mental health as a high priority in the community and that lack of access to services destabilizes the family. Long waiting times difficult for low income families.

2. ACCESS TO SUBSTANCE ABUSE TREATMENT
   - The drug overdose mortality rate in the service area is 27 deaths per 100,000 population, representing 106 deaths per year. Drug overdose is the 6th leading cause of death in St. Mary service area. St. Mary service area's overdose mortality rate exceeds that of Bucks County (25 per 100,000) and SEPA (26 per 100,000). Opioid awareness was an issue identified by community stakeholders with high importance and impact in the area. [1]
   - Opioid awareness was an issue identified by community stakeholders with high importance and impact in the area.

3. ACCESS TO CARE FOR THE UNINSURED, ESPECIALLY THOSE LIVING IN POVERTY
   - 8.1% of residents are uninsured in service area. [4]
   - 15.5% of residents do not have a usual place of care when they are sick or need health advice. [4]
   - Unemployment rate is 6.3%. [3] Lower socio-economic status residents are concentrated in the southern tier of the service area (Bristol, Bensalem, Falls) compared to the remainder of the service area. [3]

4. CORONARY HEART DISEASE
   - Heart disease caused on average 835 deaths annually (mortality rate 140 deaths per 100,000).[1] Prevalence of coronary heart disease: 18,842 cases.[2] Prevalence of congestive heart failure: 11,290 cases.[2]
   - When examining heart disease mortality rates by race and ethnicity, people who self-identified as “other” race had the highest age-adjusted heart disease mortality rate (200.3 deaths per 100,000 residents), when compared to white, black and Asian.

5. EDUCATION & AWARENESS LUNG CANCER SCREENING
   - Cancer caused on average 896 deaths annually (mortality rate 159.2 per 100,000). [1] Among all cancers, lung cancer had the highest mortality rate. Prevalence of lung cancer: 1,235 cases. [2]
   - 18% of St. Mary service area residents smoke cigarettes and 50% of those smokers tried to quit in the past year.
   - Lung cancer is the most common cancer killer annually, yet the overall rate of eligible patients who undergo screening with low-dose computed tomography (LDCT) is low. [5] The rate of LDCT screening is increasing very slowly with time, and most eligible patients are not screened. Further studies are needed to determine the reasons for low screening rates, and the marked geographic variation.
6. ACCESS TO PRENATAL SERVICES
- Average annualized percentage of women receiving late or no-prenatal care by race and ethnicity was highest for black women 128 (52.5%), followed by those identifying as “other race” 129 (49.9%), and Latina 165 (49.2%) as compared to white women at 679 (26.9%).[1]
- The percentage of women receiving late or no prenatal care is calculated as the percentage of all live births that have birth certificate data on receipt of prenatal care. Late prenatal care is defined as not having a recorded prenatal care visit in the 1st or 2nd trimesters, or none at all.
- The rate of live births with low birth weight (83 per 1,000) was higher than Bucks County (78.9 per 1,000) and exceeded HP2020 goal (78 per 1,000).[1] The percent of premature births (9.1%) was higher than Bucks County (8.9%) and SEPA (8.4%).[1]

7. EDUCATION & AWARENESS OF WOMEN’S HEALTH SCREENINGS (MAMMOGRAM)
- Of women ages 50-74, 75.9% had a mammogram in the past 2 years; this does not meet Healthy People 2020 goal (81.1%).[4]
- Prevalence of breast cancer: 6,462 cases.[2]

8. CONGESTIVE HEART FAILURE
- Prevalence of congestive heart failure: 11,290 cases.[2]

9. NUTRITION EDUCATION ADULTS
- Good nutrition and regular physical activity are important parts of leading a healthy lifestyle and healthy living broadly. About half of all American adults—117 million individuals—have one or more preventable chronic diseases, many of which are related to poor quality eating patterns and physical inactivity.
- Majority of residents (80.3%) eat < 4 servings of fruit and vegetables per day, significantly worse than SEPA (76.9%).[4] Over two-thirds of residents (69.4%) are currently overweight or obese. [4]

10. SMOKING CESSATION EDUCATION EXPECTANT MOTHERS
- The proportion of white mothers who smoked while pregnant (13.5%) was higher than in Bucks County (1.4%) and SEPA (9%).[1]

11. ACCESS TO BLOOD PRESSURE SCREENING
- 9.8% of adults have not had a blood pressure screening in the past year, which is significantly worse than SEPA (7.1%).[4]
- Prevalence of hypertension: 116, 123 cases. [2] St. Mary Service Area (30%) is faring better than the national average (33%), there are still many adults with this chronic disease.

12. CHRONIC LOWER RESPIRATORY DISEASE
- Chronic lower respiratory disease is the third leading cause of death (excluding fatal and unintentional injuries) contributing to 189 deaths annually (mortality rate 32.9 deaths per 100,000). [1]
HEALTH NEEDS OF THE COMMUNITY

13. ACCESS TO DENTAL CARE ADULTS AND CHILDREN
- 35% of children have not seen a dentist in the past year, significantly worse than SEPA (22.6%). [4]

14. EDUCATION & AWARENESS FOR SIGMOID/COLONOSCOPY
- 32.4% of adults (age 50+) have not had a sigmoid/colonoscopy in the past 10 years, which is significantly worse than that of SEPA (25.9%). [4]

15. EDUCATION & AWARENESS FOR WOMEN’S HEALTH SCREENING – PAP TEST
- 25.3% of women (age 18-64) have not had a pap test in the past 3 years, which is significantly worse than that of SEPA (17.4%).[4]

Data Sources
   Underlying primary data sources: 2012-2016 birth and birth outcomes data from PA Department of Health, Bureau of Health Statistics and
   Registry; and 2012-2016 mortality data from PA Department of Health, Bureau of Health Statistics and Registries.
2. Claritas 2018 Market Prevalence by Disease Category. (Dec. 2018). Additional data source from St. Mary Medical Center collaborator,
   Lisa Kelly, Director Community Health & Well-Being and Volunteers
3. Claritas 2018 Community Needs Index. (Dec 2018). Additional data source from St. Mary Medical Center collaborator, Lisa Kelly, Director
   Community Health & Well-Being and Volunteers
HOSPITAL IMPLEMENTATION STRATEGY

St. Mary Rehabilitation Hospital resources and overall alignment with the hospital's mission, goals and strategic priorities were taken into consideration of the significant health needs identified through the most recent CHNA process.

**SIGNIFICANT HEALTH NEEDS TO BE ADDRESSED**
St. Mary Rehabilitation Hospital will focus on developing and/or supporting initiatives and measure their effectiveness, to improve the following health needs:

- **Access to Substance Abuse Treatment** – pages 7-9.

**SIGNIFICANT HEALTH NEEDS THAT WILL NOT BE ADDRESSED**
St. Mary Rehabilitation Hospital acknowledges the wide range of priority health issues that emerged from the CHNA process, and determined that it could effectively focus on only those health needs which it deemed most pressing, under-addressed, and within its ability to influence. St. Mary Rehabilitation Hospital will not take action on the following health needs:

- **Access to Care** – St. Mary Rehabilitation Hospital does not plan to directly address this particular need because of duplication of efforts.
- **Access to Quality Mental Health Treatment** – St. Mary Rehabilitation Hospital does not plan to directly address this particular need because not area of expertise.
- **Coronary Heart Disease** – St. Mary Rehabilitation Hospital does not plan to directly address this particular need because not area of expertise.
- **Education & Awareness for Lung Cancer Screening** – St. Mary Rehabilitation Hospital does not plan to directly address this particular need because not area of expertise.
- **Access to Prenatal Care Services** – St. Mary Rehabilitation Hospital does not plan to directly address this particular need because not area of expertise.
- **Education & Awareness Women's Health Screenings (Mammogram)** – St. Mary Rehabilitation Hospital does not plan to directly address this particular need because not area of expertise.
- **Congestive Heart Failure** – St. Mary Rehabilitation Hospital does not plan to directly address this particular need because not area of expertise.
- **Nutrition Education Older Adults** – St. Mary Rehabilitation Hospital does not plan to directly address this particular need because not area of expertise.
- **Smoking Cessation Education Expectant Mothers** – St. Mary Rehabilitation Hospital does not plan to directly address this particular need because not area of expertise.
- **Access to Blood Pressure Screening** – St. Mary Rehabilitation Hospital does not plan to directly address this particular need because not area of expertise.
HOSPITAL IMPLEMENTATION STRATEGY

- **Chronic Lower Respiratory Disease** – St. Mary Rehabilitation Hospital does not plan to directly address this particular need because not area of expertise.
- **Access to Dental Care Adults & Children** – St. Mary Rehabilitation Hospital does not plan to directly address this particular need because not area of expertise.
- **Education & Awareness for Sigmoid/Colonoscopy Screening** – St. Mary Rehabilitation Hospital does not plan to directly address this particular need because not area of expertise.
- **Education & Awareness for Women’s Health Screening (PapTest)** – St. Mary Rehabilitation Hospital does not plan to directly address this particular need because not area of expertise.

This implementation strategy specifies community health needs that the hospital has determined to address in whole or in part and that are consistent with its mission. The hospital reserves the right to amend this implementation strategy as circumstances warrant. For example, certain needs may become more pronounced and require enhancements to the described strategic initiatives. During these three years, other organizations in the community may decide to address certain needs, indicating that the hospital then should refocus its limited resources to best serve the community.
CHNA IMPLEMENTATION STRATEGY
FISCAL YEARS 2019-2021

HOSPITAL FACILITY: ST. MARY REHABILITATION HOSPITAL
CHNA SIGNIFICANT HEALTH NEED: SUBSTANCE ABUSE TREATMENT
CHNA REFERENCE PAGE: 32
PRIORITIZATION #: 2

BRIEF DESCRIPTION OF NEED:
The drug overdose mortality rate in the service area is 27 deaths per 100,000 population, representing 106 deaths per year. Drug overdose is the 6th leading cause of death in St. Mary service area. St. Mary service area’s overdose mortality rate exceeds that of Bucks County (25 per 100,000) and SEPA (26 per 100,000). Profile of Drug Overdose patient arriving at St. Mary ED is: 66% male, 46% between 18-34 years of age, 56% high graduate only and 22% some college. According to PA Opioid Overdose Reduction Technical Assistance Center (Pitt Pharmacy), Bristol Township was the number one area for overdose deaths by location in 2017. Opioid awareness was an issue identified by community stakeholders with high importance and impact in the area.

Non-fatal drug overdoses can result in brain injury. Opiate overdose typically leads to unconsciousness and a depressed central nervous system, which can result in a lack of oxygen to the brain. Oxygen is vital to the brain and without it damage transpires. A hypoxic brain injury occurs when the brain receives inadequate oxygen, and an anoxic brain injury occurs when the brain receives no oxygen. The extent of brain damage is largely dependent on the amount of time the brain is without adequate oxygen levels. Those who suffer from anoxic or hypoxic brain injury are often admitted to inpatient rehabilitation hospitals for an average of 15-25 days for physical, cognitive and behavioral rehabilitation.

RESEARCH SHOWS:
- People who have had at least one overdose are more likely to have another. If a person who has had an overdose is seen in the rehabilitation hospital, there is an opportunity to help prevent a repeat overdose by providing resources to drug treatment while they recover and remain an inpatient.
- The Brain Injury Association of America states, “Those with a prior history of substance misuse before their brain injury are 10 times more likely to resume past behavior.” The organization is stressing the importance of treating both brain injury and addiction together.
- Epidemiological surveys have established that those who abuse drugs or alcohol have a substantially increased risk of traumatic brain injury. Between one-third and four-fifth of patients hospitalized for TBI have histories of misusing substances.
- Among those in substance abuse treatment, prior TBI is common. Reviews of five studies of people in substance abuse treatment showed estimates of prior TBI ranging from 38 to 63%. In another study of nearly 8,000 patients in state-funded substance abuse treatment programs, almost one-third reported at intake assessment that they had one or more head injuries in the past during which they lost consciousness or spent at least one night in the hospital.
- There is some evidence that suggests that regions of the brain affected by traumatic brain injury, especially the frontal cortex, may induce deficits in cognitive processes involving self-regulation and mental control that confer a general risk for substance abuse. There are clear links and indications that substance abuse/addiction should be treated in parallel with brain injury rehabilitation.
CHNA IMPLEMENTATION STRATEGY  
FISCAL YEARS 2019-2021

GOAL:
- Increase access to substance abuse prevention and treatment services at St. Mary Rehab Hospital.
- Educate local substance abuse treatment providers on the cognitive and behavioral sequela of anoxic/hypoxic brain injury to better communicate with overdose survivors experiencing brain injury.

OBJECTIVE:
- SMRH patients identified with substance or alcohol abuse will be referred to relapse prevention resources during their inpatient stay by 2021.
- Provide training on how to communicate with patients who have cognitive and behavioral deficits secondary to drug use and/or overdose for local drug and alcohol rehab providers by 2021.

## ACTIONS THE HOSPITAL FACILITY INTENDS TO TAKE TO ADDRESS THE HEALTH NEED:

<table>
<thead>
<tr>
<th>STRATEGIES</th>
<th>TIMELINE</th>
<th>COMMITTED RESOURCES</th>
<th>POTENTIAL PARTNERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educate SMRH Admission Clinical Liaisons on identification and documentation of substance abuse in the Pre-Admission Assessment.</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Choose screening tool to better identify patients with a history of substance abuse.</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identify and refer SMRH patients who screen positive for substance abuse during inpatient stay to local behavioral health provider.</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Council of SEPA will educate SMRH physicians &amp; staff on motivational interviewing when discussing substance abuse treatment post discharge.</td>
<td>X</td>
<td>X</td>
<td>Council of Southeast PA</td>
</tr>
<tr>
<td>SMRH Brain Injury Program Staff will educate local substance abuse providers on cognitive and behavioral deficits post brain injury.</td>
<td>X</td>
<td>X</td>
<td>Council of Southeast PA</td>
</tr>
</tbody>
</table>
## Anticipated Impact of These Actions:

<table>
<thead>
<tr>
<th>IMPACT MEASURES</th>
<th>BASELINE</th>
<th>TARGET</th>
</tr>
</thead>
<tbody>
<tr>
<td># of patients identified on admission with history of substance abuse that were offered substance abuse treatment services (IP vs. OP).</td>
<td>No current baseline.</td>
<td>Year 1 - establish referral process; Year 2 - refer 50% of patients who agree to engage in relapse prevention treatment. Year 3 - refer 75% of patients who agree to engage in relapse prevention treatment.</td>
</tr>
<tr>
<td># of patients identified on admission with history of substance abuse that consented to receive substance abuse treatment services.</td>
<td>No current baseline.</td>
<td>Year 2 - 50% of those offered services will consent to treatment. Year 3 – 75% of those offered services will consent to treatment.</td>
</tr>
<tr>
<td>Education sessions provided by SMRH staff to local substance abuse providers on cognitive and behavioral deficits post brain injury.</td>
<td>No current baseline.</td>
<td>Will provide 3 educational sessions in Y1. Evaluate need on Years 2 and 3 if no staffing changes.</td>
</tr>
</tbody>
</table>

## Plan to Evaluate the Impact:

SMRH records will be audited for number patients identified and referred who have a history of substance use disorder on an annual basis. Continued investigation of parallel treatment strategies. Collaboration with other providers in the brain injury/addiction continuum to provide appropriate resources and treatment to those with brain injury and addiction diagnoses.

## Adoption of Implementation Strategy

On November 1, 2019, SMRH Board of Managers approval was received, (quorum), for the SMRH 2019-2021 Implementation Strategy to address the community health needs identified in the 2019 Community Health Needs Assessment. Upon review, the Board approved this Implementation Strategy and the related budget.

[Signature]

Lisa Haney, CEO, St. Mary Rehabilitation Hospital

11/01/2019

Date