



Bayhealth Milford Memorial Hospital

Community Health Needs Assessment
Assessment of 2013 Implementation Strategy

Sussex County, Delaware

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I. Implementation Strategy Assessment of 2013

Obesity Imperative - MILFORD

Strategic Imperative #1: To develop programs which promote exercise and develop dietary options that promote healthy eating habits among Bayhealth employees and patients.		
	Implementation Activities	Outcomes
	Offer healthier options in the Bayhealth cafeteria with appropriate labeling	September 2013 Bayhealth brought in METZ Culinary Management as our food and nutrition vendor. METZ collaborated with department with the organization to develop a process for offering healthy options for the staff and patients that frequent the cafeteria. The initial phase began by placing food nutrition labels on all prepackage (Grab and Go) foods. The next phase was adding the labels on al a cart food items. The final phase for this activity was to have nutritional information available within the food service department for all employees and visitor. Additionally, as the dietary assistants visit patient rooms they offer copies of the nutritional information to patient and/or family members.
	Continue the Be Healthy Bayhealth Initiative	This initiative was discontinued in 2015 due to lack of participation. Employees had difficulty getting time to participate in our efforts. The food services department continues to offer healthy options for employees.
Strategic Imperative #2 Partner and collaborate with existing programs in the community to address and reduce obesity in Kent County.		
	Implementation Activities	Outcomes
	Assess the potentiality of partnering with state and community	Bayhealth Education Department collaborated with the American Heart Association, American Diabetes Association, the Delaware Breast Cancer Coalition and several local organizations to offer screening assessments and patient education on the dangers of

	programs that target obesity.	obesity in children and adults. Over the past three years, 40 events offered provided screening of blood cholesterol, blood glucose, blood pressure, BMI and osteoporosis free of cost to any public member attending the event. Community members with levels higher than what is considered "acceptable range" are referred for follow-up care.
	Align and incentivize primary care physicians and family doctors to further educate patients in obesity.	This objective was not developed during the 2013-2016 period due to administrative changes in physician leadership.
	Continue to participate in the Healthier Sussex Task Force regarding obesity.	Various Bayhealth leaders at Bayhealth continue to be active in the endeavor helping to move the health of Sussex County forward. From 2013 through 2014, Healthier Sussex County had two major goals to increase rates of diabetic monitoring and to increase mammography screenings in Sussex County. According to county health rankings, Sussex County residents showed progress in these two areas. The rate of diabetic monitoring increased from 86 to 87 percent, and mammography screenings increased from 71.9 to 72.6 percent.
	Promote the benefits of bariatric surgery as an option for those who have not been able to achieve weight loss through traditional means	The Bayhealth Bariatric Program has grown over the past three years. Different from other bariatric programs Bayhealth focuses individualized attention on each patient who receives care and education from highly trained specialists. They help patients navigate through the process to surgery and beyond—providing the tools and support for lifelong success. The RN specialists attend community education events and provide group education series for individuals and groups who want to learn more about the surgical options for improving their health.

2013 Cancer Imperative

Strategic Imperative #1 -2 -3: To implement screening and treatment programs to increase early detection and treatment of breast, lung, and prostate cancer.		
	Implementation Activities	Outcomes
Breast Cancer	Promote Bayhealth's free or reduced price screenings and treatment programs for the Kent community	Performed over 50 low cost or no cost screening mammograms per year. Promoted via print ads, social media and community events. Through our Healthier Sussex County partnership, mammography screenings increased from 71.9 to 72.6 percent.

	Promote and implement outreach and education programs such as using health navigators for breast cancer screening reduction	Established the position of Breast Care Coordinator to help women with positive mammograms navigate through care options.
	Identify appropriate performance metrics for Bayhealth Physician Alliance related to the early detection of breast cancer	To achieve this outcome Bayhealth Cancer Institute (BCI) collaborated with BPA, our clinical integrated network. The role of the BCI was performing community outreach projects. BPA's role was completing the stages of implementing the Bayhealth business intelligence tool (BIT) which positions the organization's ability to impact pockets of populations beginning in FY 2017. Performance metrics are expected to be available in the 2016 Implementation Strategy Assessment.
Lung Cancer	Assess the implementation of a low dose computed tomography (LDCT) program	Bayhealth implemented Low Dose CT Lung Screening program in 2015. Bayhealth Cancer Center collaborated with the State of Delaware to provide low cost screening for this high-risk population.
	Implement or continue community-wide smoking cessation programs	Bayhealth Cancer Center conducted 70 American Cancer Associate Smoking Cessation courses during 2013 – 2016. Promotion conducted through print ads, news releases, social media, Bayhealth's web site, and community events.
	Assess the potential impact of a partnership with the state regarding radon testing.	Bayhealth is an active member of the Delaware Cancer Consortium and pleased to share excerpts from Turning Action into Results - Accomplishment June 2016 report. "Our goal is to lower Delawareans' risk of cancer by reducing potential environmental exposures. We work diligently through a variety of communications methods to inform Delawareans about those exposures — from household toxins to radon in your basement. Increasing awareness of environmental concerns is an important part of our impressive list of achievements. Making people more aware of the dangers around them that can contribute to cancer may help reduce the risks for every Delawarean." Pamphlet education included....  RADON —It's a radioactive gas that you can't see, smell or feel. According to the EPA, radon is the second-leading cause of lung cancer in the United States. It comes from the soil and rock beneath your home and seeps into your basement. (Source: Environmental Protection Agency)

		<p>WHAT YOU CAN DO: Test your home. Kits are available in most hardware stores https://www.healthydeware.org/Consortium/Resources</p>
	Identify appropriate performance metrics for Bayhealth Physician Alliance related to early detection of lung cancer	To achieve this outcome Bayhealth Cancer Institute (BCI) collaborated with BPA, our clinical integrated network. The role of the BCI was performing community outreach projects. BPA's role was completing the stages of implementing the Bayhealth business intelligence tool (BIT) which positions the organization's ability to impact pockets of populations beginning in FY 2017. Performance metrics are expected to be available in the 2016 Implementation Strategy Assessment.
Prostate Cancer	Promote and Implement free prostate cancer screenings to members of the Kent community	Performed 119 free prostate cancer screening. Promoted via social media, and community events. FY13 - 17 completed FY14 - 42 completed FY15 - 33 completed FY16 - 27 completed
	Educate physicians on updated prostate cancer screening guidelines.	Bayhealth held an Oncology PSA and Prostate Cancer Screening Controversies Lecture on November 19, 2015 at Kent General Hospital with Dr. David Lee from University of Pennsylvania. The lecture was well attended and was featured in our Oncology Annual Report for 2015.
	Assess collaboration with the Volunteer Ambulatory Surgical Access Program (VASAP).	Volunteer Ambulatory Surgical Access Program (VASAP), is a community program supported in part by Bayhealth. Uninsured or underinsured patients from physician referrals may receive free surgeries from surgeons, nurses, and other clinical staff who donate their time. This objective was not developed during the 2013-2016 period due to administrative changes in physician leadership.
	Identify appropriate performance metrics for Bayhealth Physician Alliance related to early detection of prostate cancer.	To begin achieving this outcome, BPA began the process of developing a timeline to select and implement the Bayhealth business intelligence tool (BIT). The BIT will position the organization's ability to impact pockets of populations beginning in FY 2017. Performance metrics are expected to be available in the 2016 Implementation Strategy Assessment.

Cancer Imperative Summary: Over the past three years other significant milestones were accomplished, many of which were spin-offs of the implementation activities. This progress began with opening our new Milford Cancer Center in 2012. These expanded facilities cost \$45M to construct, however, numerous programs have grown because of its addition. For example, Bayhealth began a new inpatient Palliative Care Program, which will likely expand to outpatient services in order to provide the right resources in the right settings for our patients. Bayhealth's affiliation with Penn Medicine also grew, providing Bayhealth patients with high quality cancer care to a wide variety of treatments including surgery, chemotherapy, hormonal therapies, and radiation. This growth allowed Bayhealth to also begin clinical trials, which focus on new treatments, quality of life studies, and more. Clinical trials are provided free to the patient when not covered by insurance.

To increase patient access to cancer services, Bayhealth established its Cancer Institute, which supports the salaries of cancer nurse navigators, who support Bayhealth Cancer Center patients. Four navigators care for 1,000 patients a year, meeting with every new cancer patient, determining supportive care needs, and initiating referrals to meet clinical needs, survivorship plans, or screening or prevention programs. Navigators also connect patients with financial support through the Cancer Institute's Helping Hands Fund, which provides up to \$300 per calendar year for various expenses including utilities, transportation, and more.

In 2015, Bayhealth hired its second and third Advanced Practice Nurse Practitioners (APNP) and its fifth Hematology Oncologist Physician. The same year, Bayhealth added its Telegenetics Program – a partnership with Penn Medicine and the Abramson Cancer Center – to provide patients with access to genetic counseling close to home. Patients come to Bayhealth and visit with genetic counselor using a secure video web connection, avoiding unnecessary travel to Philadelphia for this type of service. The patient works with a genetics counselor at Penn to create a genetic profile, which helps determine the patient's risk for certain types of cancer. Patients may share their results with family members to encourage preventive screenings.

Access Imperative

Strategic Initiative #1: Promote enrollment in Medicaid and the use of Hope Clinic in addition to Federally Qualified Health Clinics (FQHC) such as Westside Family Healthcare and LaRed Clinic.

	Implementation Activities	Outcomes
	Work with Westside Family Healthcare and Hope Free Clinic in order to educate and promote awareness of their services to staff (i.e. discharge planners) and patients.	Several Bayhealth departments work within our community to promote FQHC services. Bayhealth's Care Management, Education, Social Services, Physician Liaisons, Cancer Institute, and Marketing departments have been successful in the following venues: <ul style="list-style-type: none">• Healthier Sussex County Workgroup• Westside Family Healthcare• Healthy Family Day• Hope Clinic Fundraiser Sponsor• La Red Health Center• La Esperanza Health Center

Strategic Initiative #2: Develop programs that assist the uninsured.

	Implementation Activities	Outcomes
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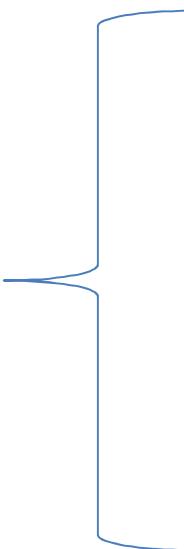
	Develop and/or support education programs that inform uninsured individuals of the resources available to them.	Bayhealth participated in numerous community education events to provide free health screenings and education specific to each test and medical condition associated with screenings.
	Bayhealth will evaluate support for programs that provide transportation for uninsured individuals.	Van transportation is provided for patients who are actively receiving radiation treatment for cancer. Bayhealth provides passes for cancer patients using public transportation through the Helping Hands Fund. Bayhealth provides taxi vouchers, based on need, for individuals needing transportation from the hospital to home. No other mechanism for providing transportation for the uninsured has been developed to date.
	Evaluate participation in the Community Health Access Program (CHAP) of Delaware.	Bayhealth participated in the CHAP program with Delmarva Rural Ministries until their closing in 2011. That same year, Westside Family HealthCare opened for patient care in Dover. Bayhealth began financial negotiation agreements for our mutual patient populations. In 2012, a payment plan was put into place to cover outpatient procedures at a reduced rate. After careful deliberation Bayhealth made the decision in 2014 to focus on revising the financial assistance program. Bayhealth proposed moving from the current plan to one which provided six months of reduced pricing for patients. This would result in potentially greater savings for the clients and by adding all hospital services (not just outpatient) covered in the previous agreement. The agreement has been well received by all parties and is considered a successful implementation activity and will be closed.
	Provide free online birth classes.	Bayhealth provides Labor & Childbirth, Hello Baby classes for expectant parents and siblings, Infant Care Class for Safety Education, and Breastfeeding 101 classes. The Labor & Childbirth classes are also offered online, but due to their cost, could not be provided free of charge. However, if a patient is unable to pay for classes, Bayhealth will provide on-site classes free of charge.

Strategic Initiative #3: Provide the range of physician services needed in the community.		
	Implementation Activities	Outcomes
	Recruit additional physicians that meet the need of the local populace.	<p>Bayhealth Medical Group (BMG) manages the processes of recruiting, hiring and orientation of physicians. Beginning 2014, an extensive national search commenced under the leadership of a new Practice Manager Administrator. The results of this search brought 19 employed specialty physicians to BMG to meet the needs of our local communities. These specialties include physicians as well as physician extenders:</p> <ul style="list-style-type: none"> 2 Orthopedic Surgeons w/Physician's Assistant (PA) 4 Primary Care Physicians in Kent and Milford/PA 1 Ear Nose Throat (ENT) 3 Endocrinology 1 Urology w/ PA 1 Colon and Rectal Milford 2 Gastroenterologist 2 General Surgeons 1 Family Practice/Sports Medicine 1 Maternal Fetal Medicine 1 Women's Services

Mental Health Imperative

Strategic Initiative #1: Improve communication with state services and Dover Behavioral Health		
	Implementation Activities	Outcomes
	Improve the transition of substance abuse patients to housing and treatment centers.	In 2014, Bayhealth High School Wellness Center (BHSWC) applied for and received a \$1 Million grant to alert high-school age students on the consequences of experimenting with drugs that have a high potential for abuse. Over 3,000 students participated in the grant activities which included expert guest speakers at school assemblies, dances, and sponsored events discouraging drug use. These events were held at Smyrna, Caesar Rodney, Dover, Polytech, Lake Forest, Milford, and Woodbridge Wellness Centers.
	Promote the use of the Delaware's Assertive Community Treatment (ACT) program.	ACT is a service-delivery model that provides comprehensive, locally based treatment to people with serious and persistent mental illnesses. Bayhealth Care Management social workers and

		care managers work closely with two community agencies contracted with the State of Delaware in Kent and Sussex counties to provide ACT services to inpatient and/or patients who enter through the Emergency Department.
	Promote the use of Kent Community Mental Health Clinic	Bayhealth's Emergency Department Navigator makes referrals to community mental health clinics using the ACT program and vendors contracted by the state to provide services. These agencies include Connections and Recovery Innovations. Unfortunately, there are often more clients than available appointments in Kent/Sussex counties.
	Increase integration between Kent General Hospital's Emergency Department and the Ellendale Recovery Response Center.	Over the past three years, patient referrals have increased between Bayhealth and Ellendale Recovery Response Center. The Delaware Department of Health and Social Services funds Recovery Innovations (an ACT entity) which is a part of the Ellendale Recovery Response Center. When Bayhealth makes a referral, individuals begin comprehensive recovery-based behavioral health services at Ellendale in Kent County.
	Utilize Target Care Managers that work for the state to transition patients from the ED to appropriate behavioral health services.	Beginning in 2014, Emergency Department Navigators provided the majority of the social work coverage for the Kent Emergency Department (ED). The ED navigators are members of Care Management who assist patients needing psych evaluations, which are conducted on site by Dover Behavioral Health's psych technicians. The Navigator often sees patients who are running low on psych medications or need assistance locating a provider (West Side Health/La Red) and arranges referrals and transfers. (Estimated one patient per day with mental health/substance abuse issues.)

<u>Strategic Initiative #2: Support or implement programs that assist mental health patients</u>		
	Implementation Activities	Outcomes
	<p>Assess the potential implementation of tele-psychiatry in the emergency department</p>	<p>This activity was not able to accomplish during the 2013 period due . However, inquiry and investigation began in the summer of 2016.</p>
	 <p>Evaluate participation with State / Private providers to fund / support group home beds.</p> <p>Evaluate participation with State/ Private providers to fund / support methadone services for individuals that lack insurance.</p> <p>Implement a plan to support Screening, Brief Intervention, and Referral to Treatment (SBIRT) for alcoholics.</p>	<p>Numerous departments within the Bayhealth system collaborate to implement these 3 activities:</p> <p><u>Care Management:</u> When a patient comes to the Emergency Department with a medical problem, an underlying mental health issue may become known and a psychiatric consult be required if the attending physician determines it is warranted. The patient is given a private area (meant for psychiatric holds) and if not admitted to the hospital for their medical issues, they are seen on an outpatient basis by psychiatric technicians from Dover Behavioral Health who will assess the person for ongoing services at DBH. (Estimated one person per day is referred with mental health/substance abuse issues.)</p> <p>If a patient with mental health issues needs to be admitted for medical reasons, they are scheduled for an inpatient psychiatric consult with one of several psychiatrists/psychologists that are available in the area. Care Management Nurse Navigators assist patients needing to be discharged to another facility (Dover Behavioral, Rockford, Meadowwood, Recovery Innovations). Referrals/transfers can be voluntary or involuntary, in which case the police assist in the transfer.</p> <p>Patient Advocacy and Patient Access collaborate with the Emergency Department and Care Management.</p>

	<p>Patient Advocacy will work to calm patients and family members in the Emergency Department waiting area. Patient Access verifies insurance and helps identify appropriate transfer options. An Emergency Department Nurse Navigator administers Care Management tools and processes to assist patients to receive proper treatment.</p> <p><u>ED Navigator :</u> The Emergency Department Nurse Navigator works with Care Management to assist patients who need psychiatric evaluations. Dover Behavioral Health psychiatric technicians conduct these evaluations on-site. The Emergency Department Nurse Navigator often sees patients who are running low on their psychiatric medications or who need assistance locating a provider (West Side Health/La Red), and assists with facility transfers (estimated one patient per day of mental health/substance abuse).</p> <p><u>Patient Advocacy:</u> Patient Advocacy helps to de-escalate emotional patients and family members who are upset or have the potential to become explosive while in the hospital. For psychiatric patients in particular, Patient Advocacy at Kent General must deal with the family while the individual is held in the psychiatric specialty room until the person is admitted for medical reasons or transferred to an appropriate facility. The core issue Patient Advocacy runs into is that the families are not educated about state protocols for treatment, analysis, and transfer. If no beds are available, patients are transferred to medical units, since Bayhealth, does not have a dedicated psychiatric unit for holding patients.</p>
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Risk Management:

Risk Management suggests we expand our research to include not only mental health/substance abuse issues but also those dealing with child, elder, and sexual abuse among patients as they are often interrelated. Risk Manager currently sits on the Child Advocacy Center of Delaware and can speak to the larger need for hospital engagement on these issues. Policies are currently being reviewed with regard to restraint and seclusion protocols.

SANE Nurses:

Bayhealth's Chief SANE Nurse deals with a multitude of issues outside of the realm of sexual abuse, including mental health and substance abuse. She collaborates with Emergency Department staff to provide forensic exam, physical treatment, and works with the police department to provide crisis intervention services. Crisis intervention is provided at Kent by the SANE Nurse, the Emergency Department physician, and Patient Advocacy who work hand-in-hand with the Emergency Department Nurse Navigator. We have Interventionists/Assessors from Dover Behavioral Health on site from 8am to 4pm, and 11pm to 7pm every day, and second shift is covered by on-call psych techs. Patients who have attempted suicide are referred to Contact Lifeline, which offers a variety of counseling services for up to a year after crisis intervention. When a substance abuse/mental health issue is related to domestic abuse, the SANE Nurse works with the Dover Police and State Police to find shelters and resources in the community. The Delaware State Police Victim Center (1-800-VICTIM-1) is a no-cost service for individuals who suffer abuse. The Child Advocacy Center on behalf of Infirmed Adults, with mental health/disability issues completes an

		interview on site for inpatients. 60-80 cases per month at both Kent and Milford campuses are processed.
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II. 2013 Community Health Needs Assessment - Executive Summary

Bayhealth Medical Center is Delaware's largest healthcare system in central and southern Delaware. Bayhealth's mission is to improve the health status of all members of our community. As a not-for-profit organization, Bayhealth invests its margin back into facilities, equipment, physician and staff training, community outreach and education to continually meet the health needs of the communities we serve.

Bayhealth Medical Center is comprised of Kent General and Milford Memorial Hospitals, numerous satellite facilities and many employed physician practices encompassing a variety of specialties. Bayhealth is a 402 bed healthcare system with two acute care hospitals: Kent General Hospital (234 beds) and Milford Memorial Hospital (168 beds). Bayhealth is a technologically advanced not-for-profit healthcare system with more than 3,100 employees and a medical staff of 485 physicians. In Fiscal Year 2012, Bayhealth recorded 83,467 emergency department visits, 17,151 patients admitted to acute care beds, 2,236 births, and provided \$45.5 million in unreimbursed medical care to patients.

Bayhealth began an affiliation with Penn Medicine in 2003. Today, four medical specialties including cardiovascular, orthopedics, oncology and stroke make it possible for people living in Kent and Sussex County to receive regional world-class services without leaving their community. Penn medical residents and nursing students complete their clinical rotations at Bayhealth throughout the year.

Milford Memorial Hospital, located on the boarder of Kent and Sussex County, has been offering quality healthcare since 1938. Milford Memorial offers a comprehensive array of services, including diagnostic imaging, family-centered birth services, cancer care, rehabilitation services, inpatient and outpatient medical, surgical care, and a 24-hour emergency department. In January 2002, a comprehensive, 12,000-square foot integrated Cancer Center opened in Milford, providing radiation, chemotherapy and physician offices in one location. Milford Memorial also offers the community a SleepCare Center, bariatric surgery, Lifestyles Fitness Center and rehabilitation services including occupational therapy, speech pathology and cardiopulmonary rehabilitation. In 2009, Bayhealth announced plans to build a replacement hospital on grounds of the existing Milford Memorial Hospital. Construction is planned to begin FY 2015.

Milford Memorial Hospital's history is rich in community involvement. Some examples of Bayhealth's community work include:

- Free health screenings, prevention and wellness lectures, injury prevention programs and other community education projects.

- Financial and in-kind contributions to other not-for-profit organizations related to community benefits.
- The time spent by Bayhealth employees serving on community committees and boards related to community benefits.
- The cost of health professional education and training, as well as health research.
- The costs of healthcare workforce development and recruitment.

To better understand the health needs in Bayhealth's service area, Bayhealth conducted a Community Health Needs Assessments (CHNA). Bayhealth analyzed a variety of publicly reported data and gathered input from key stakeholders in Sussex County. Diligent attempts were made to collect interview and survey responses from individuals and community-based organizations to gain insight on the needs of vulnerable families in Sussex County. Prior to 2012-2013, the most recent needs assessment was reported to the Bayhealth Board of Directors in 2006.

The 2013 needs assessment results revealed opportunities for improvement in health promotion, disease prevention and improving access to health care in Sussex, DE. The Needs Assessment Team collated interview and survey responses in order to prioritize identified health needs and develop implementation strategies to fulfill Bayhealth's mission.

III. Description of Community Served

Milford Memorial Hospital, one of two hospital facilities owned and operated by Bayhealth, opened its doors in 1938. Since that time, Milford Memorial has grown in size and services to meet the health needs of the communities served, offering a comprehensive array of services to the residents of central and southern Delaware

Sussex County is located in the southern part of the state of Delaware. The county seat is Georgetown. Historically a rural farmland community, Sussex County is attempting to preserve its farmland and natural resources while effectively managing the population growth that is occurring in the county. Sussex County has a population of 203,390, making it the second largest county in the state in terms of the size of its population¹. The population has grown 30.2% since 2000, which is much higher than the state average rate of approximately 17% for the same time frame². The median age for the county in 2011 was 45.9 years of age, higher than the state as a whole or the U.S. median age for the same time frame. The most prevalent

¹<http://quickfacts.census.gov/qfd/states/10/10005.html>

²<http://censtats.census.gov/data/DE/05010005.pdf>

³<http://quickfacts.census.gov/qfd/states/10/10005.html>

⁴<http://www.delawarehealthtracker.com/modules.php?op=modload&name=NS-Indicator&file=overview&indid=100362400003®ionzoom=County>

race in Sussex County is white (non-Hispanic), which currently represents over 75% of the total population³. The average education level in Sussex County is lower than the state average⁴.

Sussex County is home to three acute care hospital facilities: Bayhealth's Milford Memorial, Beebe Medical Center in Lewes, and Nanticoke Health Services in Seaford. These three hospitals are joining with local community and health resources to focus on one mission – to make Sussex County one of the healthiest in the nation. As part of The Healthier Sussex County Initiative, Bayhealth will focus on addressing important health issues impacting residents of Sussex County. The Healthier Sussex County Task Force has identified five community health needs:

- Obesity
- Cancer
- Mental/behavioral health
- Cost/health insurance/access to health care
- Transportation

Milford Memorial's Community Health Needs Assessment focuses on the residents of Sussex County, the home county of the hospital. Approximately 65% of Milford Memorial's patients originate from Sussex County⁵. An additional 30% of patients that utilize Milford Memorial come from Kent County, a contiguous county. The 2015 population is forecasted to exceed 220,000 in Sussex County. The median age for the county in 2011 was 45.9 years of age, higher than the state as a whole or the U.S. median age for the same time frame.

Please refer to Attachment A for more information on the community served.

IV. Who was Involved in the Assessment

The assessment process was initiated jointly by the Education and Strategic Planning Departments of Bayhealth. The assessment was primarily conducted by the Education Department.

To gain feedback from persons with broad knowledge of the community served, Bayhealth sought input from community stakeholders, to include the following:

- Hope Medical Clinic
- Delaware Division of Public Health Department of Health and Social Services
 - Thurman Adams State Service Center
 - Delaware Division of Public Health Office of Minority Health
 - Delaware Division of Public Health Office of Women's Health
 - Delaware Division of Public Health Nursing
 - Delaware Division of Public Health Social Services
- LaRed Medical Center

⁵ <http://www.dhss.delaware.gov/dhss/dph/hp/files/hosp09.pdf>

- Westside Family Health Center
- PA Mid-Atlantic AIDS Training Center
- Bayhealth High School Wellness Centers, Advanced Practice Nurses
 - Milford
 - Woodbridge
 - PolyTech
- Community Physicians

Personal invitations were extended to community partner organizations who interact with low-income groups to participate in one-on-one interviews regarding the health needs of Kent County residents. Focus groups were conducted in multiple locations throughout the county. Wellness center staff, guidance counselors, church staff (including those of minority populations), and public health nurses, were interviewed to ensure information obtained represents the diversity of our community in terms of demographic, socioeconomic, and geographic factors. One-on-one meetings with community physicians were conducted over a two-month period. Community physicians offer a unique perspective and knowledge of the health needs of our population. Physicians who could not attend one-on-one sessions completed a written response assessment.

Please refer to Attachment B for a select list of participants in the process.

V. How the Assessment was Conducted

Quantitative and qualitative analyses methods were utilized to generate a comprehensive assessment to fully understand the health needs of the community served. Quantitative analyses were conducted using the most recent data available from five primary sources:

- Delaware Health Tracker (a product of the Healthy Community Network);
- County Health Rankings & Roadmaps (a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute);
- Demographic data from the Delaware Population Consortium;
- Delaware Health Statistics Center; and,
- Demographic and socioeconomic data from the U.S. Census Bureau.

To gain insight, Bayhealth reviewed available data to compare health statistics at the state and county levels to identify areas of health disparity. Based on this analysis, the Education Department of Bayhealth developed discussion topics for a variety of community engagements, including interviews with key stakeholders, focus groups, and online surveys. A variety of community settings were selected with a special emphasis on those persons and areas most impacted by health disparities. Thematic analysis identified health needs based on available quantitative data and responses from interviews and online surveys.

Attachment C includes a summary of the community engagement.

Priority Criteria and Outcomes

The criteria used to evaluate and prioritize the health needs identified through the fact-finding process included:

- The seriousness of the issue;
- The relative size of the populations affected;
- The degree to which the need particularly affected persons living in poverty or reflected health disparities;
- Alignment with Bayhealth's mission and vision; and,
- Availability of community resources to address the need.

After close review of the community data and discussions with medical staff members of Bayhealth, health needs were prioritized jointly by the Education and Strategic Planning Departments. Bayhealth's administration was given the opportunity to discuss and reprioritize as needed. The four health concerns identified as priority issues are:

1. Obesity rates;
2. Cancer rates; specifically prostate and lung;
3. Lack of access to and awareness of existing health care services; and,
4. Lack of mental health and substance abuse services.

Please refer to Attachment D for select health data analyzed as part of the assessment.

It should be noted that the assessment process identified some gaps in information. There is, for example, a need to have more information on social determinants and environmental factors and the resulting ill effects (e.g., obesity) by demographic and racial/ethnic groups in order to better understand and address the community's complex health issues.

VI. Health Needs Identified

A. Obesity

Focus groups, interviews, and online survey responses revealed health concerns related to obesity including:

- Poor nutrition
- Resulting incidence of chronic disease/co-morbidities
- Sedentary lifestyle/lack of physical exercise
- Lack of free/affordable exercise locations available in Sussex County

Community input regarding obesity and related issues were consistent with the current Delaware Health Tracker data. Current Sussex County data indicated that a majority of residents are overweight or obese and suffer from related chronic illnesses, including diabetes, high blood pressure and high cholesterol. Specific to Sussex County residents, the incidence of diabetes (11.6%) is far above the state average of (8.7%).

Table 1. Delaware State and County Statistics Related to the Incidence of Obesity and Related Co-morbidities.

Adult Fruit and Vegetable Consumption	
<u>County/State</u>	<u>Percent</u>
Kent	23.1
New Castle	25.1
Sussex	26.5
State of Delaware	25.0

Adults who are Obese	
<u>County/State</u>	<u>Percent</u>
Kent	31.9
New Castle	26.8
Sussex	31.8
State of Delaware	28.8

High Blood Pressure Prevalence	
<u>County/State</u>	<u>Percent</u>
Kent	32.9
New Castle	28.2
Sussex	35.6
State of Delaware	34.8

High Cholesterol Prevalence	
<u>County/State</u>	<u>Percent</u>
Kent	38.3
New Castle	36.9
Sussex	42.0
State of Delaware	40.6

Adults with Diabetes	
<u>County/State</u>	<u>Percent</u>
Kent	10.2
New Castle	7.2
Sussex	11.6
State of Delaware	8.7

Age-Adjusted Death Rate due to Diabetes

<u>County/State</u>	<u>Percent</u>
Kent	26.3
New Castle	21.1
Sussex	16.5
State of Delaware	20.6

<u>Age-Adjusted Death Rate due to Heart Disease</u>	
<u>County/State</u>	<u>Deaths/100,000 population</u>
Kent	233.7
New Castle	171.0
Sussex	166.1
State of Delaware	178.8

<u>Age-Adjusted Death Rate due to Cerebrovascular Disease (Stroke)</u>	
<u>County/State</u>	<u>Deaths/100,000 population</u>
Kent	39.0
New Castle	43.3
Sussex	29.0
State of Delaware	38.2

<u>Recreation and Fitness Facilities in Delaware</u>	
<u>County</u>	<u>Facilities/ 1,000 population</u>
Kent	0.08
New Castle	0.16
Sussex	0.16

<u>Adults Engaging in Regular Physical Activity</u>	
<u>County/State</u>	<u>Percent</u>
Kent	45.6
New Castle	52.1
Sussex	52.4
State of Delaware	51.0

Table 1. Note. Adapted from Delaware Health Tracker. (2013). Indicator comparison report. Retrieved from <http://www.delawarehealthtracker.com/IndicatorCompare/51a4ed2e65ee9>

B. Cancer Rates

Bayhealth has an established cancer screening, diagnosis, treatment and survivorship program. Recent national controversy regarding prostate cancer screening practices has made prostate cancer a priority for Sussex County and will be addressed in the Implementation Strategies Report. Data from the Delaware Health Tracker revealed incidence and mortality rates for lung cancer in Sussex County to be above the state average. These results suggest that the public needs more education on cancer prevention strategies, risk factor management, and recommended cancer screening regimens and resources.

Table 2: Incidence and Mortality Rates of Prostate and Lung Cancer in Delaware

Prostate Cancer	Incidence Rate	Age-Adjusted Death Rate due to Prostate Cancer
	<u>Cases/100,000</u>	<u>Cases</u>
<u>County/State</u>	<u>males</u>	<u>100,000 males</u>
Kent	219.4	26.8
New Castle	186.6	27.2
Sussex	154.6	20.2
State of Delaware	182.8	24.9

Lung and Bronchus Cancer	Incidence Rate	Age-Adjusted Death Rate due to Lung Cancer
All Location Types		
	<u>Cases/100,000</u>	<u>Deaths/100,000</u>
<u>County/State</u>	<u>population</u>	<u>population</u>
Kent	87.2	59.9
New Castle	72.6	55.6
Sussex	84.0	59.3
State of Delaware	78.1	57.3

Table 2. Note. Adapted from Delaware Health Tracker. (2013). Indicator comparison report. Retrieved from <http://www.delawarehealthtracker.com/IndicatorCompare/51a4ed2e65ee9>

The high incidence and mortality rates of lung cancer in Sussex County may be related to the number of adults (21.0%) and teens (16.0%) who smoke. These numbers indicate that more effort is needed to encourage young people not to smoke and to encourage existing smokers to quit.

Table 3. Tobacco Use: Adults and Teen

Tobacco Use	Adults Who Smoke	Teens Who Smoke
All Location Types		
<u>County/State</u>	<u>%</u>	<u>%</u>
Kent	25.1	13.0
New Castle	21.2	13.0

Sussex	21.0	16.0
State of Delaware	21.8	14.0

Table 3. Note. Adapted from Delaware Health Tracker. (2013). Indicator Comparison Report-Cancer. Retrieved from <http://www.delawarehealthtracker.com/index.php?module=IndicatorCompare&func=display&rcuid=51c300659a071>

Breast and colon cancer screening rates are above the state average 82.9% and 23.8% respectively. However, the mortality rates associated with these cancers are also above the state average of 24.3% and 18.2%.

Table 4. Incidence, Screening and Mortality Rates for Breast and Colon Cancer

Breast Cancer	Incidence Rate	Mammogram History	Age-Adjusted Death Rate due to Breast
All Location Types			
	Cases/100,000	Screening	Deaths/100,000
<u>County/State</u>	<u>females</u>	<u>%</u>	<u>females</u>
Kent	121.1	81.6	26.6
New Castle	131.3	81.2	21.9
Sussex	126.9	82.9	24.3
State of Delaware	127.9	81.4	23.0

Colon Cancer	Incidence Rate	Colon Cancer Screening	Age-Adjusted Death Rate due to Colon
All Location Types			
	Cases/100,000	Screening	Deaths/100,000
<u>County/State</u>	<u>population</u>	<u>%</u>	<u>population</u>
Kent	46.9	17.5	19.2
New Castle	47.9	12.0	16.3
Sussex	50.4	23.8	18.2
State of Delaware	48.3	16.0	17.2

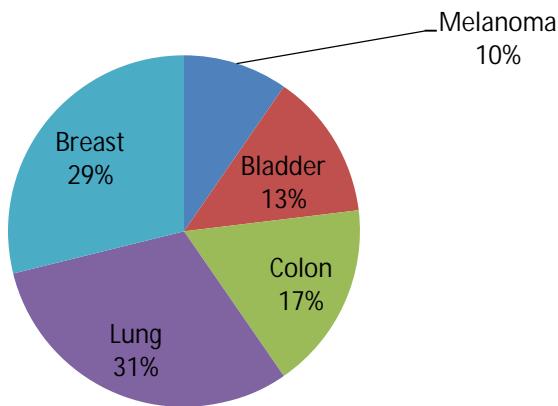
Table 4. Note. Adapted from Delaware Health Tracker. (2013). Indicator Comparison Report-Cancer. Retrieved from <http://www.delawarehealthtracker.com/index.php?module=IndicatorCompare&func=display&rcuid=51c300659a071>

Bayhealth's Cancer Registry tracks the top five cancers diagnosed at Milford Memorial: lung (31%), breast (29%), colon (17%), bladder (13%), and melanoma (10)⁶.

Figure 1: Top 5 Cancer Diagnoses-Milford Memorial Hospital

⁶ <http://www.bayhealth.org/media/file/Oncology%20Annual%20Report%20Web-2013.pdf>

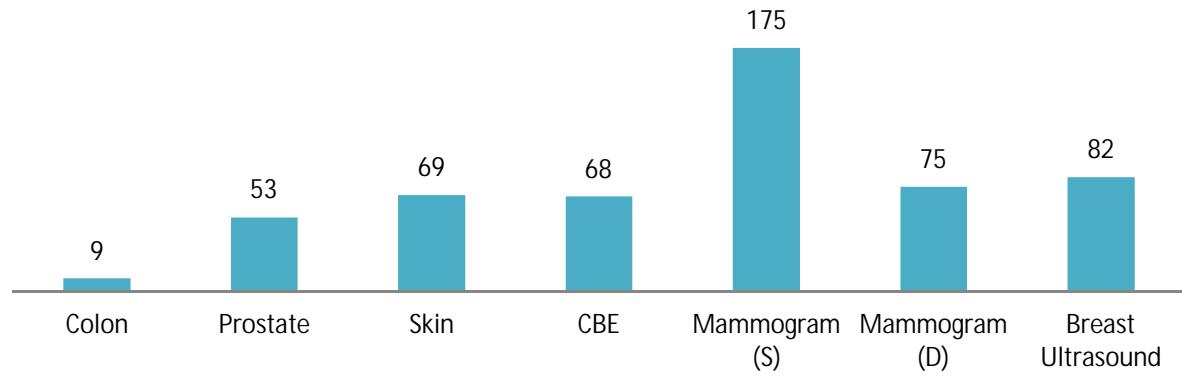
Top 5 Cancer Diagnoses CY 2011: Milford Memorial



Bayhealth's Cancer Institute has an established community outreach and cancer screening program targeted to at risk populations; uninsured and underinsured. The Institute participated in numerous community outreach events in 2012. The Cancer Institute nurses provide the community with education on skin, breast, colorectal, prostate, lung, and cervical cancers, see Figure 2 for CY 2012 data. The Institute staff also facilitates free prostate, colon, skin and breast screenings to uninsured and underinsured patients throughout the year.

Figure 2: CY 2012 Free Cancer Screenings at Bayhealth

Free Cancer Screenings Provided at Bayhealth CY2012



Cancer Institute nurses refer eligible patients to the state cancer screening program, Screening for Life, which provides free office visits, diagnostic imaging and recommended follow-up for breast, cervical, prostate and colon cancer screening.

C. Access to Health Care

Several access to health care issues were discussed as part of the open forum workshops of the community assessments. Recurring concerns were vocalized regarding:

- Lack of transportation
- Lack of access to local medical specialists
- Lack of knowledge regarding existing support services

Low-income and minority populations seem to be most affected by the lack of transportation and ability to access health services. Barriers include:

- Inability to pay, and/or inability to get transportation to the provider
- Unawareness of available services

The lack of access to health services was noted equally for residents in central and southern Delaware. The need for outreach and education regarding existing services, including social services, was a theme which emerged in all forums. Minority and low-income populations appear to be at the greatest risk for not understanding or being aware of existing services that are available in their communities. Sexually transmitted diseases, syphilis and gonorrhea incidences are high in Sussex County.

Table 5. STD Incidence Rates in Delaware

HIV Incidence Rate	
	<u>Cases</u>
<u>County/State</u>	<u>100,000 population</u>
Kent	9.1
New Castle	14.6
Sussex	7.0
State of Delaware	12.3

Syphilis Incidence Rate	
	<u>Cases</u>
<u>County/State</u>	<u>100,000 population</u>
Kent	4.2
New Castle	2.4
Sussex	3.5
State of Delaware	3.0

Table 5 Note. Adapted from Delaware Health Tracker. (2013). Indicator comparison report. Retrieved from <http://www.delawarehealthtracker.com/IndicatorCompare/51a4ed2e65ee9>

Gonorrhea Incidence Rate	
	<u>Cases</u>
<u>County/State</u>	<u>100,000 population</u>
Kent	102.4
New Castle	81.0

Sussex	109.0
State of Delaware	91.2

D. Mental Health and Substance Abuse Services

Mental health and/or substance abuse was a topic addressed in all forums, with participants indicating that more services need to be available for individuals suffering from mental health issues and/or substance abuse problems. The need for these types of services appears to be a significant problem for low-income persons. Delaware Health Tracker reports 13.5 deaths/100,000 population due to suicide in Sussex County in 2012, far above the state average.

Table 6. Age Adjusted Death Rate due to Suicide

Age Adjusted Death Rate due to Suicide	
	<u>Deaths</u>
<u>County/State</u>	<u>100,000 population</u>
Kent	11.2
New Castle	10.2
Sussex	13.5
State of Delaware	11.0

Table 6 Note. Adapted from Delaware Health Tracker. (2013). Retrieved from <http://www.delawarehealthtracker.com/modules.php?op=modload&name=NS-Indicator&file=overview&indid=200012000032®ionzoom>All+Location+Types>

VII. Community Assets Identified

The assessment identified a number of strong community assets, including Bayhealth hospitals and their community partners. Assets include:

- Health outreach/education programs
- Senior centers
- Public health departments (behavioral health and medical care)
- Community clinics providing care to uninsured/underinsured for free or on a self-pay sliding scale
- Primary care physicians and dentists
- Public school system with active associations and wellness centers, and
- Numerous religious congregations.

Please refer to Attachment E for a listing of community organizations and the services they provide.

VIII. Summaries: Assessments and Priorities

Assessment data is provided in Attachment D. Attachment F lists the identified needs and describes the method of setting priorities. Bayhealth administration, with approval from the

Board, committed to focus on the affirmed priorities. In summary, priority needs identified were:

1. Obesity rates;
2. Cancer rates; specifically prostate and lung;
3. Lack of access to and awareness of existing health care services; and,
4. Lack of mental health and substance abuse services.

Identified Needs Not Addressed

- Transportation
- Dental services
- High incidence and mortality associated with breast and colon cancer

Lack of transportation may sometimes affect access to care and potentially patient compliance, especially amongst low-income and medically underserved populations. However, the total number of patients affected in Kent County is relatively small. As a hospital system Bayhealth does not have the expertise to effectively address transportation needs. Bayhealth will continue to run the Oncology Radiation Transportation Van and refer patients to Logisticare for low-cost transportation, an existing community resource. Free blood pressure, osteoporosis, prostate and colon cancer screenings are performed at community events and health fairs. Free health seminars are provided as requested by homeless shelters, churches and schools in an attempt to bring the information to the people who need it the most.

Survey respondents reported a lack of dental services especially for low-income and medically underserved populations. Bayhealth does not employ or recruit dental services to Sussex County and cannot impact the deficit. Bayhealth will continue to refer patients to free/low-cost options at Hope Medical Clinic and Westside Family Health Center with the goal of improving access to dental services for low-income persons.

Publicly reported data from Delaware Health Tracker reveals high incidence and mortality associated with breast and colon cancer in Sussex County. Bayhealth currently offers free mammograms and free colon screening to uninsured and underinsured patients. Screening for Life, is a state-wide program which provides free cancer screenings to citizens above Medicaid income range. Bayhealth has actively participated in these programs for over a decade, and will continue to support existing breast and colon health initiatives.

VIII. Next Steps

Bayhealth will create teams to develop and implement strategies to address identified health needs. The teams will include representatives from the needs assessment team, hospital administration, and Bayhealth's Board of Directors. These subgroups will use information from Bayhealth's strategic plan to formulate strategies to support our community's health needs. Collaboration with community partner service organizations will be an important

part of the planning and implementation process to gain perspective and avoid service duplication.

Attachment A: Description of Community Served

Milford Memorial Hospital is a state licensed 168 bed hospital serving Sussex and Kent County residents. Milford Memorial is one of three acute care facilities in Sussex County. The following map reflects the location of Milford Memorial Hospital within Sussex County and the state. There are many hospitals in surrounding counties and in adjacent states that serve residents from Delaware, including Sussex County.



The entire county is a designated Health Professional Shortage Area (HPSA) for primary medical care, dental care, and mental health care. There is one Federally Qualified Health Centers in Sussex County: LaRed Health Center, Inc. Sussex County includes a Medically Underserved Area (MUA)⁷.

⁷ <http://hpsafind.hrsa.gov/HPSASearch.aspx>

The projected population of Sussex County, by age group, is shown in the table below. As indicated, Sussex County is a relatively older county with a median age from 2007 through 2011 of 45.9 years of age. More than half (53%) of the county population is projected to be 45 years of age or over in 2015, as shown in the following table.

Table A1.

Population by Life stages & Gender Sussex County, 2015				
Life stage	Male	Female	Total by Age	% by Age
0 - 4 Early Childhood	5,838	5,778	11,616	5.3%
5 - 14 Later Childhood	12,351	11,859	24,210	11.0%
15 - 19 Adolescence	5,663	5,552	11,215	5.1%
20 - 29 Early Adulthood	11,574	11,088	22,662	10.3%
30 - 44 Young Adulthood	17,033	16,947	33,980	15.4%
45 - 59 Middle Adulthood	22,352	24,071	46,423	21.0%
60 - 74 Late Adulthood	23,108	25,709	48,817	22.1%
75+ Older Adulthood	9,676	12,361	22,037	10.0%
Total	107,595	113,365	220,960	100.0%

Table A1 Note. Adapted from Delaware Population Consortium. (2012). Annual population projections. Retrieved from <http://stateplanning.delaware.gov/information/dpc/DPC2012v1.0.pdf>

The most prevalent race in Sussex County is white, which represents over 75% of the current the total population. Though the percentage of population in Sussex County that is white-alone, non-Hispanic is projected to decline slightly by 2025, that population group will remain the largest segment of the county population in the foreseeable future. The Hispanic population in Sussex County is projected to increase as a percentage of the total county population, as shown below.

Table A2.

Population by Race/Ethnicity Sussex County				
Race / Ethnicity	2010	2015	2020	2025
White	75.5%	74.9%	73.5%	71.8%
Black	12.5%	11.9%	11.6%	11.5%
Other	3.4%	3.9%	4.5%	5.2%
Hispanic	8.6%	9.4%	10.3%	11.5%
Total	100.0%	100.0%	100.0%	100.0%

Table A2 Note. Adapted from "Annual Population Projections," Delaware Population Consortium (2012) <http://stateplanning.delaware.gov/information/dpc/DPC2012v1.0.pdf>

There were fewer foreign-born persons in Sussex County (6.8%) compared to the state as a whole (8.3%), for the years 2007 through 2011. For this same time period, a smaller

percentage of households in Sussex County (9.9%) spoke a language other than English at home, compared to the state (12.3%)⁸.

Sussex County's high school graduation rate is higher than the state average, however residents have fewer bachelors' prepared professionals and the lowest household income in Delaware: \$53,215 in Sussex County compared to the state average of \$59,317. The percentage of residents living in poverty (11.5%) in Sussex County slightly exceeds the state average (11.2%), for years 2007 through 2011.

Table A3. Education Level Related to Household Income

Median Household Income	
<u>County/State</u>	<u>Dollars</u>
Kent	54,783
New Castle	64,158
Sussex	53,215
State of Delaware	59,317

High School Graduation	
<u>County/State</u>	<u>Percent</u>
Kent	77.2
New Castle	77.0
Sussex	81.5
State of Delaware	78.0

People 25+ with a Bachelor's Degree or Higher	
County View	
<u>County</u>	<u>Percent</u>
Kent	20.0
New Castle	32.7
Sussex	21.9

Table A3 Note. Adapted from Delaware Health Tracker. (2013). Indicator comparison report. Retrieved from <http://www.delawarehealthtracker.com/IndicatorCompare/51a4ed2e65ee9>

⁸ <http://quickfacts.census.gov/qfd/states/10/10005.html>

Attachment B: Planning Participants

Many individuals associated with Bayhealth participated in the community health needs assessment process, including clinical and medical staff members who provide leadership and direct care services in many healthcare settings. Members of hospital administration and the Board of Directors participated as part of the Community Assessment Team. The following lists Bayhealth participants in the assessment.

Table B1. Community Assessment Team Members

Community Assessment Team Members		
Bayhealth Participants	High School Wellness Bayhealth Participants	Community Partners
Diane Andrews, Esq. In House Council	Julie Layton, MSN, RN, APRN Milford High School	Betsy Wheeler, Principal Delaware Rural Health Initiative
Jeff Barton, DPM Podiatrist	Melissa Raffaele, MSN, RN, APRN Woodbridge High School	William Weaver, Administrator Dover Behavioral Health
David Briele Director of Revenue		Kay Malone, Administrator LaRed Health Center
Janis Chester, MD Psychiatrist		Charita Olabiyi Outreach Manager Westside Family Healthcare
Lynn Davis, MSW Social Services Manager		Ronniere Robinson Program Administrator Division of Public Health Office of Minority Health
Susan Dunlop, MS Dietary Manager		Wayne Smith, Clinic Manager Milford Public Health Unit Division of Public Health
Joanne Fletcher, MSN, RN Director Care Management		Karen McGloughlin, Director DPH Office of Women's Health Community Health Division of Public Health
Renee Grob, MD Pediatrician		Kim Christie Public Health Nurse Georgetown State Service Center
Ann Keane, MSN, RN Director Patient Care Services		Niecie Letzer Public Health Nurse Georgetown State Service Center
Leslie McClements, MD Assistant Medical Director		Cheryl Rogers Public Health Nurse Georgetown State Service Center

Laboratory		
Adrian Morris , MD Internal Medicine		Mary Johnson Senior Medical Social Worker Georgetown State Service Center
Laura Moylan, MD OB/GYN		Susan Ellis Senior Medical Social Worker Sussex County Health Unit
Joseph Parise, DO Family Practice		Anna Short, Clinic Manager - Sussex County Public Health Unit Division of Public Health
Sharad Patel, MD Family Medicine		Nerky Thomas Senior Medical Social Worker Georgetown State Service Center
Michael Polise, MD Radiologist		Paul R. Silverman, Dr. P.H. Associate Deputy Director Health Information and Science Division of Public Health
Robert Scacheri, MD OB/GYN		Kathleen Russell, Deputy County Health Administrator Kent and Sussex Counties Division of Public Health
Donna Stinson, RT, FACHE Admin Director Oncology Operations		

Paul Silverman, Associate Deputy Director at Delaware Division of Public Health has been an advocate for Delaware and has given advice to Bayhealth in the development phases of this CHNA.

Paul Silverman has worked in various capacities for the Delaware Division of Public Health for the past 30 years. Currently, he is the Associate Deputy Director for Health Information and Science. Dr. Silverman also served as a state epidemiologist from 1983 to 1992.

Before joining the Division of Public Health, Dr. Silverman was the public health epidemiologist for the Allegheny County Health Department in Pittsburgh, Pa. He has also served in a teaching capacity for the University of Pittsburgh, Graduate School of Public Health, and Department of Epidemiology. From 1982 to 1997 he was an adjunct assistant professor of Epidemiology.

Dr. Silverman graduated from the University Of Pittsburgh Graduate School Of Public Health, Department of Epidemiology with a D.Ph. (Doctor of Public Health). He holds a Bachelor of Arts degree in Biology and Sociology from Franklin & Marshall College in Lancaster, Pa.

Kathleen E. Russell, BSDH, MPH County Health Services Administrator Delaware Division of Public Health participated in surveys and has given advice to Bayhealth during the CHNA.

Kathleen Russell is the Southern Health Services (SHS) County Health Services Administrator for the Delaware Division of Public Health. Currently she is responsible for management of all aspects of Kent and Sussex County public health clinic operations at five clinic and three satellite locations. During her 26 year career, Ms. Russell has worked in academia as an instructor and assistant professor of dental hygiene at Delaware Technical & Community College and Old Dominion University respectively; has served as the Division's TB Control and Elimination Program Director and Immunization Program liaison as well as the Comprehensive Cancer Control Director. In addition to staff roles of providing clinical and home visiting services and referrals, she works with the Clinic Managers and their staffs to identify ways SHS can effectively contribute to health equity, health reform, and healthy lifestyles and performance management.

Ms. Russell graduated with a Masters of Public Health (MPH) from The University of Michigan in Ann Arbor, Michigan. She also holds a Bachelor of Science in Dental Hygiene (BSDH) from Old Dominion University in Norfolk, VA.

Community Stakeholders

The following Public Health Department staff members from Kent and Sussex Counties participated in the community health needs assessment, including :

- Hope Medical Clinic
- Delaware Division of Public Health Department of Health and Social Services
 - Thurman Adams State Service Center
 - Delaware Division of Public Health Office of Minority Health
 - Delaware Division of Public Health Office of Women's Health
 - Delaware Division of Public Health Nursing
 - Delaware Division of Public Health Social Services
- LaRed Medical Center
- Westside Family Health Center
- PA Mid-Atlantic AIDS Training Center
- Bayhealth High School Wellness Centers, Advanced Practice Nurses
 - Milford
 - Woodbridge
 - PolyTech
- Community Physicians

Attachment C: Summary of Community Engagement

Bayhealth conducted focus groups, town hall meetings, community key leader interviews, and online surveys between September 2012 and January 2013. In total, 50 people participated in the discussions to provide the global perspective and insight regarding Bayhealth's community health needs.

Topics covered during the community engagement sessions included:

- Health and quality of life in the community,
- Accessibility (or lack thereof) of health care in the community,
- Specific areas of need,
- Barriers to living a healthy lifestyle in the community, and the
- Need for outreach and education for specific populations in the community.

Participants were eager to discuss the lack of transportation in their community and its impact on the ability of individuals, especially low-income persons, to access health services. The themes were consistent among participants regardless of the method by which the information was obtained.

Obesity and associated chronic diseases, such as diabetes, heart disease, poor nutrition, need for food closets, costs of eating healthy, lack of understanding by the community the importance of good nutrition, etc., were consistent themes. Also discussed was the lack of community-based and/or free locations for exercising and staying active. The lack of medical specialists and the inability of low-income and underinsured populations to access medical care were also consistent themes. The need for accessible dental services was a consistent theme among respondents.

The need for outreach and education to low-income and/or minority populations regarding available social service programs was a common theme among participants. Many individuals stated that social services are generally available in the community but that low-income and minority populations are not aware of the programs. Lack of transportation and/or awareness of the programs were mentioned repeatedly. Also consistently noted was the need for resources geared to the Hispanic population. The lack of mental health and/or substance abuse services was also a consistent theme among participants.

Finally, stakeholders discussed how Bayhealth and other providers can better reach community members with regard to education and outreach of available services. Challenges reaching diverse populations, including various age groups, races, socio-economic levels, respond to various types of media and technology. Groups recognize the different forms of communication more often used by various population subgroups (e.g., television versus social media).

Stakeholder Questions

The following questions were asked of all participants in the assessment and/or were used to guide the discussions, regardless of the assessment method (i.e., one-on-one interview, focus groups, town hall meeting, or online survey).

Introductory Information:

Name/ Title:

Organization Representing:

Date:

1. What is the number one thing that Bayhealth Medical Center could do to improve the health and quality of life of the community?
2. What are the three most important health issues/ needs in the community?
3. How accessible and adequate are the following care/ services in Kent/Sussex County:
 - a. Primary care
 - b. Mental/ Behavioral Health
 - c. Human/ Social Services
 - d. Specialties (e.g. Cardiologist, Endocrinologist, Orthopedist, etc.)
 - i. If these services are inadequate, what would be the best way to address this?
4. Does the community have adequate programs which promote healthy lifestyles?
 - a. How do residents obtain information about these programs?
5. How could information be better disseminated in the community so that more people are informed?
6. How do the members of your community/ organization perceive healthcare services?
 - a. What do you perceive is their greatest need?
 - b. Do those that you represent value preventive care and are proactive about their own healthcare?
7. Is there anything else you would like to discuss about your community that you feel impacts those you represent?
 - a. (e.g. Socioeconomic status, education, barriers, language barriers, access to care, access to insurance, transportation, perceived risks, prevention services, etc.)

Attachment D: Health Data

Bayhealth utilized both quantitative and qualitative analyses as part of its assessment in order to fully understand the health needs of the community served. Quantitative analyses were conducted using the most recent data available from five primary sources:

- Delaware Health Tracker (a product of the Healthy Community Network);
- County Health Rankings & Roadmaps (a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute);
- Demographic data from the Delaware Population Consortium;
- Delaware Health Statistics Center; and,
- Demographic and socioeconomic data from the U.S. Census Bureau.

The following information is from the Delaware Health Tracker, as of May 2013, illustrating how the community served by Bayhealth compares to other counties in Delaware and the state as a whole.

Indicator Comparison Report

Children with Health Insurance

Location	Status	Percent
County : Kent		96.4
County : New Castle		95.7
County : Sussex		93.7
State : Delaware		95.4

Adults with Health Insurance

Location	Status	Percent
County : Kent		88.5
County : New Castle		87.7
County : Sussex		82.3

State : Delaware



86.7

Unemployed Workers in Civilian Labor Force

Location	Status	Percent
<u>County : Kent</u>		8.0
<u>County : New Castle</u>		7.2
<u>County : Sussex</u>		8.7
<u>State : Delaware</u>		7.7

Primary Care Provider Rate

Location	Status	Providers/ 100,000 population
<u>County : Kent</u>		52
<u>County : New Castle</u>		81
<u>County : Sussex</u>		60
<u>State : Delaware</u>		71

Recreation and Fitness Facilities

Comparison: U.S. Value

Location	Status	Facilities/ 1,000 population
<u>County : Kent</u>		0.08
<u>County : New Castle</u>		0.16
<u>County : Sussex</u>		0.16

Adults Engaging in Regular Physical Activity

	Location	Status	Percent
<u>County : Kent</u>		45.6	
<u>County : New Castle</u>		52.1	
<u>County : Sussex</u>		52.4	
<u>State : Delaware</u>		51.0	

Adults who are Obese

	Location	Status	Percent
<u>County : Kent</u>		31.9	
<u>County : New Castle</u>		26.8	
<u>County : Sussex</u>		31.8	
<u>State : Delaware</u>		28.8	

High Blood Pressure Prevalence

	Location	Status	Percent
<u>County : Kent</u>		32.9	
<u>County : New Castle</u>		28.2	
<u>County : Sussex</u>		35.6	
<u>State : Delaware</u>		34.8	

Children with Asthma

	Location	Status	Percent
<u>County : Kent</u>		28.7	
<u>County : New Castle</u>		26.0	

<u>County : Sussex</u>		21.8
<u>State : Delaware</u>		25.9

Tuberculosis Incidence Rate

Location	Status	Cases/ 100,000 population
<u>County : Kent</u>		2.5
<u>County : New Castle</u>		2.4
<u>County : Sussex</u>		2.0
<u>State : Delaware</u>		2.3

High Cholesterol Prevalence

Location	Status	Percent
<u>County : Kent</u>		38.3
<u>County : New Castle</u>		36.9
<u>County : Sussex</u>		42.0
<u>State : Delaware</u>		40.6

Median Household Income

Location	Status	Dollars
<u>County : Kent</u>		54783
<u>County : New Castle</u>		64158
<u>County : Sussex</u>		53215
<u>State : Delaware</u>		59317

Adults who Visited a Dentist

Location	Status	Percent
County : Kent		67.1
County : New Castle		78.3
County : Sussex		69.0
State : Delaware		74.2

Oral Cavity and Pharynx Cancer Incidence Rate

Location	Status	Cases/ 100,000 population
County : Kent		11.6
County : New Castle		9.9
County : Sussex		14.3
State : Delaware		11.4

Prostate Cancer Incidence Rate

Location	Status	Cases/ 100,000 males
County : Kent		219.4
County : New Castle		186.6
County : Sussex		154.6
State : Delaware		182.8

Age-Adjusted Death Rate due to Prostate Cancer

Location	Status	Deaths/ 100,000 males
<u>County : Kent</u>		26.8
<u>County : New Castle</u>		27.2
<u>County : Sussex</u>		20.2
<u>State : Delaware</u>		24.9

Age-Adjusted Death Rate due to Breast Cancer

Location	Status	Deaths/ 100,000 females
<u>County : Kent</u>		26.6
<u>County : New Castle</u>		21.9
<u>County : Sussex</u>		24.3
<u>State : Delaware</u>		23.0

Age-Adjusted Death Rate due to Colorectal Cancer

Location	Status	Deaths/ 100,000 population
<u>County : Kent</u>		19.2
<u>County : New Castle</u>		16.3
<u>County : Sussex</u>		18.2
<u>State : Delaware</u>		17.2

Age-Adjusted Death Rate due to Unintentional Injuries

Location	Status	Deaths/ 100,000 population
County : Kent		37.5
County : New Castle		34.2
County : Sussex		46.6
State : Delaware		36.8

Age-Adjusted Death Rate due to Heart Disease

Location	Status	Deaths/ 100,000 population
County : Kent		233.7
County : New Castle		171.0
County : Sussex		166.1
State : Delaware		178.8

Age-Adjusted Death Rate due to Cerebrovascular Disease (Stroke)

Location	Status	Deaths/ 100,000 population
County : Kent		39.0
County : New Castle		43.3
County : Sussex		29.0
State : Delaware		38.2

Age-Adjusted Death Rate due to Lung Cancer

Location	Status	Deaths/ 100,000 population
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County : Kent		59.9
County : New Castle		55.6
County : Sussex		59.3
State : Delaware		57.3

High School Graduation

Location	Status	Percent
County : Kent		77.2
County : New Castle		77.0
County : Sussex		81.5
State : Delaware	 Current Target	78.0

Adult Fruit and Vegetable Consumption

Location	Status	Percent
County : Kent		23.1
County : New Castle		25.1
County : Sussex		26.5
State : Delaware		25.0

Adults with Diabetes

Location	Status	Percent
County : Kent		10.2
County : New Castle		7.2

<u>County : Sussex</u>		11.6
<u>State : Delaware</u>		8.7

HIV Incidence Rate

Location	Status	Cases/ 100,000 population
<u>County : Kent</u>		9.1
<u>County : New Castle</u>		14.6
<u>County : Sussex</u>		7.0
<u>State : Delaware</u>		12.3

Gonorrhea Incidence Rate

Location	Status	Cases/ 100,000 population
<u>County : Kent</u>		102.4
<u>County : New Castle</u>		81.0
<u>County : Sussex</u>		109.0
<u>State : Delaware</u>		91.2

Syphilis Incidence Rate

Location	Status	Cases/ 100,000 population
<u>County : Kent</u>		4.2
<u>County : New Castle</u>		2.4
<u>County : Sussex</u>		3.5

State : Delaware



3.0

Dentist Rate

Location	Status	Dentists/ 100,000 population
<u>County : Kent</u>		32
<u>County : New Castle</u>		54
<u>County : Sussex</u>		20
<u>State : Delaware</u>		43

Adults 65+ with Pneumonia Vaccination

Location	Status	Percent
<u>County : Kent</u>		69.6
<u>County : New Castle</u>		68.1
<u>County : Sussex</u>		72.1
<u>State : Delaware</u>		69.2

Adults 65+ with Influenza Vaccination

Location	Status	Percent
<u>County : Kent</u>		59.3
<u>County : New Castle</u>		62.9
<u>County : Sussex</u>		66.8
<u>State : Delaware</u>		63.4

Age-Adjusted Death Rate due to Influenza and Pneumonia

Location	Status	Deaths/ 100,000 population
County : Kent		15.0
County : New Castle		13.4
County : Sussex		11.1
State : Delaware		

Colorectal Cancer Incidence Rate

Location	Status	Cases/ 100,000 population
County : Kent		46.9
County : New Castle		47.9
County : Sussex		50.4
State : Delaware		48.3

Colon Cancer Screening

Location	Status	Percent
County : Kent		17.5
County : New Castle		12.0
County : Sussex		23.8
State : Delaware		16.0

Age-Adjusted Death Rate due to Colorectal Cancer

Location	Status	Deaths/ 100,000 population
County : Kent		19.2

County : New Castle		16.3
County : Sussex		18.2
State : Delaware		17.2

Breast Cancer Incidence Rate

Location	Status	Cases/ 100,000 females
County : Kent		121.1
County : New Castle		131.3
County : Sussex		126.9
State : Delaware		127.9

Mammogram History

Location	Status	Percent
County : Kent		81.6
County : New Castle		81.2
County : Sussex		82.9
State : Delaware		81.4

Age-Adjusted Death Rate due to Breast Cancer

Location	Status	Deaths/ 100,000 females
County : Kent		26.6
County : New Castle		21.9
County : Sussex		24.3

State : Delaware



23.0

Cervical Cancer Incidence Rate

Location	Status	Cases/ 100,000 females
<u>County : Kent</u>		9.0
<u>County : New Castle</u>		9.2
<u>County : Sussex</u>		8.3
<u>State : Delaware</u>		8.9

Pap Test History

Location	Status	Percent
<u>County : Kent</u>		86.9
<u>County : New Castle</u>		80.6
<u>County : Sussex</u>		86.4
<u>State : Delaware</u>		82.7

Bayhealth analyzed 2013 health rankings from the County Health Rankings & Roadmaps, collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute. The following table summarizes the current health rankings for the counties in Delaware, including the communities served by Bayhealth. (In each instance, the most recent data was used to provide the current, i.e., 2013, health rankings.) Sussex County ranks second in most categories of health outcomes and health factors.

Table D1: Delaware Counties: Ranking by Health Indicators, 2013

Health Indicator	New Castle County	Sussex County	Kent County
Health Outcomes			
Overall	1	2	3
Mortality	1	2	3
Morbidity	2	1	3
Health Factors			
Overall	1	2	3
Health Behaviors	1	2	3
Clinical Care	2	1	3
Social & Economic Factors	1	2	3
Physical Environment	3	1	2
Table D1 Note. Adapted from County Health Rankings & Roadmaps. (2013). 2013 Rankings Delaware.			
http://www.countyhealthrankings.org/sites/default/files/states/CHR2013_DE_0.pdf			

Attachment E: Community Assets Analysis

Community-based Agencies & Services

Dover Behavioral Health System – Dover Behavioral Health is a Joint Commission accredited facility offering a range of behavioral health and chemical dependency services including: inpatient services, partial hospitalization programs, chemical dependency inpatient and outpatient programs, dual diagnosis program, and a military program. Inpatient services are offered in Kent County with outpatient services offered at a satellite location in Sussex County.

Hope Clinic –The Hope Clinic is Delaware's only 100% free medical facility offered to eligible patients. Services include: free non-emergency primary medical and dental care to uninsured, non-Medicaid, and/or non-Medicare patients aged 18-65 years. Comprised entirely of volunteers, the staff currently includes internists, surgeons, family practice physicians, dentists, nurses, a counselor, and an array of additional medical and office support staff. In 2012, Hope Medical Clinic provided \$600,000 of care on a \$250,000 budget.

LaEsperanza – Community Center – This is a bi-cultural and bilingual 501(c)(3) social services agency that provides free culturally appropriate programs and services in the areas of family development, immigration, victim services, and education to help Hispanic adults, children and families living in Sussex County. The Center currently serves approximately 10,000 individuals annually.

LaRed Health Center – Services include: Primary Care, Pediatric Services, Medical Services, Dental Services, Counseling/Mental Health Services, Pregnancy Services, and HIV/AIDS Treatment. The center accepts: Uninsured, Underinsured, Private Insurance, Medicare, and Medicaid; all income levels accepted. Fees: Sliding scale available. Languages Spoken: English, Spanish.

LogistiCare Transportation Service – LogistiCare provides non-emergency, medically necessary medical transportation and currently manages all of Delaware's Medicaid and chronic renal disease patient transportation. LogistiCare assists Bayhealth with patient discharge transportation to patient's home and to and from treatment.

Modern Maturity Senior Center (MMSC)- Located in Kent County, MMSC provides seniors with an exercise wellness center, senior lunch (nominal fee), meals on wheels for homebound seniors, adult day services, caregiver resource center, dinner dances, trips and tours and adult support groups.

Nemours Pediatrics – Services include: Vision Services, Hearing Services, Dental Services, and Immunizations. The clinic accepts: Uninsured, Underinsured, Insurance, Medicare, and Medicaid; all income levels accepted. Financial assistance is available.

Planned Parenthood of Delaware, Dover Center – Services include: Women's Health Services, Specialist medical services, Family Planning Services, Pregnancy Services. Accepts: Uninsured, underinsured, insurance, and Medicaid; all income levels accepted. Fees: Sliding scale; no one turned away due to inability to pay.

Westside Family Healthcare – Westside Family Healthcare is a Joint Commission accredited, Federally Qualified Health Center. This community health system has locations serving New Castle, Kent, and Sussex Counties in Delaware. Services include Women's Health Services, Podiatry Services, Pediatric Services, Mental Health Services, Medical Services, and Dental Services.

- The facility accepts most insurance plans, including Delaware Healthy Children Program, Delaware Physicians Care, Inc., Medicaid, Medicare, Screening for Life, Unison, and most private commercial insurance plans.
- Westside offers a sliding fee scale based on household income for patients without insurance. Financial Aid Assistants are available to assist patients in applying for Medicaid, Medicare, Screening for Life, and the Delaware Healthy Children Program.

Division of Public Health – The James W. Williams State Service Center currently offers client services administered by Delaware Health and Social Services (DHSS) divisions, including the following:

Division of State Service Centers (DSSC)

- Community Resource Assistance Services (CRASP)
- DART Bus Ticket Sales
- Emergency Assistance Service (EAS)
 - Emergency Shelter - is provided for eligible EAS clients
 - Needy Family Fund
- Food Closet
- Foster Grandparent Program
- Kinship Care Program
- Teen Voucher
- Utility Assistance

Division of Social Services (DSS)

- Child Care
- Food Stamps
- General Assistance
- Healthy Children
- Medicaid
- Temporary Assistance for Needy Families

Division of Public Health (DPH)'s Kent County Health Unit, featuring:

- Child Health Clinic
- Immunizations

- Lead Screening
- Dental clinic
- WIC - A supplemental Nutrition Program for pregnant and nursing women, infants and young children
- Family Planning
- Sexually Transmitted Disease (STD) Clinic
- Tuberculosis (TB) services
- Pregnancy testing and counseling
- HIV counseling, testing and education
- Home visits for families
- Health Education

Division of Substance Abuse and Mental Health (DSAMH)

- Kent/Sussex Community Mental Health (CMH)

Division of Substance Abuse and Mental Health (DSAMH)

- Kent/Sussex Community Mental Health (CMH)
- Treatment Access Center (TASC) - Dover Facility
 - Assessment, referral to treatment and case management
 - TASC makes recommendations to court system
 - Voluntary drug diversion program for non-violent offenders

CHILD, Inc. Parenting Classes-Services are free in Kent County and open to the public. Classes are designed to address parenting issues from 0-3yrs old, 4-11 years old and 12 years old and up.

First State Community Action Agency - Housing, counseling, case management & community outreach

Bayhealth Community Outreach Services

Bayhealth offers a variety of community resources which including the following:

- Bariatric Center
- Diabetes Wellness Center; free glucose testing to high risk patients
- Cancer Center; free prostate, colon, skin and breast screenings to uninsured/underinsured
- Oncology Radiation Transportation Van
- Care Management Services
- Health Education classes (through Education Department)
- Free Health Screenings; Osteoporosis, Cardiovascular
- Home Care
- Steps Blood Pressure Clinic
- Steps to Healthy Aging Lecture Series for 50 years and older

Healthier Sussex County Initiative

Bayhealth, along with Beebe Medical Center and Nanticoke Health Services, are joining with local community and health resources to focus on one mission – to make Sussex County one of the healthiest in the nation. Healthier Sussex County will focus on addressing important health issues impacting residents of Sussex County by identifying and addressing health disparities; identifying and addressing health education; and making a positive impact on health behaviors⁹.

The Healthier Sussex County Task Force has identified five community health needs:

- Obesity
- Cancer
- Mental/behavioral health
- Cost/health insurance/access to health care
- Transportation

⁹ <http://www.healthiersussexcounty.com/>

Attachment F: Prioritized Community Health Needs

Identifying Community Health Needs

Early in 2012, Bayhealth Medical Center adopted a comprehensive process to conduct the community health needs assessment for each of its facilities (Kent General Hospital and Milford Memorial Hospital). Guidelines from Catholic Health Association of the United States (CHA) in collaboration with VHA Inc. and Healthy Communities Institute structured Bayhealth's processes.¹⁰ The guidance included in these steps:

Step 1: Plan and Prepare for the Assessment

Step 2: Determine the Purpose and Scope of the Community Health Needs Assessment

Step 3: Identify Data that Describes the Health and Needs of the Community

Step 4: Understand and Interpret the Data

Step 5: Define and Validate Priorities

Step 6: Document and Communicate Results

Community insight data considered in the assessment process included: focus groups, town hall meetings, community key leader interviews, and online surveys. Staff from the hospital collated and analyzed the data, shown in Attachment C.

Bayhealth's Education and Strategic Planning Departments began with a review of current demographics from Delaware Population Consortium and the U.S. Census Bureau. The hospital, in conjunction with the Delaware Hospital Association, utilized Delaware Health Tracker, a web-based information system to present the most recent data available. Attachment D includes health indicators for specific diseases, conditions and/or issues associated with the need priority categories.

The community assets and resources analysis was an important evaluation component when prioritizing community health needs. Attachment E includes an asset analysis for the communities served.

¹⁰ <http://www.chausa.org/docs/default-source/advocacy/072011-cha-comments-on-community-health-needs-assessment-guidelines-pdf.pdf>

Setting Health Need Priorities

The health needs were prioritized jointly by the Education and Strategic Planning Departments based on review of the data and discussions with medical staff members of Bayhealth. The prioritized health needs were then reviewed by Bayhealth's administration, with the opportunity for discussion and reprioritization as needed.

The scope of the evaluation was not limited to unmet community needs. Current hospital services, community need perceptions, and available community assets were considered. Community demographics as well as health and quality of life indicators were reviewed. The criteria used to evaluate and prioritize the identified health needs identified through the fact-finding process included:

- The seriousness of the issue;
- The relative size of the populations affected;
- The degree to which the need particularly affected persons living in poverty or reflected health disparities;
- Alignment with Bayhealth's mission and vision; and,
- Availability of community resources to address the need.

The priority needs identified by the assessment were:

1. Obesity rates;
2. Cancer rates, specifically prostate and lung;
3. Lack of access to and awareness of existing health care services; and,
4. Lack of mental health and substance abuse services.

References

- Bayhealth Medical Center. (2012). Bayhealth Oncology Services Annual Report 2012.
Retrieved from
<http://www.bayhealth.org/media/file/Oncology%20Annual%20Report%20Web-2013.pdf>
- Catholic Health Association of the United States. (2011). Elements in community health needs assessment and implementation strategies. Retrieved from
<http://www.chausa.org/docs/default-source/advocacy/072011-cha-comments-on-community-health-needs-assessment-guidelines-pdf.pdf>
- County Health Rankings and Roadmaps. (2013). 2013 Rankings Delaware. Retrieved from
http://www.countyhealthrankings.org/sites/default/files/states/CHR2013_DE_0.pdf
- Delaware Health Statistics. (2013). Delaware hospital discharge summary report: 2009. Retrieved from <http://www.dhss.delaware.gov/dhss/dph/hp/files/hosp09.pdf>
- Delaware Health Tracker. (2013). Age adjusted death rate due to Diabetes. Retrieved from
<http://www.delawarehealthtracker.com/modules.php?op=modload&name=NS-Indicator&file=overview&indid=200010000032®ionzoom=All+Location+Types>
- Delaware Health Tracker. (2012). Age adjusted death rate due to suicide. Retrieved from
<http://www.delawarehealthtracker.com/modules.php?op=modload&name=NS-Indicator&file=overview&indid=200012000032®ionzoom=All+Location+Types>
- Delaware Health Tracker. (2013a). Indicator comparison report. Retrieved from
<http://www.delawarehealthtracker.com/IndicatorCompare/51a4ed2e65ee9>
- Delaware Health Tracker. (2013b). Indicator comparison report. Retrieved from
<http://www.delawarehealthtracker.com/index.php?module=IndicatorCompare&func=display&rcuid=51ba202145d05>
- Delaware Health Tracker. (2013). People 25+ with bachelor's degree or higher. Retrieved from
<http://www.delawarehealthtracker.com/modules.php?op=modload&name=NS-Indicator&file=overview&indid=1003624000003®ionzoom=County>
- Delaware Population Consortium. (2012). Annual population projections. Retrieved from
<http://stateplanning.delaware.gov/information/dpc/DPC2012v1.0.pdf>
- United States Census Bureau. (2012). State and county quick facts: Kent County, Delaware. Retrieved from
<http://quickfacts.census.gov/qfd/states/10/10005.html>
- United States Census Bureau. (2000). Profile of General Demographic Characterizes: 2000.

Retrieved from <http://censtats.census.gov/data/DE/05010005.pdf>

U.S. Department of Health and Human Services. (2013). Find shortage areas: HPSA by state & county. Retrieved from <http://hpsafind.hrsa.gov/HPSASearch.aspx>