Mercy Medical Center

Community Health Needs Assessment and Implementation Plan

2013

Reviewed and approved by the Boards of Mercy Medical Center on June 25, 2013, and Catholic Health Services on July 29, 2013

Mercy Medical Center
Catholic Health Services
At the heart of health

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I. Executive Summary

A. New IRS Requirements

The Affordable Care Act (ACA), enacted March 23, 2010, added new requirements that all not-for-profit hospitals, recognized as 501 (c) (3) organizations, are required to complete a Community Health Needs Assessment (CHNA). A CHNA is designed to identify, prioritize and address health issues in a hospital's primary service area and, according to IRS regulations, must be completed at least once every three years for tax years beginning after March 2012. A successful CHNA must include each of the following:

- Definition of community served by the facility
- Identification of key health partners and resources in the community
- Description of the process and methods used to conduct the health needs assessment
- Completion of a community-wide survey/focus groups or other means to obtain input regarding significant health needs

- Identification and prioritization of significant community health needs
- Dissemination of the CHNA findings and report to the public

In compliance with the statute and IRS guidelines and in an effort to positively impact health outcomes within the communities served, Mercy Medical Center recently conducted a CHNA. The hospital's CHNA focused on the health behavior of individuals in the community, health issues and concerns facing residents of the community and access to care.

B. Community Served, Demographics, Existing Health Facilities and Resources

Located in south central Nassau County, Mercy's primary service area (comprising 75% of its inpatients) has a population of about 435,000.[1] The population is ethnically diverse, more than half of it African-American, Hispanic or Asian.[2] Nearly a third of residents speak a language other than English in the home, and more than a quarter are foreign born. Mercy's primary service area also comprises some of the poorest populations in Nassau County, including four of the eight highest poverty zip codes in the county. These zip codes alone accounted for 30% of Mercy's total discharges and 48% of the hospital's Emergency Department discharges in 2012. Fully 45% of all individuals in the county below the poverty level live in Mercy's primary service area.[3] While a third of the residents in this service area have a bachelor's degree, nearly a quarter from these high-poverty zip codes do not have a high school diploma.

Mercy is a full-service, 375-bed hospital with more than 700 physicians and a staff of more than 1,300, whose operational purpose is to provide a complete range of medical services to area residents. Mercy recorded 11,000+ inpatient discharges and nearly 39,000 Emergency Department visits in 2012. Mercy provides 24-hour emergency care for both adults and children, has a Level III Neonatal Intensive Care

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[1] For the purposes of this CHNA, the communities served consist of Baldwin, Bellmore, East Meadow, Elmont, Freeport, Hempstead, Lynbrook, Merrick, Rockville Centre, Roosevelt, Uniondale, Valley Stream, and West Hempstead. This is based on the geographic area within which the majority of Mercy's patients reside.

[2] This and the other demographic data in this paragraph are based on data from the U.S. 2010 Census or the U.S. Census American Community Survey (2007-2011).

[3] These are: Hempstead (poverty rate 15.6%), Roosevelt (14.1%), Freeport (12.6%), and Uniondale (8.6%). (Since the cost of living in Nassau County is 42% higher than the U.S. average, these official poverty rates understate the problem.)

Unit (NICU) and is a New York state-designated stroke center. It has been designated a Center of Excellence for both bariatric surgery and breast imaging. It has extensive inpatient and outpatient services for behavioral health and for mother/baby services, in addition to the largest inpatient acute rehabilitation program on the south shore of Nassau County. Mercy is a member of Catholic Health Services of Long Island (CHS).

Mercy belongs to a rich web of local health facilities, including neighboring hospitals South Nassau Communities Hospital, Winthrop Hospital, NuHealth, Franklin Hospital and Long Beach Medical Center (although currently the latter is facing closure, due to Hurricane Sandy). Three of these hospitals are less than four miles distant from Mercy; two are less than nine miles. There are more than 12 hospitals within Nassau County, where Mercy is located.

In Nassau County, NuHealth, North Shore and Winthrop are designated as regional trauma centers, and South Nassau is designated as an area trauma center. NuHealth is the county's only designated burn center. North Shore and Winthrop serve as regional perinatal centers; Mercy and NuHealth maintain Level 3 perinatal care, the highest level; Plainview and South Nassau maintain Level 2 status; with other hospitals at Level 1, having no NICU. There are only 2 designated AIDS centers in Nassau County, and all 12 hospitals have designated stroke centers and offer general primary care outpatient clinic services.

There are 34 nursing homes and 4 community health centers in Nassau County; the latter are operated by the Nassau County Department of Health and located in Elmont, Freeport, Hempstead and Westbury. They provide comprehensive primary, preventive and behavioral health services to all persons, regardless of insurance status and ability to pay. There are many non-hospital-based health care programs operating in the area. Mercy works closely with the Rotacare free medical clinic, FEGS, the Perinatal Services Network, Healthy First Start Consortium, the Women, Infants and Children Program (WIC) of Catholic Charities and CHS Healthy Sundays, among many others.

Mercy Medical Center reported $571 thousand in charity care at cost net of offsetting revenues in 2012. Community service, uncompensated care and other charitable activities provided for the community totaled $6.5 million at cost.

C. Overview of CHNA Findings

Mercy's CHNA draws upon the results of the Nassau County Health Needs Assessment, which was conducted through a Nassau County Health Department-hospital collaboration in which Mercy participated[4], as well as Mercy's own community survey, along with information from a variety of data sources specific to the Mercy service area. The Mercy CHNA identified several areas of need, including:

- Diabetes prevention, control and treatment
- Obesity prevention, control and treatment
- Prenatal and early childhood health care

[4] This collaborative included the Nassau County Department of Health, three Catholic Health Services hospitals (Mercy, St. Francis and St. Joseph), Long Beach Memorial Hospital, the North Shore–LIJ Health System, South Nassau Communities Hospital and Winthrop Hospital.

D. Identification and Prioritization of Community's Significant Health Needs

After careful review and assessment by senior leadership, based on the needs of the hospital's service area identified in this report, which include prevention and treatment of chronic diseases and addressing the health burden of overweight and obesity-related diseases and conditions, as well as the needs Mercy can most effectively meet given its current service offerings and resources, Mercy developed an implementation plan to address the health needs indicated above.

In addition, the first two (diabetes and obesity) were chosen in part because Mercy agreed to join with other members of the local health department-hospital collaboration in a collective effort targeted at two areas within the NYS Prevention Agenda for 2013–2017. Both areas fall within the Prevent Chronic Disease category—one to reduce obesity in children and adults, the other to increase access to high-quality chronic disease preventive care and management in both clinical and community settings (which in Mercy's case will focus on diabetes preventive care).

II. CHNA Process and Findings

A. Methodology, Data Sources, Collaborating Organizations

Mercy's CHNA draws upon the results of the collaboratively conducted Nassau County Health Needs Assessment, which took place in the first three quarters of 2013. Key representatives from the Nassau County Department of Health were involved, sharing their research and data collection findings, as well as the use of their facility and coordination of meetings. The Nassau County Health Needs Assessment was supplemented by Mercy's own community survey, which included input from members of medically underserved, low-income and minority populations who attended programs at the Hispanic Brotherhood, Martin Luther King, Jr., Center or Equal Opportunity Council (EOC). Information from a variety of data sources specific to the Mercy service area was also used to supplement the Needs Assessment.

1. *Nassau County Health Needs Assessment: Qualitative*

The qualitative assessment is based on key-informant interviews with health organization leaders to identify pressing health needs in the community.[5] Upon providing consent to be interviewed, participants were asked open-ended questions about their organization and the population they serve:

- Identify the biggest health problems in their community
- Prioritize health issues to be addressed
- Describe the factors that affect the health care the community receives
- Describe the health resources their community uses in relation to specific health problems
- Identify barriers to, or gaps in, resources provided
- Identify ways their organization might improve services and programs for the community they serve

Interviews were recorded and transcribed. Qualitative data analysis was conducted to identify prevalent themes and emergent themes in responses.

[5]Participating organizations included: American Cancer Society, American Diabetes Association, American Heart Association, Catholic Charities, Circulo de la Hispanidad, FEGS, Health and Welfare Council of Long Island, Island Harvest, Jewish Association Serving the Aging (JASA), Long Island Council of Churches, Mental Health Association of Nassau County, Perinatal Services Network, Project Independence, Sustainable Long Island and United Way.

2. *Nassau County Health Needs Assessment: Quantitative*

The quantitative assessment is based on a community survey that was widely distributed[6] during the 2nd quarter of 2013 in both Spanish and English, eliciting more than 1,000 completed surveys. The criteria for question development began with tested and used surveys as a template guide. Content relating to the NYS Prevention Agenda priorities, plus goals and barriers, were then incorporated into the questions, as well as demographic information and the use of common terminology verses official public health terminology.

In addition to providing county-wide data, it reported results specifically for Elmont, Inwood, Freeport, Glen Cove, Hempstead, Uniondale, Long Beach, Roosevelt and Westbury. These "select communities" constitute zip codes identified to have disproportionately higher rates for many diseases, as well as adverse social and economic indicators. The "select communities" results are particularly important for Mercy, because five of those communities are located in Mercy's primary service area. In fact, 60% of the population of these communities and 72% of the "select communities" survey respondents are in Mercy's primary service area, comprising a disproportionate share of patients and Emergency Department admissions.

3. *Mercy Medical Center Health Needs Assessment*

The assessment of needs specific to Mercy's service area was made on the basis of several sources of data:

- A community health needs assessment survey distributed widely by Mercy throughout the service area resulted in 177 persons completing the survey to date. The survey was distributed through a variety of sources—physician offices, Martin Luther King, Jr., Center, Hispanic Brotherhood, Equal Opportunity Council (EOC), Health and Welfare Council, Mercy employees and volunteers, Mercy website, Mercy patients in the outpatient clinic, Homemaker's Club, Sandel Senior Center and others. It is a 19-question health assessment survey in which respondents were asked about their own health and health concerns/needs and (in one case) those of "you and your neighbors".
- Zip code-level data from the U.S. Census and from the New York State Prevention Quality Indicators website;[7]
- County data sources such as the Nassau County Diabetes Report and the 2010 Update of the Nassau County Community Health Assessment (a 3-volume report not to be confused with the Nassau County Health Needs Assessment described above)[8];
- NYSDOH hospitalization data through SPARCS (Statewide Planning and Research Cooperative System), a comprehensive data reporting system between the health care industry and government
- Mercy internal records and the first-hand experience of Mercy's outpatient clinicians.

[6]Through Survey Monkey, hospital outreach, public libraries, NCDOH programs and county agencies, faith-based organizations, community centers and social media.

[7] U.S.Census portal is http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml. Prevention Quality Indicators are at www.health.ny.gov/statistics/chac/indicators.

[8] Can be accessed at http://www.nassaucountyny.gov/agencies/Health/data.html.

B. Detailed CHNA Data/Results

1. *Results of the Nassau County Health Needs Assessment*

The primary finding of the Nassau County qualitative assessment was substantial agreement among participants that, of five priority health areas designated by the New York State Department of Health, prevention of chronic diseases was the most pressing in the county.[9] Fully 76.4% of participating organizations regarded prevention of chronic disease as a priority, and 50% regarded it as the number one health priority. An overview of the results follows:

- Diabetes, heart disease and cancer were the most commonly reported chronic diseases of concern
- The health burden of overweight and obesity-related diseases and conditions, such as diabetes and heart disease, is increasing significantly
- Promoting healthy living, especially among the youth, should be a top priority, especially in minority populations with a high prevalence of obesity
- Time and funding should be allocated for prevention rather than solely on treatment
- More outreach to low SES and minority populations is needed to provide education about nutrition and healthy food practices
- There is a lack of awareness of the importance of prenatal care among high-risk populations
- There has been an increase in the prevalence of mental health issues and substance abuse

The survey tool of the Nassau County Health Needs Assessment tabulated results for both the county as a whole and for the "select communities". The four most common responses to three key questions are given in the table below.

Nassau County		Select Communities	
What are the biggest ongoing health concerns in your community?			
Cancer	44.0%	Diabetes	40.5%
Obesity/weight loss	36.0%	Drug/alcohol abuse	38.0%
Diabetes	33.0%	Cancer	37.2%
Drug/alcohol abuse	31.9%	Obesity/weight loss	31.8%
What are the biggest ongoing health concerns for you?			
Cancer	35.6%	Cancer	37.2%
Heart Disease	35.0%	Women's Health	33.8%
Women's Health	32.7%	Diabetes	30.9%
Obesity	30.8%	Obesity	33.8%

[9] These five areas, which are prioritized in the New York State Prevention Agenda are: (1) Prevent Chronic Disease (2) Promote Healthy and Safe Environment (3) Promote Healthy Women, Infants and Children (4) Promote Mental Health and Substance Abuse; and (5) Prevent HIV, STD and Vaccine Preventable Diseases.

Which of the following is most needed to improve the health of your community?			
Nassau		Select Communities	
Healthy food choice	46.0%	Healthy food choice	44.7%
Weight loss	30.0%	Weight loss	25.8%
Mental health services	20.8%	Drug/alcohol rehab	23.3%
Drug/alcohol rehab	18.8%	Mental health services	20.0%

2. *Results of the Mercy Medical Center Community Health Needs Assessment Survey*

While the Nassau County survey asks respondents to both comment on their own health concerns and those of the community, the Mercy survey focused solely on the former. The results of this survey follow:

What are the top 3 challenges you face?	
Joint pain or back pain	38.9%
High blood pressure	32.0%
Overweight/obesity	31.5%
Diabetes	14.2%
What is needed to improve the health of your family and neighbors?[10]	
Healthier food	49.3%
Free or affordable wellness screenings	32.1%
Wellness services	25.7%
Primary care physicians	14.3%

Responses to two other questions in this survey share some common themes. When asked what types of health screenings and/or services are needed to keep you and your family healthy and what health issues do you need education about, some common responses for both questions included: blood pressure, cholesterol, nutrition, exercise/physical activity, diabetes and weight-loss help.

3. Limitations and Gaps in the Data

One limitation of both surveys is that respondents were disproportionately female—more than 70% in the Nassau county survey and 63.5% in the Mercy survey. For this reason, the frequency of "Women's

[10] Non-health-related choices such as "recreation facilities" and "safe places to work and play" are omitted from the results reported because, as a hospital, Mercy would not be the appropriate organization to address such concerns.

Health" in response to "What are the biggest ongoing health concerns for you?" is likely higher than it would otherwise be.

A second limitation that applies to the Mercy survey is that more than 80% of the respondents describe their health as "very good" or "excellent", which means their reported health concerns—especially when they are asked explicitly about their own health—are those of relatively healthy people. (It is not clear whether this applies to the Nassau survey or not.) Thus, "joint pain or back pain" and "high blood pressure" are at the top of the list, whereas a survey targeted at those in fair or poor health in our area might yield a different ranking.

Another limitation of the quantitative surveys is that it is not known whether the sample size and methodology of those responding is statistically significant. Based upon the relatively small sample size, the data might be skewed or biased in any given direction. Furthermore, those responding were not necessarily representative of the community at large. However, the results do correlate well with published data on major health concerns so it is believed that Mercy is appropriately addressing the health needs of the community with this plan.

C. Significant Health Needs/Priorities Identified

Mercy's assessment of the health needs in the area is informed by the county-level CHNA results reported so far and by Mercy's own survey, but also by the additional sources of information listed in section II.A. Although the hospital recognizes that joint or back pain and blood pressure screening are important concerns, they are not included among the top five health needs for the reasons cited in the previous section. Further, these needs are addressed during the year when Mercy's Joint-Endeavor RN coordinator conducts a series of speaker bureau sessions in the community, and blood pressure screenings are held at various health care outreach programs. On the basis of the other available information, the following significant needs have been identified:

1. *Diabetes prevention and control* was rated near the top of identified needs in the CHNA by key informants, the county survey of "select communities" and by the Mercy survey. Four of the five communities with the county's highest rates of hospitalization for Type 2 diabetes—Roosevelt, Uniondale, Hempstead and Freeport—are in Mercy's primary service area.[11] The rate of hospital admissions for uncontrolled diabetes for these areas is 275% of the "expected" admissions rate in New York State, and that for African-Americans 362%, according to the New York State Prevention Quality Indicators website.[12]

2. *Obesity prevention and control* were rated near the top of identified needs in the CHNA by key informants and the community survey of "select communities," as well as Mercy's own community survey. Obesity prevention through better nutrition is also one of the five Nassau County health priorities designated in the 2010 Nassau County Community Health Assessment.[13] Although zip code-level data on body mass index (BMI) is not available, there is strong national evidence that obesity impacts African-American and Hispanic populations more than others. The following table shows the disparities in the rate of obesity for three racial/ethnic groups that emerged in the

[11] Nassau County Dept. of Health. "Diabetes: From the National, State, and Local Perspective,", p.7.
[12] See www.health.ny.gov/statistics/chac/indicators.
[13] Nassau County Community Health Assessment: 2010 Update. Volume 3, p.12.

2009–2010 National Health and Nutrition Examination Survey (NHANES).[14] The age group 40–59 is broken out since this cohort has the highest rates of obesity.

	Non-Hispanic White	Non-Hispanic Black	Hispanic
Body Mass Index ≥ 30 (Obese)			
All (≥20 years, age-adjusted)	34.3%	49.5	39.1
Men (all)	36.2	38.8	37.0
Men (40-59 y)	37.4	42.6	40.0
Women (all)	32.2	58.5	41.4
Women(40-59y)	31.8	62.7	48.0

Given the racial/ethnic composition of the hospital's primary service area, the need for obesity prevention and control is clear.

3. *Cancer screening and prevention* is another chronic disease mentioned by the key informants and is ranked third in the Nassau County Health Needs Assessment survey. It is also one of the five local health priorities identified in the 2010 Update of the Nassau County Community Health Assessment. While racial/ethnic disparities, unlike the other priorities, are either relatively small or actually favor the minority populations (e.g., Hispanics) strongly represented in the area[15], rates of cancer screening for these populations continue to be a source of concern.

4. *Prenatal and early childhood health care.* Although perhaps not among the top three responses, one of the findings of the Nassau County Health Needs qualitative assessment is that "there is a lack of awareness of the importance of prenatal care among high-risk populations, especially among the African American population". Although it ranks low on community surveys, it is a good example of an important health need that doesn't poll well, for the simple reason that quality of prenatal care will be a self-reported health concern at relatively few times in one's life. Nevertheless, it can have lifelong consequences for the newborn child. Poor prenatal care in Nassau County is concentrated in poor, largely African-American and Hispanic populations of the southern region, much of it in Mercy's primary service area. The "late or no prenatal care"" rate (LNPC) in the Mercy PSA (4.5%) is more than double the rest of the county's rate, accounting for over half the county total. Prenatal care and infant mortality is one of the five Nassau County health priorities designated in the 2010 Nassau County Community Health Assessment.[16] Consequently, prenatal and early childhood health care should be regarded as a vital health need in the area.

[14] See tables in "Prevalence of Obesity and Trends in the Distribution of Body Mass Index Among US Adults, 1999-2010." *JAMA*. 2012;307(5):491-497. doi:10.1001/jama.2012.39. National Center for Health Statistics, Centers for Disease Control and Prevention.
[15] Nassau County Community Health Assessment: 2010 Update. Vol 1, p.61,65.
[16] Nassau County Community Health Assessment: 2010 Update. Vol 3, p.12.

D. Priorities Chosen for Action and Why

Of these identified significant needs, after careful review and assessment by senior leadership, Mercy has prioritized the following three critical health care concerns for our community:

- Diabetes prevention, control and treatment
- Obesity prevention, control and treatment
- Prenatal and early childhood health care

These priorities were chosen based on the needs of the hospital's service area identified in section II of this report and the importance placed on addressing them by the community. In addition, the first two (diabetes and obesity) were chosen in part because Mercy agreed to join with other members of the Nassau County Health Department-hospital collaboration in a collective effort targeted at two areas within the NYS Prevention Agenda 2013-2017 Priorities. Both areas fell under the Prevent Chronic Disease category—one to reduce obesity in children and adults, the other to increase access to high-quality chronic disease preventive care and management in both clinical and community settings (which in Mercy's case will focus on diabetes preventive care).

III. Implementation Plan

Mercy's implementation plans include a diabetes education outreach program; a new wound care and hyperbaric oxygen center that, together with the hospital's new podiatry service, will address a large class of complications of diabetes; a new outpatient rehabilitation service that can help care for the many diabetics with a need for ambulatory physical, occupational, speech and balance rehabilitation secondary to complications of diabetes; an obesity prevention outreach program; expanded access to Mercy's award-winning weight-loss (bariatric) surgery services; and the Welcome Baby prenatal outreach program; as well as existing hospital services that will support or benefit from these. Also, throughout the implementation period, for each of the priorities, Mercy will continually address these needs through Speaker's Bureau engagements, support groups, participation in community health fairs and Healthy Sunday programs, and various screening programs.

In order to oversee more fully the design and implementation of the priority needs, two existing multidisciplinary Mercy staff committees will be merged into one for this task. The current Mission and Ministry Committee and the Community Outreach Committee, whose membership and focus are very similar, will merge into one, having one of its main responsibilities being the oversight of the Community Health Needs Assessment and its implementation.

Priorities Not Chosen for Action and Why

Mental health (and related substance abuse) was not selected, despite the fact that this is an area of particular strength at Mercy. In part, this is because this has already been a priority for the past two years, with the addition of an integrated health care capability in 2011 and partnership with the South Shore Association for Independent Living (SAIL) in February to manage a contract from the New York State Office of Alcoholism and Substance Abuse Services (OASAS) to assist the homeless in the area.

It is also because Mercy's Outpatient Mental Health Clinic is relocating this year to the same facility occupied by the Maryhaven Center of Hope (Nassau Division), a member of the Catholic Health Services of Long Island network, which operates a Personalized Recovery Oriented Services (PROS)

program. It was felt that needs were already being met with the above new partnerships, and over the year, with additional grant funding available, they would continue to be met.

Also not selected was cancer, chiefly because there are already many programs at Mercy (e.g., the lung cancer detection study, breast cancer screening programs, the relationship with Memorial Sloan-Kettering at Rockville Centre, etc.) and elsewhere, which focus on cancer screening and prevention. Mercy will continue to provide excellent care for its cancer patients, by further developing the cancer care unit and its staff, working toward the renewal of its Commission on Cancer recognition status, providing state-of-the-art technology (such as the new CT, MRI and PET radiology modalities), expanding the role of the patient navigator and working closely with Memorial Sloan-Kettering Cancer Center.

A. Priority 1: Diabetes education, control and treatment

The reasons for regarding this as perhaps the most critical need in our service area were given in II.C. In addition, Mercy has a two-year-old diabetes education program, which is now growing and seeing more patients. Mercy is in the process of developing a unique set of services, including an outpatient Wound Care Center, which will support diabetes treatment, as well as its new outpatient podiatry service. Expanded diabetes education will also enable Mercy's maternal-fetal medicine program, which specializes in assisting mothers whose pregnancies are designated "high risk", to provide more effective support for mothers with gestational diabetes. Further, CHS has made a strong commitment to develop diabetes education and preventative services across all hospitals, for both inpatients and outpatients.

Mercy's implementation plan for diabetes includes both a diabetes education/self-management plan and a plan for other forms of diabetes treatment.

1. *Mercy's Diabetes Education Outreach Program*

This program will enable Mercy's Diabetes Education Center to meet the needs of area residents by going to them rather than depending on them to come to Mercy. One of the hospital's certified diabetes educators (most likely bilingual) will work with local churches, community service centers and health clinics to provide introductory diabetes management classes at various locations in high-risk areas. These classes will be designed to (i) impart vital diabetes-related dietary and health-related information, (ii) inform attendees about Mercy's outpatient diabetes education program and how it can help them, (iii) answer questions about insurance and make it clear that no one will be turned away because of inability to pay, (iv) explain how attendees can take advantage of Mercy's subsidized transportation service to attend Mercy's diabetes education program classes, and (v) share contact information to follow up with those who are interested. Mercy is currently seeking grant funding for this program.

The hospital also plans to augment the current diabetes education program in two additional ways: (1) to educate Mercy staff—Emergency Department (ED) personnel and inpatient staff (nursing, discharge planning and dietary)—to refer individuals with diabetes-related conditions to the diabetes education program, thereby providing preventive education to those most in need at the time they are most responsive to it and creating a measurable impact on preventable diabetes-related ED admissions. (2) It is expected that in the course of the next three years the increase in self-monitoring of blood glucose and glycemic levels by those with diabetes will motivate increasing numbers of diabetes patients to use diabetes education to learn how to control their diabetes effectively, driving an additional increase in the program. Both of these will lead to further expansion of the diabetes education program.

2. *Gestational Diabetes*

Mercy plans to provide a program for mothers with gestational diabetes to enable them to understand the disease and its implications for themselves and their fetus, and then teach them how to manage blood glucose through diet, monitoring, exercise and medication. Mercy's Maternal-Fetal Diagnostic Center, which specializes in assisting mothers whose pregnancies are designated "high risk", will play an expanded role.

3. *Improved Treatment of Diabetes-Related Conditions*

For the thousands of individuals in the area who have diabetes, control of the disease by dietary management and lifestyle changes is the most desirable option. However, it does not always suffice. A variety of complications are common, including increased risk of cardiovascular problems, damage to nerves, kidneys and eyes, foot problems and wounds that won't heal, the last two of which frequently lead to amputation.

Mercy is currently in the process of creating or expanding four services that address these problems:

- An ambulatory outpatient podiatry service that began operation last year
- A new Wound Care Center
- Expanded access to Mercy's award-winning weight loss/bariatric surgery services
- Expansion of primary care practices (onsite in Mercy's Family Health Center) and in community settings to better deal with and prevent diabetic complications

Podiatry and wound care work together to impact the treatment of diabetic patients in this way: Delayed wound healing is one of the most common complications associated with both Type 1 and Type 2 diabetes. If left untreated, wounds can lead to infection, amputation and even death. In fact, diabetes is the leading cause of non-traumatic lower limb amputation in the United States. The most common such wound is a diabetic foot ulcer, an open sore or wound that occurs in approximately 15% of patients with diabetes. Approximately 14–24%of patients with diabetes who develop a foot ulcer will require an amputation. Foot ulceration precedes 85% of diabetes-related amputations.[17] Thus, the combination of the outpatient podiatry service and Wound Care Center will add an important new weapon to Mercy's arsenal in the fight against diabetes.

Obesity reduction and diabetes control are of course closely linked. Mercy's plans to promote obesity education and management, described in the next section, will also support the goal of improved diabetes treatment. In particular, long-term studies show that bariatric surgical procedures can not only cause significant long-term loss of weight but also cause recovery from diabetes, improvement in cardiovascular risk factors and a reduction in mortality of 23% from 40%.[18]

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[17] American Podiatric Medical Association website, www.apma.org/Learn/FootHealth.cfm?ItemNumber=981.

[18] Robinson MK (July 2009). "Editorial: Surgical treatment of obesity—weighing the facts". *N. Engl. J. Med.* **361** (5): 520–1. doi:10.1056/NEJMe0904837. PMID 19641209.

B. Priority 2: Obesity prevention, control and treatment

In addition to its documented impact in the hospital's service area, Mercy seeks to build up its program in the area of nutritional education and obesity outreach. Mercy is also proud to be a Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program Accredited Center and seeks to leverage its strength in this area to address the treatment needs of the populations hardest hit by severe obesity.

Like the diabetes plan above, Mercy's implementation plan for obesity has two components: a plan for prevention and control and a plan for improved treatment.

1. The Mercy Weight-Loss Outreach Program

The plan for obesity is still under development but will in all likelihood include the following elements :

- A nutritional education program will use Mercy physicians and nutritionists to give lectures and make presentations on nutrition and obesity-related issues throughout the community at local health fairs, libraries, senior centers, etc.
- An adult weight management program will be offered, consisting of a multi-disciplinary team of health care professionals (nutritionist, physical therapist, behavior health therapist) to provide guidance and support to the adult wishing to modify his or her lifestyle to manage weight.
- To educate Mercy staff—Emergency Department personnel and inpatient staff (nursing, discharge planning and dietary)—to refer individuals with obesity-related conditions to the hospital's weight management program or outpatient internal medicine clinic.

2. *Expanded Access to Weight-Loss (Bariatric) Surgery*

For people who are very obese, weight-loss surgery may be the only option that provides significant long-term weight loss. The U.S. National Institutes of Health recommends bariatric surgery for obese people with a body mass index (BMI) of at least 40 and also for people with BMI ≥ 35 if they have a serious coexisting medical condition such as diabetes. This is a larger population, especially for subpopulations in our service area, than one might suppose. For example, nationally, nearly a quarter of African-American women in the 40–59-year age group fall in the BMI ≥ 40 category! The following table presents the national BMI≥ 35 and BMI≥ 40 data for three racial/ethnic groups[19]:

[19] See tables in "Prevalence of Obesity and Trends in the Distribution of Body Mass Index Among US Adults, 1999-2010." *JAMA*. 2012;307(5):491-497. doi:10.1001/jama.2012.39. National Center for Health Statistics, Centers for Disease Control and Prevention

	Non-Hispanic White	Non-Hispanic Black	Hispanic
Body Mass Index ≥ 35 (Obese Grade 2)			
All (≥20 years, age-adjusted)	14.4%	26.0%	14.9%
Men (all)	12.1%	20.7%	11.4%
Women (all)	16.6%	30.7%	18.1%
Women(40-59y)	15.6%	36.4%	17.3%
	Non-Hispanic White	Non-Hispanic Black	Hispanic
Body Mass Index ≥ 40 (Obese Grade 3)			
All (≥20 years, age-adjusted)	5.7%	13.1%	5.0%
Men (all)	4.2%	7.4%	4.1%
Women (all)	7.3%	17.8%	6.0%
Women (40-59y)	7.3%	23.0%	4.4%

Bariatric surgery can potentially play a decisive role in obesity management for a surprisingly large number of people. And, as noted in the previous section, it can simultaneously impact comorbidities including diabetes, cardiovascular health, sleep apnea and mortality.[20] Aggressive treatment of obesity via surgical approaches for patients not responsive to medical and dietary interventions is becoming a much more important modality. Gastrointestinal surgery can result in substantial weight loss, and therefore is an available weight loss option for well-informed and motivated patients, especially those who have comorbid conditions.[21]

During the coming three years the hospital plans to create a bariatric access program, which will expand access to bariatric surgery for those in need, offering a wider menu of discounted rates and charity care than are currently available. Budget and quantified goals remain to be worked out.

C. Priority 3: Prenatal and early childhood healthcare.

Through Mercy's OB/GYN and pediatric services, including several outpatient educational programs, the federally funded supplemental food program WIC (Women, Infants and Children) and Mercy's Family Care Center, which works every day with underserved mothers in our community and is familiar with the problems they face, Mercy is well positioned to have an impact in this area. In addition, Mercy hopes to develop a prenatal outreach program to go out in the community to address these prenatal and early childhood problems.

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[20] Robinson MK (July 2009). "Editorial: Surgical treatment of obesity—weighing the facts". *N. Engl. J. Med.* **361** (5): 520–1. doi:10.1056/NEJMe0904837. PMID 19641209.

[21] Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults: The Evidence Report. NHLBI Obesity Education Initiative. http://www.ncbi.nlm.nih.gov/books/NBK2004/

Through its Women and Children Outpatient Center, Mercy currently offers a prenatal care program that helps mothers-to-be-give their babies a healthy start in life, regardless of financial ability or immigration status. At least a quarter of Mercy's outpatient OB/GYN clinic patients and more than half of the Level III NICU patients are Medicaid/self-pay. Each woman in Mercy's prenatal program sees a social worker, a nutritionist and a board-certified physician, and receives alcohol and substance abuse testing. The hospital offers a six-week childbirth preparation program taught by registered nurses and staff adept at educating patients of diverse languages, cultures and education levels.

1. *Welcome Baby Prenatal Outreach Program.* The hospital plans to augment these services with the Welcome Baby Prenatal Outreach Program. The primary goal of the program is to improve the quality of prenatal care in some of the neediest areas of the county, yielding healthier births and fewer premature and low birth weight babies. As part of Mercy's full-service outpatient obstetric, gynecologic and pediatric service, one of the staff will reach out to the neediest areas in the community to identify and educate at-risk pregnant women and motivate them to participate in a sustained program of prenatal care. In addition, Mercy plans to extend the subsidized transportation program to prenatal program clients. The reason is that the single public bus to Mercy stops only twice daily, resulting in missed appointments or costly cab rides for women who can't afford it.

   The outreach program will provide three services for at-risk women in the area: (1) Outreach: A specialist will partner with various community/government organizations to identify those in need and get advice on the best approach, and visit community settings to make presentations and provide literature. (2) Health Education: The presentations will normally be overviews derived from Mercy's current 6-week parenting preparation course; the outreach specialist will also offer this course in Spanish. (3) Referrals and follow-up: The outreach specialist will assist with transportation to Mercy appointments and follow-up clients who don't come to Mercy to ensure they go somewhere, working with local organizations wherever possible.

   Similar to the diabetes outreach program, it is hoped that one of Mercy's current staff take on this new responsibility. At the same time, the hospital is currently seeking grant funding for this program.

2. *Automatic Call Reminder*
   Missed appointments are a major occurrence for many of the mothers who frequent the Family Care Center. With the advent of an automatic phone call reminder for upcoming appointments, it is hoped that this will improve the outcome measures.

IV. Conclusion

Mercy Medical Center regards this year—the 100th year of its service to Nassau County—as a special opportunity to promote excellence in care and commitment to those in need. This is also regarded as a time to further the hospital's outreach to the community and to strengthen its capacity to bring a brighter future to those served.