Northwestern Medicine®

2018 Community Health Needs Assessment

Implementation Plan for Northwestern Medicine Central DuPage Hospital

Contents

Introduction

Northwestern Medicine Central DuPage Hospital (NMCDH) has a rich history of caring for its community. NMCDH, an acute-care facility located in Winfield, Illinois, offers emergency care and inpatient specialty care in medical and surgical services, obstetrics, pediatrics, neurology and oncology to the residents of DuPage County and surrounding areas. It is also a regional destination for oncology, neurology, orthopaedic, pediatric and cardiology care.

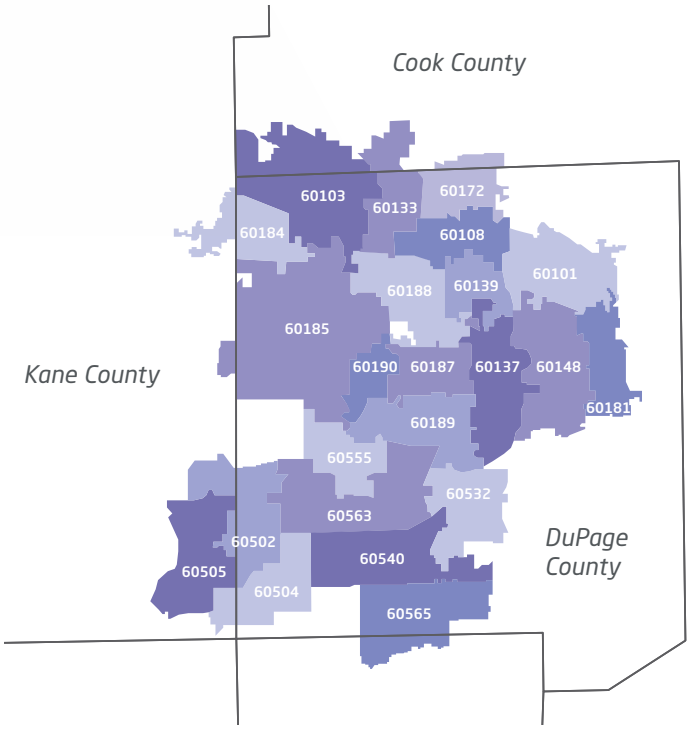
NMCDH continues to uphold its promise to provide DuPage County residents convenient and affordable access to high-quality, advanced healthcare services. More than 1,000 physicians are on the medical staff at NMCDH, and are trained in more than 90 medical specialties. In 2010, NMCDH achieved and continues to uphold the prestigious Magnet® recognition from the American Nurses Credentialing Center. This recognition is considered the gold standard for nursing excellence and demonstrates an organizational commitment to quality care.

NMCDH sponsors numerous programs to promote health and wellness, healthcare career training, youth mentoring, language assistance and a multitude of additional programs to enhance the quality and accessibility of health care. Services are carefully designed and structured to meet the needs of our growing and changing communities.

In 2018, NMCDH completed a comprehensive Community Health Needs Assessment (CHNA) to identify the highest-priority health needs of residents in our community. We will use this information to guide new and enhance existing efforts to improve the health of our community. The goal of the CHNA was to implement a structured, data-driven approach to determine the health status, behaviors and needs of all residents in the NMCDH service area. Through this assessment, we identified health needs that are prevalent among residents across all socioeconomic groups, races and ethnicities, as well as issues that highlight health disparities or disproportionately impact the medically underserved and uninsured.

Community defined for the assessment

The study area for the survey effort was defined as the NMCDH service area and analyzed at the ZIP code level. It included the following ZIP codes:



Overview of the assessment process

A comprehensive CHNA was commissioned on behalf of Northwestern Medicine by Professional Research Consultants, Inc. (PRC). PRC is a nationally recognized healthcare consulting firm with extensive experience in conducting CHNAs in hundreds of communities across the United States since 1994.

The CHNA framework consisted of a systematic, data-driven approach to determine the health status, behaviors and needs of residents in the service area of NMCDH. The CHNA provided information to enable hospital leadership and key community stakeholders to identify health issues of greatest concern among all residents and decide how best to commit the hospital's resources to those areas, thereby achieving the greatest possible impact on the community's health status.

The CHNA incorporated data from both quantitative and qualitative sources. Quantitative data input included primary research (the PRC Community Health Survey) and secondary research (vital statistics and other existing health-related data). These quantitative components allowed for trending and comparison to benchmark data at the state and national levels. Qualitative data included a telephone survey randomly administered to residents in the community and a survey of key community stakeholders. Once the data was reviewed by NMCDH community health experts, executive leadership and key community stakeholders identified priority areas of need in which NMCDH was uniquely positioned to address and respond.

The entire CHNA process included:

A comprehensive identification and prioritization of needs;

the identification of priority needs that NMCDH was most uniquely suited to address;

a framework for the development of a comprehensive Community Health Improvement Plan (CHIP) designed to guide NMCDH in addressing and responding to the identified priority needs via a process-driven methodology including goal development, strategies, measurable outcomes; and

a plan to partner with other key community stakeholders to support the remaining needs.

Following completion of the CHNA, NMCDH leadership convened an External Steering Committee (ESC) to review the findings. This multidisciplinary committee was made up of key stakeholders who were selected based on strong collaborative efforts to improve the health of the community, including the medically underserved, minority and low-income populations. The varied backgrounds of the committee members provided diverse insight into prioritizing identified health indicators.

Prioritization process

A planned and structured process was used to facilitate prioritization of the identified health needs. Tools and data utilized in the process included the CHNA data, DuPage County IPLAN data, an organizational asset inventory and alignment with guiding principles for response to community need.

The prioritization process included an analysis of:

Importance of the problem to the community

Is there a demonstrated community need?

Will action impact vulnerable populations?

Does the identified health need impact other community issues?

Availability of tested approaches or existing resources to address the issues

Can actionable goals be defined to address the health need?

Does the defined solution have specific and measurable goals that are achievable in a reasonable timeframe?

Opportunity for collective impact

Can the need be addressed in collaboration with community or campus partners to achieve significant, long-term outcomes?

Are other organizations already addressing the health issue?

Applicability of NMCDH as a change agent (such as acting as a partner, researcher or educator, or in a position to share knowledge or funding)

Does NMCDH have the research or education expertise/resources that address the identified health need?

Does NMCDH have clinical services or other expertise/resources that address the identified health need?

Estimated resources, timeframe and size of impacted population

NMCDH developed a survey tool to formally solicit input from ESC members and identify their organizations' priority health needs (defined as health needs that could be impacted the most by the work of NMCDH and partner organizations participating on the ESC). NMCDH leaders and ESC members were asked to identify top priorities from among the areas of opportunity identified by PRC using the following prioritization criteria:

Magnitude: How many people in the community are/will be impacted?

Seriousness and impact: How does the identified need impact health and quality of life?

Feasibility: What capacity/assets currently exist to address the need?

Consequences of inaction: What impact would inaction have on the population health of the community?

Trend: How has the need been changing over time?

The survey results were compiled and shared with the ESC. Together with the committee, the highest-priority health needs were determined, taking into account the findings of the CHNA, the survey findings, and discussion around the guiding principles and prioritization criteria.

Attention was also focused on assessment of internal and external capabilities. An asset analysis included a review of current initiatives and exploration of ways to better coordinate efforts. The potential for duplicative efforts and existing gaps were identified.

Identification of priority health needs

A CHNA provides information to assist hospitals in identifying health issues of greatest concern among residents within their service area. It also guides in the decision to best commit their resources to those areas, thereby resulting in the greatest possible impact on community health status. The NMCDH CHNA was conducted with a data-driven approach, utilizing both online key informant surveys in addition to vital statistics and other existing health-related data. It spotlighted disparate/vulnerable populations including individuals experiencing mental health/substance abuse concerns, decreased access to affordable healthcare services and limited English-proficient individuals.

Seven potential areas of opportunity for community health improvement were identified in the CHNA:

- Access to healthcare services
- Prevention and management of chronic disease
- Injury and violence
- Mental health
- Nutrition, physical activity and weight
- Substance abuse
- Tobacco use

Upon completion of this process, the 2018 NMCDH priority health needs were identified as follows:

- Access to healthcare services
- Mental health and substance abuse
- Chronic disease

Response to non-prioritized health needs

An identified need was not addressed as a 2018 priority health need if NMCDH was not best positioned to help due to the following situations:

NMCDH has limited expertise, services or resources in the identified area of need

Public health or other organizations typically address the need

Other organizations have infrastructure and plans already in place to better meet the need

Broader initiatives in the Implementation Plan will address or significantly impact the need

Injury and violence

While injury and violence was not addressed as a priority need, NMCDH partners with local police and EMS systems to respond to emergency needs. Additionally, NMCDH has a strong Injury Prevention program which provides injury prevention education to hundreds of children and adolescents annually.

Nutrition, physical activity and weight

The problems related to poor nutrition, inadequate physical activity and overweight/obesity are included within the broader category of chronic disease within our Implementation Plan. These factors are considered key root causes of chronic disease and were included in the causal analysis and response.

Tobacco abuse

Tobacco abuse is incorporated into the substance abuse component of the Implementation Plan.

Implementation Plan development

It is widely recognized and accepted that the gold standard for community benefit planning and the response to community need is largely dependent upon the support of organizational leadership and the integration and alignment of community benefit planning into the organization's mission and strategic plan. To that end, NMHC has developed a set of guiding principles that are in alignment with the organization's strategic plan.

Implementation Plan Development

Deliver Exceptional Care	Develop People, Culture and Resources	Advance Medical Science and Knowledge
NMHC Strategic Plan Alignment		
Ensure that residents of our defined communities have access to high-quality, medically necessary healthcare services in the most appropriate setting, in response to assessed needs	Create pathways to healthcare professions and ensure a well-trained healthcare workforce is in place for our communities Support community-based partners through collaboration and providing tools and resources	Support the discovery of new knowledge through research that can prevent, detect and cure disease and reduce suffering
NMHC Community Benefit Plan Alignment		
Develop and support culturally competent clinical and educational programs to prevent disease, promote health and wellness and address disparities in health	Provide youth with education, mentoring and exposure to healthcare professions Provide support for community-based healthcare and wellness programs by collaborating, convening, leading and funding	Provide support for the research and education efforts of Northwestern Medicine
Develop and support models of care that ensure adequate primary care capacity and access to medically necessary diagnostic and specialty care, especially for the medically underserved	Train healthcare students and professionals in the classroom and clinical settings Share technical, fundraising and management expertise to foster a culture of quality among our community-based healthcare partners	Provide clinical settings for research at our care locations and through partnership with community healthcare organizations
Develop and maintain programs to address affordability of and accessibility to healthcare services	Develop programs to address current and projected healthcare workforce shortages Support continuing education to ensure a well-trained healthcare workforce is in place	Promote access to clinical trials Disseminate knowledge of clinical discoveries to the medical science community, our communities, and within our system Engage and support community partners in conducting research in response to identified healthcare needs

These guiding principles were utilized in the development of the Implementation Plan for each of the priority health needs discussed below.

Priority health need: Access to healthcare services

Introduction and need overview

Access to health services has a profound effect on every aspect of a person's health, yet almost one in four Americans does not have a primary care provider (PCP) or health center where he or she can receive regular medical services. Increasing access to both routine medical care and medical insurance is vital for improving the health of all Americans.[1] Access to health services affects a person's health and well-being.

Regular and reliable access to health services can:

- Prevent disease and disability
- Detect and treat illnesses or other health conditions
- Increase quality of life
- Reduce the likelihood of premature (early) death
- Increase life expectancy[2]

Insurance

Approximately one in five Americans (children and adults under age 65) does not have medical insurance. People without medical insurance are more likely to lack a usual source of medical care, such as a PCP, and are more likely to skip routine medical care due to costs, increasing their risk for serious and disabling health conditions. When they do access health services, they are often burdened with large medical bills and out-of-pocket expenses.

Among CHNA survey respondents age 18 to 64, 4.1 percent reported having no insurance coverage for healthcare expenses. This was down from 8.1 percent in 2015 and is notably lower than state (10.7 percent) and national (13.7 percent) reports.

Barriers to access

A total of 38.3 percent of service area respondents reported some type of difficulty or delay in obtaining services in the past year. These findings were similar to both regional and national findings.

Notable barriers to healthcare access included:

- Inconvenient office hours
- Difficulty obtaining a provider appointment
- Cost of a doctor visit
- Cost of prescriptions
- Difficulty finding a doctor
- Lack of transportation

1 Healthy People 2020
2 Healthy People 2020, Leading Health Indicators

Access to healthcare services was identified as a moderate/major problem in the community by 55.2 percent of respondents and key stakeholders who noted the following concerns:

- Barriers to care for refugee and immigrant populations, including access, transportation, language barriers and difficulty navigating the system
- Personal finances
- Lack of providers who accept all Medicaid plans
- Transportation for seniors

Additionally, key informants identified the types of medical care most difficult to access:

- Substance abuse treatment
- Mental health
- Primary care
- Specialty care

Access to primary care

Due to the collaborative efforts of NMCDH, the DuPage County Health Department and multiple health/human service organizations, service area residents have access to significantly more PCPs than throughout the state or nation. DuPage County reports 145.6 PCPs per 100,000 population, as compared to between 80 and 95 PCPs at the state and national level. Qualitative data aggregated via survey respondents included:

- A specific source of primary care was acknowledged by 82.8 percent of survey respondents
- A total of 73.7 percent have visited their healthcare provider for a checkup in the past year
- A total of 72.8 percent utilize their doctor's office for medical care
- Among respondent's children, 85.4 percent have visited a PCP for a routine checkup in the past year

Use of the emergency room more than once in the past year was acknowledged by 8.1 percent respondents for the following reasons:

- Emergency (51.6 percent)
- Access problems (5.1 percent)
- Weekend/after hours (23.5 percent)

Analysis of access to care concerns

People without medical insurance are more likely to lack a usual source of medical care, such as a PCP. They are also more likely to skip routine medical care due to costs, increasing their risk for serious and disabling health conditions.

When they do access health services, they are often burdened with large medical bills and out-of-pocket expenses. Increasing access to both routine medical care and medical insurance are vital steps in improving the health of all Americans.[3] Access to health services affects a person's health and well-being. As discussed previously, regular and reliable access to health services can:

- Prevent disease and disability
- Detect and treat illnesses or other health conditions
- Improve quality of life
- Reduce the likelihood of premature (early) death
- Increase life expectancy

Social determinants of health include factors such as socioeconomic status, education and employment. These factors significantly affect an individual's ability to access health care. Individuals with minimal or no health insurance are the least likely to access health care until their conditions become severe and costly. Lack of routine care and preventive screening may result in poor outcomes and decreased life expectancy.

A lack of knowledge regarding how to access affordable health care contributes to limited access to health care. It is incumbent upon healthcare providers to not only provide financial assistance, but it is also critical to develop pathways and safety nets to facilitate access to care.

Community assets

The DuPage Health Coalition leads the development and implementation of the DuPage County Access to Health Services Action Plan. The coalition is a collaborative effort by thousands of individuals and hundreds of organizations in DuPage County to provide access to medical services to the county's low-income, medically uninsured residents. Since the program began in 2001, more than 60,000 DuPage County residents have received high-quality, compassionate health care through Access DuPage, a program developed by the coalition and funded by its members. This year, Access DuPage will serve approximately 6,000 members.

The DuPage Health Coalition represents an exceptional partnership of hospitals, physicians, local government, human services agencies and community groups working together locally to build an efficient and effective health safety net. Every dollar of direct service provided through Access DuPage is matched by more than ten dollars in donated healthcare services generously provided by every hospital in DuPage County, as well as thousands of volunteer physicians and health clinics.

Access DuPage sits within a growing network of health services coordinated by the DuPage Health Coalition. The DuPage Health Coalition also operates the Silver Access Program, which provides financial help to lower-income families purchasing health insurance on the Affordable Care Act Marketplace and Women's Health Navigation Services. In early

3 Healthy People 2020

2017, the DuPage Health Coalition opened the DuPage Dispensary of Hope, a new free pharmacy program in Wheaton offered in partnership with DuPage County. NMCDH leadership and staff work collaboratively with the DuPage Health Coalition to promote affordable access to care for all residents of DuPage County.

The DuPage Federation on Human Services Reform is a collaboration of government and key community organizations that identify ways a local community can address its human services needs using its own resources.

Existing NMCDH hospital programs

NMHC and its affiliates, including NMCDH, are committed to meeting the healthcare needs of those within the NMHC community who are unable to pay for medically necessary or emergency care. When needed, NMHC provides medically necessary care free of charge or at discounted rates ("financial assistance").

To manage its resources and responsibilities, and to provide financial assistance to as many people as possible, NMHC has established program guidelines for providing financial assistance. However, NMHC will always provide emergency care, regardless of a patient's ability to pay.

Range of possible interventions

A broad range of interventions exists to address the problem of access to care. The DuPage Health Coalition and the DuPage Federation have coordinated efforts to develop a DuPage Safety Net Plan for Health and Human Services 2016-2018.

Major goals of this joint strategic plan include:

Comprehensive assessment and enrollment in appropriate services

Timely access to essential health services

Timely access to essential human services

Effective management of the social determinants of health, with an emphasis on poverty

Benchmarks

National–Healthy People 2020 (HP 2020)

Goal

Improve access to comprehensive, quality healthcare services

Related objectives

AHS-1: Increase the proportion of persons with medical insurance

AHS-3: Increase the proportion of persons with a usual PCP

AHS-4: Increase the number of practicing PCPs

AHS-5: Increase the proportion of persons who have a specific source of ongoing care

AHS-6: Reduce the proportion of persons who are unable to obtain or are delayed in obtaining necessary medical care, dental care or prescription medicines

AHS-7: Increase the proportion of persons who receive appropriate evidence-based clinical preventive services

Local – DuPage County Health Department 2015 IPLAN

Outcome objective 1: Build capacity and access to medical homes

Outcome objective 2: Enhance access to low-cost prescription medications

Outcome objective 3: Demonstrate improved health status of the uninsured in DuPage County

Implementation strategy

1. NMCDH will offer a comprehensive financial assistance program to patients who are unable to afford the cost of necessary medical care.
2. NMCDH will continue to support efforts to increase access to care by providing leadership, investing resources and working collaboratively with other community organizations throughout the county.
3. NMCDH will support the maintenance and expansion of an efficient and effective continuum of care offering medical homes (including primary and specialty care), pharmaceuticals, inpatient, outpatient and emergent care to uninsured adult residents of DuPage County.
4. NMCDH will also seek to engage and maintain a multicultural workforce of PCPs, specialists, mid-level practitioners, registered professional nurses and other medical professionals committed to working in an evidence-based practice setting.

Strategy #1

NMHC will offer a comprehensive financial assistance program to patients who are unable to afford the cost of necessary medical care.

Methodology	Resources/Programs/ Partnerships	Anticipated Impact	Evaluation Plan
1. NMCDH will offer financial assistance policies that are easily accessible, user-friendly, respectful, and meet all regulatory requirements.	1. Leadership and staff from NMCDH	1a. NMCDH will conduct an internal audit of financial assistance policies, procedures and application materials annually. 1b. NMCDH will conduct an internal audit of signage, website and compliance with all regulatory requirements.	1a-b. NMCDH staff will report annually to leadership the results of an internal review of website, policies, forms and signage to ensure accessibility, user-friendliness and compliance with all regulatory requirements.
2. NMCDH will continue to provide medically necessary inpatient and outpatient hospital services to uninsured and underinsured patients in accordance with the hospital's financial assistance policies.	2. Leadership and staff from NMCDH	2. NMCDH will promote access to needed healthcare services by offering financial assistance to qualified individuals who were unable to afford the cost of their medical care.	2a. NMCDH staff will track and report the number of individuals rendered financial assistance annually. 2b. NMCDH staff will track and report the amount of financial assistance rendered annually.
3. NMCDH will continue to address the needs of individuals identified as potentially eligible for public health insurance by facilitating their application for government-sponsored healthcare coverage.	3. NMCDH financial services and First Source – an outside vendor that assists patients in applying for government-sponsored healthcare coverage	3. NMCDH and outside vendor will assess and refer eligible patients for public benefits.	3. NMCDH financial services staff will report the number of patients referred annually along with an annual quantitative summary of costs related to the use of First Source services.

Strategy #2

NMCDH will continue to support efforts to increase access to care by providing leadership, investing resources and working collaboratively with other community organizations throughout the county.

Methodology	Resources/Programs/ Partnerships	Anticipated Impact	Evaluation Plan
1. NMCDH leadership will continue representation on various task forces and work groups related to the collaborative work occurring on access-to-care issues.	1. NMCDH leadership, DuPage Health Coalition, DuPage Federation, Health Safety Net Plan partners	1. NMCDH will create and/or participate in programs and initiatives focused on meeting the IPLAN and Safety Net objectives to promote access to care.	1. NMCDH will prepare an annual summary of activities and work completed towards responding to this strategy.
2. NMCDH will continue to provide free inpatient and outpatient care to Access DuPage clients in accordance with presumptive eligibility and existing NMCDH financial assistance policies.	2. NMCDH and Access DuPage	2. Access to free inpatient and outpatient care will enable presumptively eligible, low-income residents to receive needed services in a timely, coordinated and efficient manner.	2a. NMCDH staff will track and report the cost of free inpatient care rendered to Access DuPage clients. 2b. NMCDH staff will track and report the cost of free outpatient care and other services rendered to Access DuPage clients.
3. NMCDH will provide resources for people who do not have health insurance or cannot afford breast cancer screening through the *Why Wait*? program.	3. NMCDH staff	3. Underserved individuals will have access to breast cancer screening on a timely basis.	3a. NMCDH staff will report a quantitative summary detailing the number of individuals screened. 3b. NMCDH staff will report a summary of the costs related to breast cancer screenings and subsequent care.
4. NMCDH will continue to offer the *Parent Review* email program.	4. NMCDH staff	4. The program will offer educational information and access to support information for moms-to-be.	4. NMCDH staff will track and report software utilization and costs related to the program.
5. NMCDH will provide grant funding to the Winfield Fire Department to lead efforts in local emergency disaster planning.	5. NMCDH and the Winfield Fire Department Grant amount: $60,000	5. NMCDH funding will help to ensure maintenance of the highest level of preparedness for responding to emergencies, disasters and/or catastrophic occurrences, which may generate mass casualties.	5. An annual summary of disaster planning exercises and outcomes will be provided by the Winfield Fire Department to NMCDH.

Strategy #3

NMCDH will support the maintenance and expansion of an efficient and effective continuum of care offering medical homes (including primary and specialty care), pharmaceuticals, inpatient, outpatient and emergent care to uninsured adult residents of DuPage County.

Methodology	Resources/Programs/ Partnerships	Anticipated Impact	Evaluation Plan
1. NMCDH will provide operational grants to the DuPage Health Coalition in support of their coordination of the DuPage County Health Safety Net system.	1. NMCDH leadership, DuPage Health Coalition/ Access DuPage, Health Safety Net Plan partners	1. Provision of an operational grant to the DuPage Health Coalition will enable low-income county residents to afford and receive needed care.	1. Access DuPage will track and review information related to the following metrics: 1a. Number of individuals enrolled annually 1b. Number of individuals re-enrolled annually 1c. Number of individuals linked to: - Local PCPs - DuPage Community Clinic - Local FQHCs 1d. Utilization rates: - Primary care visits - Office-based primary care visits - Convenient care visits - Specialty referrals - Inpatient hospitalizations - Day surgeries - Hospital outpatient visits - Emergency Department visits 1e. Number of prescriptions filled
2. NMCDH will provide supportive funding to the Silver Access DuPage Program.	2. NMCDH and Silver Access DuPage Program	2. Additional funding will allow DuPage County residents with ACA Marketplace plans to increase their coverage from Bronze level to Silver level, thereby enhancing the scope of their healthcare coverage.	2. Data will be collected and reported by Silver Access DuPage related to the number of individuals who were able to expand the scope of their healthcare coverage.

Strategy #3 (continued)

NMCDH will support the maintenance and expansion of an efficient and effective continuum of care offering medical homes (including primary and specialty care), pharmaceuticals, inpatient, outpatient and emergent care to uninsured adult residents of DuPage County.

Methodology	Resources/Programs/ Partnerships	Anticipated Impact	Evaluation Plan
3. NMCDH will provide operational support to the Engage DuPage program.	3. NMCDH staff, DuPage County Health Department, DuPage Federation on Human Services Reform, DuPage Health Coalition	3. NMCDH will provide funding for Community Access Specialists who staff the Emergency Department and provide eligible patients with information regarding potential resources. Interested clients are offered benefiting appointments and established in a medical home, thus promoting timely access to care.	3a. Engage DuPage staff will provide an annual report detailing the percentage of participants who were eligible for the Engage DuPage program. 3b. Engage DuPage staff will provide a quantitative summary detailing the number of clients that have kept their follow-up care appointments.
4. NMCDH will support care rendered to the underserved clients of Tri-City Health Partnership (TCHP).	4. NMCDH and TCHP staff	4. NMCDH will promote access to needed health services by assuming costs of laboratory and other hospital services rendered to presumptively eligible clients from the TCHP free clinic.	4. NMCDH staff will provide an annual report detailing the number of clients served and the related costs.
5. NMCDH will engage in a formal agreement with VNA Healthcare to promote access to primary and specialty care to Medicaid recipients in the service area.	5. NMCDH and VNA leadership	5. NMCDH staff will work collaboratively with VNA staff to promote a seamless continuum of primary, specialty and emergency care to underserved residents in the hospital's service area.	5a. NMCDH will track and report on the number of individuals referred to VNA as well as NMCDH and Northwestern Medicine Regional Medical Group (NMRMG). 5b. NMCDH and NMRMG will track and report the costs associated with providing specialty care to patients referred from VNA.

Strategy #4

NMCDH will also seek to engage and maintain a multicultural workforce of PCPs, specialists, mid-level practitioners, registered nurses and other medical professionals committed to working in an evidence-based practice setting.

Methodology	Resources/Programs/ Partnerships	Anticipated Impact	Evaluation Plan
1. NMCDH will serve as a training center for nursing and other allied health professions.	1. NMCDH staff and local nursing and allied health professions training programs	1. Serving as a training center demonstrates an ongoing commitment towards the provision of a highly competent, culturally sensitive and diverse future workforce.	1. NMCDH staff will track and report a quantitative summary detailing number and types of internships and staff time commitment.
2. NMCDH will provide trained professional healthcare interpreters and offer language assistance programs.	2. NMCDH staff and phone line language assistance services	2. Utilization of trained professional healthcare interpreters will decrease barriers to care, promote access and ensure high-quality, culturally competent care.	2. NMCDH staff will track and report a quantitative summary detailing types of interpretive services and related costs.

Strategy #4 (continued)

NMCDH will also seek to engage and maintain a multicultural workforce of PCPs, specialists, mid-level practitioners, registered nurses and other medical professionals committed to working in an evidence-based practice setting.

Methodology	Resources/Programs/ Partnerships	Anticipated Impact	Evaluation Plan
3. NMCDH will offer community benefit grants targeted to address access to care in the NMCDH service area.	3. DuPage Pads: Medical Respite Grant amount: $15,000	3. DuPage Pads will measure the success of the Medical Respite program by utilizing an evaluation survey that is done pre-service, during service and post-service case manager interviews, and voluntary participant surveys. Program outcomes include: - More than 60% of the individuals served will increase income and/or maintain or obtain mainstream benefits. - More than 80% will receive information on the importance of regular physicals relative to age and gender. - More than 75% of the individuals served will exit the program with medical insurance. - More than 60% will exit the program with an identified PCP. - More than 50% will exit the program with a follow-up appointment scheduled with a PCP related to the condition resulting in entry to the Medical Respite Program. - More than 35% of the individuals served will exit into stable housing.	3. A report on the measurable outcomes of the program will be submitted to NMCDH staff by September 30, 2019.

Priority health need: Mental health and substance abuse

Introduction and need overview

Data from the Community Health Needs Assessment (CHNA) revealed that poor mental health and access to mental health treatment were issues of concern to DuPage residents as evidenced by:

Sixty-four percent of residents reported their mental health as "excellent" or "very good," with 22.8 percent reporting "good" and 13.2 percent reporting "fair" or "poor."

Among individuals reporting "fair" or "poor" mental health, 33 percent also reported low income.

A total of 19.9 percent of adults reported being diagnosed with a depressive disorder (an increase of 2.9 percent over the last CHNA), and 25.1 percent reported symptoms of chronic depression lasting two or more years (a decrease of 1.9 percent).

Among low-income individuals, 39.4 percent reported symptoms of chronic depression.

Between 2013 and 2015, the annual average age-adjusted suicide rate was 8.9 deaths per 100,000 population in DuPage County (essentially unchanged from 2011 – 2013 data).

A total of 28.7 percent of respondents reported ever having sought help for a mental or emotional problem, as compared to 30.8 percent nationally.

A total of 14.7 percent of respondents reported either currently taking medication or receiving mental health treatment, as compared to 13.9 percent nationally.

Lack of access to mental health care within the past 12 months was reported by 14.7 percent of individuals 18 to 39 years of age and 27.9 percent of Hispanic individuals.

Additionally, CHNA data related to substance abuse and tobacco use included:

Substance abuse

Age-adjusted deaths from cirrhosis/liver disease and age-adjusted drug-induced deaths remained lower than regional, state and national rates.

A total of 4.6 percent of respondents acknowledged driving after having consumed too much alcohol in the last month, up from 1.7 percent in 2015.

Illicit drug use in the past month was acknowledged by 4.4 percent of respondents. While this was twice the U.S. rate (2.5 percent), it reflected a decrease from 8.6 percent in the 2015 survey.

A total of 2.5 percent of respondents acknowledged seeking professional help for a drug/alcohol-related problem.

A total of 33.5 percent of respondents acknowledged that their life had been negatively affected by substance abuse.

Substance abuse was characterized as a "major" problem in the community by 56.8 percent of respondents. Education, denial/stigma, cost/insurance and access to affordable care were cited as barriers to treatment, and ease of access to opiates was cited as a contributing factor.

Key informants who rated substance abuse as a "major" problem most often identified alcohol, cocaine, heroin/opioids, prescription medications and marijuana as the most problematic substances in the community.

Tobacco use

A total of 10.6 percent of NMCDH service area adults currently smoke cigarettes, representing a decrease from 15.5 percent in 2015.

Among households with children, 6.3 percent have someone who smokes cigarettes in the home.

Additionally, 3.8 percent of service area adults use some type of smokeless tobacco.

Tobacco use was identified as a "moderate problem" by 36.4 percent of survey respondents, while an additional 12.1 percent identified it as a "major" problem, citing concerns such as lack of education, peer pressure and high-stress environments.

Analysis of mental health and substance abuse concerns

Mental health and substance abuse are associated with many other root causes and social determinants including poverty, education and unemployment. HP 2020 identified mental health risk factors, such as decreased resiliency and lack of treatment for mental health conditions. Substance abuse risk factors included high stress and community norms. Contributing factors to both issues included poor coping skills, stressors, social and self-stigma, lack of access to treatment, adverse life events, perceived low risk of substance abuse, inadequate policies and easy access to substances.

Public policies impacting substance abuse include absent and/or unenforced social host ordinances and lack of regulation on e-cigarettes and hookah bars. Current budget stalemates at the state level have resulted in substantial cutbacks in mental health and related human services. Key programs for people with mental illness are also facing reductions in the state's proposed budget.

Community assets

The DuPage Behavioral Health Collaborative was formed in response to the mental health findings and needs noted in the DuPage County IPLAN. The mission of the group is to work collaboratively to identify and implement data-driven strategies that improve access and quality of behavioral health services for all DuPage County residents, advocate for aligning resources and funding, and educate the community about the signs and symptoms of mental health issues.

The collaborative is composed of two teams – the Treatment Leadership Team (behavioral health) and the Prevention Leadership Team (substance abuse). NMCDH leadership and staff serve as integral members of both teams, working both independently and collaboratively to address mental health and substance abuse issues in DuPage County. Both the Treatment Leadership Team and the Prevention Leadership Team are comprised of members from local hospitals, public health, and private and community sectors, and represent a broad cross-section of the community united to respond to both issues.

The DuPage County Health Department Crisis Intervention Unit is a mental health support system that deals with mental health emergencies on a 24-hour basis. This unit deals with urgent mental health issues that require immediate attention such as suicidal thoughts, homicidal threats, and symptoms of serious mental illness including depression, schizophrenia,

bipolar disorder, anxiety and other issues that may require hospitalization. Individuals can contact the unit at any time and set up an appointment either by phone or in person. The Crisis Program also has a 10-bed respite unit available for short-term stabilization. Psychiatric evaluations and short-term crisis counseling intervention are also available on a scheduled basis as needed.

Existing NMCDH hospital programs

NMCDH offers immediate help, providing short-term psychiatric care for adults and teens (13 years of age and older) in a hospital setting. Short-term inpatient care is provided in three secure hospital psychiatric units to help people who pose a risk to themselves or others and those who are unable to care for themselves.

Following stabilization, NMCDH offers a full range of treatment including outpatient partial hospitalization, individual and family therapy, group therapy and follow-up services in the community. NMCDH also offers a full range of substance abuse services including inpatient detoxification, residential treatment and rehabilitation services, along with continued counseling to support long-term recovery.

Range of possible interventions

The Treatment Leadership Team has developed a set of guiding strategies:

Establish a system of navigation for accessing behavioral health services, including a coordinated system of managing real-time supply and demand of behavioral health care

Identify at least one strategy to address social and economic barriers to behavioral health treatment services

Behavioral health treatment providers will adopt and share common quality indicators

Increase pipeline capacity of quality providers

The Prevention Leadership Team has developed a set of guiding strategies:

Establish and/or reinforce civil-style host ordinances throughout DuPage communities

Develop and implement mass media campaigns targeting parents regarding alcohol supply to youths

Assess and support prevention activities in schools

Promote safe prescribing education to the medical community

Promote prescription drug disposal programs

Benchmarks

National – HP 2020

Mental health goal

Improve mental health through prevention and by ensuring access to appropriate, quality mental health services

Related objectives

MHMD-1: Reduce the suicide rate

MHMD-4: Reduce the proportion of persons who experience major depressive episodes

MHMD-5: Increase the proportion of primary care facilities that provide mental health treatment onsite or by paid referral

MHMD-9: Increase the proportion of adults with mental health disorders who receive treatment

MHMD-10: Increase the proportion of persons with co-occurring substance abuse and mental health disorders who receive treatment for both disorders

Substance abuse goal

Reduce substance abuse to protect the health, safety and quality of life for all, especially children

Related objectives

SA-1: Reduce the proportion of adolescents who report that they rode, during the previous 30 days with a driver who had been drinking alcohol

SA-2: Increase the proportion of adolescents never using substances

SA-3: Increase the proportion of adolescents who disapprove of substance abuse

SA-4: Increase the proportion of adolescents who perceive great risk associated with substance abuse

SA-8: Increase the proportion of persons who need alcohol and/or illicit drug treatment and received specialty treatment for abuse or dependence in the past year

SA-9: Increase the proportion of persons who are referred for follow-up care for alcohol problems, drug problems after diagnosis, or treatment for one of these conditions in a hospital emergency department

SA-10: Increase the number of Level I and Level II trauma centers and primary care settings that implement evidence-based alcohol screening and brief intervention

SA-14: Reduce the proportion of persons engaging in binge drinking of alcoholic beverages

SA-19: Reduce the past-year nonmedical use of prescription drugs

Local – Impact DuPage Action Plan

Mental health

Outcome objective 1: By December 31, 2021, achieve a 10% reduction in the number of incoming jail inmates with a mental health issue.

Impact objective 1.1: By December 31, 2021, implement PCRT program with at least eight new external police department partners.

Impact objective 1.2: By March 1, 2019, begin implementation of pre-arrest diversion program with pilot site(s).

Impact objective 1.3: By March 1, 2019, implement the universal screening tool to be used at the DuPage County Jail.

Impact objective 1.4: By April 1, 2019, implement the Jail Datalink agreement between the DuPage County Jail and the DuPage County Health Department.

Impact objective 1.5: By December 31, 2021, train 160 DuPage County EMS responders in Mental Health First Aid.

Substance abuse

Outcome objective 1: By December 31, 2021, achieve a 10% reduction in the number of deaths in DuPage County as a result of an opioid overdose.

Impact objective 1.1: By December 31, 2021, add five RxBOX units at different locations in DuPage County.

Impact objective 1.2: By December 31, 2021, develop three major takeback partnerships (events or programs) to assist residents of DuPage County in disposing their prescription medications safely.

Impact objective 1.3: By December 31, 2021, reduce the number of opiates prescribed in DuPage County by 10%.

Impact objective 1.4: By December 31, 2021, provide safe prescribing training to at least 100 healthcare professionals working in DuPage County.

Impact objective 1.5: By December 31, 2019, establish and train five new first responder DNP program sites in DuPage County.

Impact objective 1.6: Between January 1, 2019 and December 31, 2021, train 1,500 new individuals throughout DuPage County to identify the signs of overdose and use Narcan.

Impact objective 1.7: By December 31, 2021, establish ten new first responder organizations participating in overdose follow-up services.

Impact objective 1.8: By December 31, 2019, add at least two medication-assisted treatment (MAT) providers that serve individuals with Medicaid and/or no insurance in DuPage County.

Impact objective 1.9: By December 31, 2021, reach 1,000,000 individuals through multimedia campaigns intended to reduce stigma surrounding substance use disorders and raise awareness of opioid overdoses.

Prevention Leadership Team

Outcome objective 1: Reduce the percentage of DuPage County high school students reporting consumption of alcohol within past 30 days from 30% to 25% (16.7% reduction) by 2022, as reported by the Illinois Youth Survey.

Impact objective 1.1: Reduce the percentage of DuPage County high school students reporting that it would be "very" or "sort of easy" to obtain alcohol from 63% to 58% by 2022, as reported by the Illinois Youth Survey.

Impact objective 1.2: Increase the percentage of DuPage County parents reporting "great" risk of harm for youth who use alcohol to 75% by 2021, as reported by Prevention Leadership Team surveying.

Outcome Objective 2: Reduce the percentage of DuPage County high school students that report using marijuana in the past 30 days from 17% to 15% (11.8% reduction) by 2022, as reported by the Illinois Youth Survey.

Impact objective 2.1: Increase the percentage of DuPage County high school students accurately perceiving peer use of marijuana to 20% by 2022, as reported in the Illinois Youth Survey.

Impact objective 2.2: Increase the percentage of DuPage County parents reporting "great" risk of harm for youth who use marijuana to 50% by 2021, as reported by Prevention Leadership Team surveying.

Outcome objective 3: Reduce the percentage of DuPage County high school students reporting using prescription drugs not prescribed to them within the past 30 days from 2.5% to 1% (60% reduction) by 2022, as reported by the Illinois Youth Survey.

Impact objective 3.1: Increase the percentage of DuPage County high school students reporting "great" risk in using prescription drugs not prescribed to them to 80% by 2022, as reported by the Illinois Youth Survey.

Impact objective 3.2: Reduce the percentage of DuPage County high school students reporting that it would be "sort of" or "very easy" to obtain prescription drugs not prescribed to them to 29% by 2022, as reported by the Illinois Youth Survey.

Implementation strategy

In support of national and local mental health service objectives, NMCDH will continue to provide leadership, invest resources and work collaboratively with community partners in a countywide mental health/substance abuse coalition. The purpose of the coalition will be to study the issues and needs, and develop planned responses that will ultimately improve the quantity, quality and continuity of mental health services available in the county.

Methodology	Resources/Programs/ Partnerships	Anticipated Impact	Evaluation Plan
1. NMCDH will work collaboratively with the DuPage Behavioral Health Collaborative to identify key community partners and best practices in the areas of mental health crisis intervention.	1. Leadership from NMCDH, DuPage County Health Department, Access DuPage and DuPage United, and DuPage Federation on Human Services Reform	1a. Collaborative membership will work together to identify an appropriate model and administrative structure. 1b. Collaborative membership will develop strategies to reduce repeat Emergency Department visits by individuals with a known mental health diagnosis. 1c. Collaborative membership will strive to develop and/or enhance community mental health resources to support law enforcement.	1a. NMCDH leadership will document and report the development of a proposed model and business plan. 1b. NMCDH staff will document and report progress towards reducing Emergency Department visits with mental health diagnoses six months before and six months after the implementation of the program. 1c. NMCDH staff will document and report the development of a resource directory for law enforcement.
2. NMCDH will provide in-kind leadership and support to the implementation of the Behavioral Health Treatment Action Plan that has been developed by the DuPage County Behavioral Health Collaborative.	2. Leadership from Community Affairs, Community Outreach and Behavioral Health will supply support and direction in the implementation of the objectives identified in the Action Plan.	2a. NMCDH staff will work to assist in the establishment of a navigation system that improves the ability of the provider network to ensure that patients understand, access and receive treatment services. 2b. NMCDH staff will work to assist in the development of adopted and shared common quality indicators that have been identified by Impact DuPage. 2c. NMCDH staff will work towards supporting the development of one or more innovations to increase pipeline capacity of quality providers.	2a. NMCDH staff will document and report progress towards the development of an integrated navigation model and resource referral system utilizing a coordinated system of real-time supply and demand. 2b. NMCDH staff will document and report progress towards the development of common subjective and objective quality indicators. 2c. NMCDH staff will report progress towards the development of at least two partnerships with psychiatric and mid-level provider training institutions aimed at increasing the pipeline capacity of NMCDH providers.

Implementation strategy (continued)

Methodology	Resources/Programs/ Partnerships	Anticipated Impact	Evaluation Plan
3. NMCDH will provide in-kind leadership and support to the implementation of the Substance Abuse Action Plan developed by the DuPage Behavioral Health Collaborative.	3. Leadership from Community Affairs, Community Outreach and Behavioral Health will supply support and direction in the implementation of the objectives identified in the Action Plan.	3. NMCDH staff will work collaboratively with the DuPage Behavioral Health Collaborative to increase the percentage of 12th graders who think there is moderate to great risk in using prescription drugs not prescribed to them.	3a. NMCDH staff and members of the DuPage Behavioral Health Collaborative will monitor and report the percentage of 12th graders who think there is moderate to great risk in using prescription drugs not prescribed to them. Data will be aggregated via the Illinois Youth Survey. 3b. NMCDH staff will support and report progress towards the development of a "Safe Prescriber Campaign" targeting prescribing professionals in DuPage County in an effort to reduce access to prescription pills leading to opiate abuse.
4. NMCDH will offer evidence-based wellness programs in the areas of mental health and substance abuse via programmatic venues including but not limited to Dinner with the Doc series, clinician-led educational offerings, self-help groups, rehabilitation services programs, support groups and professional development.	4. NMCDH Community Health Outreach (CHO) staff will partner with Behavioral Health staff and community mental health and substance abuse partners to provide wellness programming in the areas not limited to alcohol, cocaine, narcotics abuse, overeating, attention deficit hyperactivity disorder, depression, suicide and bipolar disorders.	4. Attendees will complete program evaluations validating that learner outcomes have been met via an increase in topic knowledge and awareness.	4a. NMCDH staff will track the number of programs offered and the number of attendees. 4b. NMCDH staff will develop course objectives and learner outcomes while measuring learned behavior and planned change. 4c. Attendees will identify at least one learned outcome and articulate one planned behavior change. 4d. NMCDH staff will work collaboratively with self-help and support group community contacts to ensure that best practices are used to assess participant impact of programming.

Implementation strategy (continued)

Methodology	Resources/Programs/ Partnerships	Anticipated Impact	Evaluation Plan
5. NMCDH will offer community benefit grants targeted to address mental health needs in the NMCDH service area.	5. Meier Clinic Foundation: Mental Health Services with Naomi's House Grant amount: $15,000	5. Meier Clinics Foundation will measure the success of the Meier Clinics Mental Health Services in collaboration with Naomi's House program by utilizing pre- and post-clinical outcomes and participant surveys. Program outcomes include: - 100% of the Naomi's House residents will be able to self-identify that healing has begun in their lives since participating in the program. - Utilization of Basis 24 pre- and post-clinical outcome testing.	5. A report on the measurable outcomes of the program will be submitted to NMCDH staff by September 30, 2019.

Implementation strategy (continued)

Methodology	Resources/Programs/ Partnerships	Anticipated Impact	Evaluation Plan
6. NMCDH will implement the National Council for Behavioral Health's Mental Health First Aid (MHFA) Program and offer programming to members of the community. Note: MHFA is an 8-hour course that teaches participants how to identify, understand and respond to signs of mental illnesses and substance use disorders.	6. NMCDH CHO staff	6a. NMCDH staff will successfully develop and implement the NMCDH MHFA Program. 6b. The NMCDH MHFA Program will demonstrate an increased awareness of appropriate resources available in the community to address mental health concerns. The program's impact will be measured in alignment with the following identified outcomes: - Ninety percent of course participants will agree or strongly agree that they are able to describe the 5-step Action Plan (ALGEE). -Ninety percent of course participants will agree or strongly agree that the MHFA course increased their confidence in recognizing and correcting misconceptions about mental health and mental illness. -Ninety percent of MHFA course participants will score a minimum of 85 percent on the MHFA course exam.	6a. Four NMCDH staff will complete MHFA and MHFA for Youth facilitator training. 6b. NMCDH staff will document and report program outcomes.

Priority health need: Chronic disease

Introduction and need overview

Cardiovascular disease

Heart disease is the leading cause of death in the United States, with stroke following as the third leading cause. Together, heart disease and stroke are among the most widespread and costly health problems facing our nation today, accounting for more than $500 billion in healthcare expenditures. HP 2020 stresses that the risk of Americans developing and dying from cardiovascular disease would be substantially reduced if changes were made in diet, physical activity and management of high blood pressure, cholesterol and smoking. Fortunately, they are most preventable especially if intervention is provided across the lifespan of the disease — from early education, prevention and screening to early diagnosis, prompt treatment and comprehensive aftercare. In planning responses to the priority needs of their communities, hospitals can positively impact the health burdens of all chronic diseases by addressing the disease across the continuum of its lifespan.

Together, cardiovascular disease (heart disease and stroke) accounted for 27.9 percent of all deaths in DuPage County.

A total of 6.3 percent of survey respondents acknowledged having been told by their healthcare provider that they either had heart disease or had a stroke.

A total of 33 percent of adults reported being told at some point that their blood pressure was high, exceeding the HP 2020 target of 26.9 percent or lower. This finding represented an increase from 31.8 percent in the 2015 NMCDH CHNA.

Among adults with multiple high blood pressure readings, 81.1 percent reported taking action to control their levels.

A total of 37.6 percent of adults reported a diagnosis of high cholesterol. This represents a notable increase from 30.9 percent in our 2015 assessment and an HP 2020 target of 13.5 percent or lower.

Regarding total risk of cardiovascular disease, 83.7 percent of respondents reported one or more risk factors including overweight, smoking cigarettes, physical inactivity, high blood pressure or high cholesterol levels.

Heart disease and stroke were rated as moderate/major problems in the community by 65.7 percent of survey respondents.

Cancer

Continued advances in cancer research, detection and treatment have resulted in a decline in both incidence and death rates for all cancers. Yet cancer remains a leading cause of death within the NMCDH service area. Once again, intervention across the lifespan of the disease poses an opportunity for hospitals to focus on prevention through education, and early diagnosis and treatment through access to routine screenings.

Between 2011 and 2013, the annual average age-adjusted cancer mortality rate was 149.3 deaths per 100,000 residents in DuPage County; the rate was notably higher among non-Hispanic Blacks and Whites. The rate has decreased slightly in 2015 to 143.0 per 100,000 residents.

Lung cancer remains the leading cause of cancer deaths in DuPage County, followed by female breast cancer, prostate cancer and colorectal cancer.

The incidence of female breast cancer ranked higher in DuPage County than in Illinois or in the U.S.

When queried regarding screenings:

- Among women age 50 to 74 years, 72.4 percent reported having had a mammogram in the past two years. This represented a decrease from 84.6 percent in 2015.
- Among women age 21 to 65 years, 82.8 percent reported having had a Pap smear within the past three years. This represented a downward decrease from 87.3 percent in 2015 and 90.4 percent in 2012.
- Among adults age 50 to 75 years, 73.4 percent reported having a colorectal cancer screening within the past 10 years. This represented an increase from 67.9 percent in 2015.
- A total of 38.2 percent of key informants rated cancer as a major problem in DuPage County.

Pulmonary disease

Asthma and chronic obstructive pulmonary disease (COPD) were also significant public health burdens.

Currently, 7.3 percent of adult survey respondents suffer from asthma — down slightly from 7.4 percent in 2015.

Additionally, 10 percent of children within the NMCDH service area were reported to have asthma. This represents an increase from 7.8 percent in 2015.

A total of 38.7 percent of key informants rated respiratory disease as either a moderate or major problem in DuPage County.

Diabetes

Diabetes is another disease that continues to increase in both incidence and prevalence in the U.S. Increasing numbers coupled with earlier onset of the disease pose a growing concern about the potential to overwhelm the existing healthcare system.

Between 2011 and 2013, the annual average age-adjusted diabetes mortality rate was 11.3 deaths per 100,000 residents in DuPage County, well below regional, state and national rates; age-adjusted mortality by race was highest among the Hispanic population. In 2015, the rate dropped to 10.9.

In 2018, 9.7 percent of respondents reported having been diagnosed with diabetes, and an additional 9.2 percent reported having "pre-diabetes." The prevalence of pre-diabetes has decreased from 10.4 percent in 2015.

Among individuals not having been diagnosed with diabetes, only 55.4 percent reported having had their blood sugar level tested within the past three years. This is a slight decrease from 57 percent in 2015.

Diabetes was identified as a major problem in DuPage County by 56 percent of respondents.

Factors contributing to chronic disease

Diet and nutrition

A total of 56.1 percent of survey respondents reported eating five or more servings of fruits and/or vegetables per day; however, 17.2 percent of low-income respondents reported that they do not eat the recommended number of servings per day.

While most respondents reported little or no difficulty accessing fresh produce, 33.2 percent of low-income respondents and 32.8 percent of Hispanic respondents reported that it was "somewhat" or "very" difficult to access affordable fresh fruits and vegetables.

U.S. Department of Agriculture data reported that 22.6 percent of DuPage County residents have low food access or live in a "food desert," meaning that they do not live near a supermarket or large grocery store. These findings were less favorable than regional, state or national findings.

Physical activity

A total of 28.4 percent of respondents reported no leisure-time physical activity in the past month; this trend was less favorable than regional, state and national findings.

Additionally, a total of 45.2 percent of respondents participate in regular, sustained, moderate or vigorous physical activity.

Among service area children age two to 17 years, 19.2 percent were reported to have had 60 minutes of physical activity on each of the seven days preceding the interview. These results were significantly lower than the 2015 rate of 46.4 percent; however, it is believed that seasonal differences (winter 2018 vs. summer 2015) may have been a contributing factor to the discrepancy in these results.

Girls were reported to engage in physical activity less often than boys (13.2 percent vs. 24 percent).

Overweight/obesity

Based on self-reported heights and weights, 65.6 percent of survey respondents were overweight and 33.4 percent were obese. Current reports demonstrate an increase from 62.4 percent overweight and 28.9 percent obese in 2015 data. Of the 33.4 percent of individuals reporting obesity, 57.9 percent were low income and 50.7 percent were Hispanic.

Based on heights and weights reported by surveyed parents, 28.3 percent of children age five to 17 years were overweight or obese (> 85th percentile). This finding indicated a decrease from 34.1 percent in 2015.

Further, 14 percent of these children were obese (> 95th percentile); a decrease from 23.9 percent in 2015.

Nutrition, physical activity and weight were perceived as major problems by 45.9 percent of survey respondents who cited reasons including education, access to affordable healthy foods, school lunch menus and less opportunity for physical activity.

Analysis of chronic disease concerns and impact on the healthcare system

It is widely recognized by public health experts that one of the most effective methods of addressing chronic disease concerns is via the use of the Interventions Model of care, which considers the evolution of a chronic disease across its lifespan.

When addressing the problem of chronic disease, there are three points of intervention:

Primary intervention involves the provision of disease prevention and health promotion strategies focused on the prevention or delay of onset of the disease. This level of intervention focuses heavily on education and prevention.

Secondary intervention involves the strategies related to regular screening, and early diagnosis and prompt treatment of disease to limit or minimize its associated disability.

Tertiary intervention involves the provision of services to assist individuals with a chronic disease to live and function at an optimum state of wellness. This level of intervention focuses heavily on chronic disease management.

The successful management of chronic disease is heavily dependent upon timely access to health care – especially primary care. Root causes and social determinants such as poverty, limited income, lack of affordable healthcare insurance, illiteracy and inadequate education frequently prevent individuals from seeking routine primary care, which provides health education and screening. These same determinants also provide barriers to receiving sick or urgent care and adequate chronic disease management, thereby exacerbating the chronic disease and increasing the costs related to care and decreasing quality of life. In addition, inadequate nutrition, physical inactivity and obesity – while not considered chronic diseases – are also contributing factors, and strategies to manage them will be addressed as part of this section.

Community assets

Programs described in the previous section of this document that address access to care are vital to the management of chronic disease. Programs such as Access DuPage and Engage DuPage ensure access to routine health care, screening, PCPs, specialists, medications and medical homes.

Existing NMCDH hospital programs

NMCDH offers a comprehensive financial assistance program to individuals unable to afford the cost of their acute medical care. In addition, the hospital offers a comprehensive array of community education programming and services to support both primary and tertiary interventions.

Range of possible interventions

A broad range of intervention exists to address the issue of chronic disease including:	
Health education	Supporting linkages to medical homes
Health screenings	Chronic disease management programs

Benchmarks

National – HP 2020

Cancer goal

Reduce the number of new cancer cases, as well as disability and death caused by cancer

Related objectives

C-3: Reduce the female breast cancer death rate

C-4: Reduce the colorectal cancer death rate

C-18: Increase the proportion of adults who were counseled about cancer screening consistent with the current guidelines

Diabetes goal

Reduce the disease burden of diabetes mellitus (DM), and improve the quality of life for all persons who have, or are at risk for, DM

Related objectives

D-2: Reduce the diabetes death rate

D-5: Improve glycemic control among persons with diabetes

D-16: Increase prevention behaviors in persons at risk for diabetes – including weight loss (D-16.2)

Heart disease goals

- Improve cardiovascular health and quality of life through prevention, detection, and treatment of risk factors for heart attack and stroke
- Early identification and treatment of heart attacks and strokes
- Prevention of repeat cardiovascular events
- Reduction in deaths from cardiovascular disease

Related objectives

HDS-1: Increase overall cardiovascular health in the U.S. population

HDS-5: Reduce the proportion of persons in the population with hypertension

HDS-16: Increase the proportion of adults aged 20 years and older who are aware of the symptoms of, and how to respond to, a heart attack

HDS-17: Increase the proportion of adults aged 20 years and older who are aware of the symptoms of, and how to respond to, a stroke

HDS-24: Reduce hospitalizations of older adults with heart failure as the principal diagnosis

Nutrition and weight status goal

Promote health and reduce chronic disease risk through the consumption of healthful diets, and achievement and maintenance of healthy body weights

Related objectives

NWS-2: Increase the proportion of schools that offer nutritious foods and beverages outside of school meals

NWS-8: Increase the proportion of adults who are at a healthy weight

NWS-9: Reduce the proportion of adults who are obese

NWS-13: Reduce household food insecurity and, in doing so, reduce hunger

Local – DuPage County Health Department 2015 IPLAN

Chronic care-related objectives are woven into the DuPage County IPLAN priority objectives and are not specifically referenced as objectives.

Implementation strategy

In support of national objectives to reduce the prevalence and burden of chronic disease, NMCDH will continue to provide evidence-based care in the areas of primary interventions (disease prevention, health promotion), secondary interventions (screening), and tertiary interventions (education to individuals affected with a chronic disease in an effort to promote an optimum state of individual wellness). NMCDH will also continue to bring leading-edge, chronic disease care to all individuals, regardless of ability to pay.

Methodology	Resources/Programs/ Partnerships	Anticipated Impact	Evaluation Plan
1. NMCDH will host/offer evidence-based community health and wellness programming in the areas of cardiovascular and peripheral vascular disease.	1. NMCDH staff, physicians and clinicians Program venues include Dinner with the Doc series, clinician-led educational offerings, self-help groups, rehabilitation services programs and support groups.	1. Upon completion of the program, participants will identify signs/symptoms of the selected topic in addition to prevention and management strategies. Participants will also rate their perceived level of knowledge before and after the program.	1. NMCDH staff will track the type of offering, the number of individuals in attendance and the qualitative metrics identified for the particular program.
2. NMCDH will host/offer evidence-based community health and wellness programming in the area of cancer, including, but not limited to, the topics of breast and colon cancer, brain tumors, proton therapy, yoga for patients with cancer, palliative care and hospice.	2. NMCDH staff, physicians and clinicians Program venues include Dinner with the Doc series, clinician-led educational offerings, self-help groups, rehabilitation services programs and support groups.	2. Upon completion of the program, participants will identify signs/symptoms of the selected topic in addition to prevention and management strategies. Participants will also rate their perceived level of knowledge before and after the program.	2. NMCDH staff will track the type of offering, the number of individuals in attendance and the qualitative metrics identified for the particular program.
3. NMCDH will host/offer evidence-based community health and wellness programming in various other areas related to chronic disease including, but not limited to, obesity, injury prevention, arthritis, maternal and child health, joint replacement, fall prevention, chronic lung disease, epilepsy and Parkinson's disease.	3. NMCDH staff, physicians and clinicians Program venues include Dinner with the Doc series, clinician-led educational offerings, self-help groups, rehabilitation services programs and support groups	3. Upon completion of the program, participants will identify signs/symptoms of the selected topic in addition to prevention and management strategies. Participants will also rate their perceived level of knowledge before and after the program.	3. NMCDH staff will track the type of offering, the number of individuals in attendance and the qualitative metrics identified for the particular program.

Implementation strategy (continued)

Methodology	Resources/Programs/ Partnerships	Anticipated Impact	Evaluation Plan
4. NMCDH will offer a community-based heart failure (HF) program to all patients with an active diagnosis of HF who have not been referred for or are not receiving other nursing services. The goal of the HF program is to empower patients with HF through a comprehensive, educational chronic disease management program designed to promote effective self-care behaviors aimed at decreasing hospital readmission rates while enhancing client-perceived quality of life.	4. NMCDH community health outreach (NMCHO) heart staff, including certified heart failure nurses, dietitians and exercise physiologists. The program also includes interfacement with NMCDH specialty physicians and mid-level practitioners and staff nurses.	4. Eligible patients with HF will receive inpatient education, home visits and follow-up telephone calls by certified HF nurses, dietitians and an exercise physiologist as indicated. Anticipated impact will include more effective self-management of the disease, enhanced quality of life and decreased hospital readmission. Established outcome measures include: - Ninety percent of patients enrolled will describe compliance with symptom tracking. - Ninety percent of patients enrolled will identify the appropriate necessary action in the event of a worsening of their condition. - Ninety percent of patients enrolled will describe expected action and undesired side effects of two of their cardiac medications during a home visit. - Eighty percent of patients will demonstrate use of an effective medication management system. - Ninety percent of patients will complete a discharge follow-up appointment with the healthcare provider managing their HF within seven days of hospital discharge. - Thirty-day, all-cause readmission rates for program participants will be less than 10 percent. - Thirty-day HF readmission rates will remain at less than three percent.	4. HF staff will collect and report annual data related to the number of patients enrolled in the program and program outcome measures.

Implementation strategy (continued)

Methodology	Resources/Programs/ Partnerships	Anticipated Impact	Evaluation Plan
5. NMCDH will provide in-kind leadership and financial support to the Forward Project.	5. NMCDH director of community and government affairs and Forward Project membership	5. NMCDH's membership and participation in the Forward Project will support their initiatives in the areas of policy, system and environmental changes aimed at the reduction of obesity.	5. NMCDH and Forward Project staff will provide an annual report detailing NMCDH's implementation of strategies to reduce sodium in their cafeterias, vending areas and patient menus.
6. NMCDH will work with local schools to implement the Coordinated Approach to Child Health (CATCH) program. Emphasis will be on parents and children attending the 4-year-old program and all preschool program teachers.	6. NMCDH staff and selected preschools in Kane and DuPage counties	6. Teachers, parents and children will demonstrate: - An increased awareness of healthy eating choices, including recognition of "Go" and "Whoa" foods - An increase in the amount of healthy snacks provided in the school setting - An increase in moderate to vigorous physical activity throughout the school day - Increased parental awareness of the importance of including physical activity in their child's life and including "Go" foods most often when providing snacks/meals	6. NMCDH staff will submit an annual report addressing identified outcomes.
7. NMCDH will provide "Kits for Kids," an educational program that may be utilized by parents, teachers, Scout leaders and other individuals to assist children in learning about hand-washing, bicycle safety and nutrition.	7. NMCDH staff working together with community members	7. Each kit will provide an educational program with tools to support a fun and engaging lesson.	7a. NMCDH staff will track the distribution of kits. 7b. NMCDH staff will develop an evaluation tool to be used by individuals upon program completion.
8. NMCDH staff will continue efforts to promote referral patterns of physicians and ancillary staff to smoking cessation resources.	8. NMCDH staff	8. NMCDH staff will develop an additional screening component within Epic that will facilitate the identification and referral of potential patients.	8. NMCDH will track and report progress and outcomes related to the program.

Northwestern Medicine®

Northwestern Medicine Central DuPage Hospital
25 North Winfield Road
Winfield, Illinois 60190

630.933.2000
TTY for the hearing impaired 630.933.4833

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