



2018 Community Health Needs Assessment Report

Northwestern Medicine Central DuPage Hospital



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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 volunteer 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..

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NMCDH has completed a comprehensive Community Health Needs Assessment (CHNA) to identify the highest-priority health needs of residents in our community and will use this information to guide new and enhance existing efforts to improve the health of our community. As described in detail in this report, 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.

Acknowledgments

NMCDH gratefully acknowledges the participation of a dedicated group of organizations that gave generously of their time and expertise to help guide and develop this 2018 Community Health Needs Assessment:

DuPage County Health Department

Metropolitan Family Services

DuPage Federation on Human Services Reform

People's Resource Center

DuPage Medical Group

WeGo Together for Kids

The Community Health Needs Assessment

Background

A comprehensive Community Health Needs Assessment 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 Community Health Needs Assessments 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.

Methodology

As previously noted, the CHNA incorporates data from both quantitative and qualitative sources. Quantitative data input includes primary research (the PRC Community Health Survey) and secondary research (vital statistics and other existing health-related data). These quantitative components allow for trending and comparison to benchmark data at the state and national levels. Once the data has been reviewed by NMCDH community health experts, executive leadership and key community stakeholders identify priority areas of need in which NMCDH is uniquely positioned to address and respond.

The entire CHNA process includes:

a comprehensive identification and prioritization of needs;

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

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 and measurable outcomes; and

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

CHNA Goals

The NMCDH CHNA will serve as a tool toward reaching three related goals:

- 1 Improve residents' health status, increase their life spans and elevate their overall quality of life.** A healthy community is one where its residents suffer little from physical and mental illness and enjoy a high quality of life.
- 2 Reduce the health disparities among residents.** By gathering demographic information along with health status and behavior data, it will be possible to identify population segments that are most at risk for various diseases and injuries. Intervention plans aimed at targeting these segments may then be developed to combat some of the socioeconomic factors that have historically had a negative impact on residents' health.
- 3 Increase accessibility to preventive services for all community residents.** More accessible preventive services will prove beneficial in accomplishing the first goal (improving health status, increasing life spans and elevating the quality of life), as well as lowering the costs associated with caring for late-stage diseases resulting from a lack of preventive care.

Quantitative data analysis: The community health survey

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 comparison to benchmark data at the state and national levels.

Survey instrument

The survey instrument used for the PRC Community Health Survey was based largely on the Centers for Disease Control and Prevention (CDC) Behavioral Risk Factor Surveillance System, as well as various other public health surveys and customized questions addressing gaps in indicator data relative to health promotion and disease prevention objectives and other recognized health issues. The final survey instrument was developed by Northwestern Medicine and PRC.

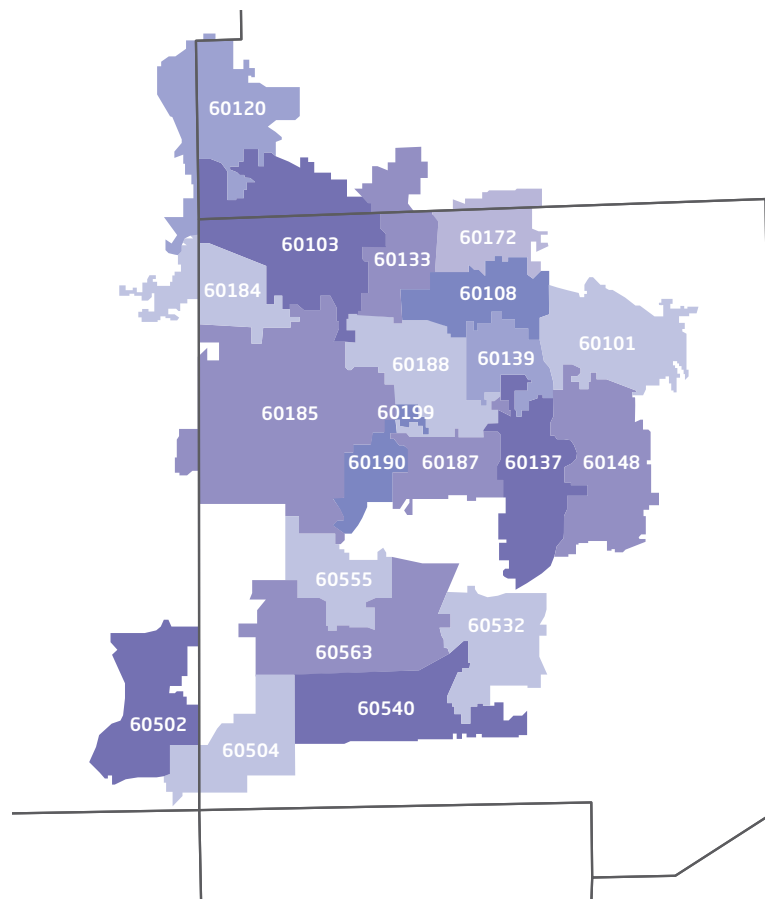
Community defined for this assessment

The study area for the survey effort was defined as the NMCDH service area, analyzed at the ZIP code level. The definition is illustrated in the following map:

NMCDH service area

NMCDH primarily serves central and western DuPage County (NMCDH service area), which has approximately 922,803 residents, is defined by seven ZIP codes and accounts for 65.3 percent of inpatient admissions at NMCDH.¹ An additional 14 ZIP codes comprise the hospital’s secondary service area.

NMCDH Primary Service Area by ZIP Code				NMCDH Secondary Service Area by ZIP Code			
60185	60555	60199	60187	60563	60502	60108	60184
60190	60188	60137		60540	60148	60172	60120
				60532	60101	60133	
				60504	60139	60103	



¹ U.S. Census Bureau, 2010

Sample approach and design

A precise and carefully executed methodology is critical in asserting the validity of the results gathered in the PRC Community Health Survey. Thus, to ensure the best representation of the population surveyed, a mixed mode methodology was implemented. This included surveys conducted via telephone (landline and cell phone) as well as through online questionnaires.

The sample design used for this effort consisted of a random sample of 400 individuals age 18 and older in the NMCDH service area. Upon completion of the interviews, they were weighted in proportion to the actual population distribution to appropriately represent the service area as a whole. For statistical purposes, the maximum rate of error associated with a sample size of 400 respondents was +/- 4.9 percent at the 95 percent confidence level. All administration of the surveys, data collection and data analysis were conducted by PRC.

Sample characteristics

To accurately represent the population studied and minimize bias, proven telephone methodology and random-selection techniques were applied. While this random sampling of the population produces a highly representative sample, it is a common and preferred practice to "weight" the raw data to further improve the representation. This was accomplished by adjusting the results of a random sample to match the geographic distribution and demographic characteristics of the population surveyed (post-stratification) to eliminate any naturally occurring bias.

Specifically, once the raw data were gathered, respondents were examined by key demographic characteristics (namely gender, age, race, ethnicity and poverty status) and a statistical application package applied, weighting variables that produced a sample that more closely matched the population for these characteristics. While the integrity of each individual's responses was maintained, one person's responses may have contributed to the whole the same weight as, for example, 1.1 respondents. Another respondent, whose demographic characteristics may have been slightly over-sampled, may have contributed the same weight as 0.9 respondents.

The poverty descriptions used in this report are based on administrative poverty thresholds determined by the U.S. Department of Health and Human Services. These guidelines define poverty status by household income level and number of persons in the household. (For example, the 2017 guidelines place the poverty threshold for a family of four at \$24,400 annual household income or lower). In this report, "low income" refers to community members living in a household with defined poverty status or living just above the poverty level and earning up to twice (< 200 percent) of the poverty threshold. "Mid/high income" refers to those households living on incomes that are at least twice (>= 200 percent) the federal poverty level.

The sample design and quality control procedures used in the data collection ensure that the sample is representative. Thus, the findings may be generalized to the total population of community members in the defined area with a high degree of confidence.

Quantitative data analysis: Public health, vital statistics and other data

A variety of existing (secondary) data sources was consulted to complement the research quality of the CHNA. Data for the NMCDH service area was obtained from the following sources, with specific citations included throughout the PRC report:

Center for Applied Research and Environmental Systems (CARES)	U.S. Census Bureau
Centers for Disease Control and Prevention (CDC)	U.S. Department of Agriculture
Community Commons	U.S. Department of Health and Human Services
ESRI ArcGIS Map Gallery	U.S. Department of Justice, Federal Bureau of Investigation
Illinois Department of Public Health	U.S. Department of Labor, Bureau of Labor Statistics
National Cancer Institute, State Cancer Profiles	

Benchmark data

Trending data was utilized throughout the report when available. State and national risk factor data was utilized as an additional benchmark against which to compare local survey findings. Source data included Behavioral Risk Factor Surveillance System (BRFSS) and Trend Data published by the CDC. State and national level vital statistics were also provided for comparison of secondary data indicators. Healthy People 2020 – a nationally recognized and evidence-based program – was also utilized as a significant source of benchmark data.

Qualitative data analysis: Community stakeholder input

Qualitative data input includes primary research gathered through an online key informant survey of various community stakeholders.

Online key informant survey

To solicit input from key informants – individuals who have a broad interest in the health of the community - an online key informant survey was included in the assessment process. A list of recommended participants was provided by NMCDH, which included names and contact information of physicians, public health representatives, other health professionals, social service providers and a variety of other community leaders. Potential participants were chosen because of their ability to identify primary concerns of the populations with whom they work as well as the overall community.

Key informants were contacted by email, introducing the purpose of the survey and providing a link to take the online survey. Reminder emails were sent as needed to increase participation. In all, 41 community stakeholders took part in the online key informant survey – including representatives of the following organizations:

DuPage County Health Department	Fox Valley Special Recreation Association
DuPage Federation on Human Services Reform	NAMI DuPage
DuPagePads	Northern Illinois Food Bank
American Cancer Society	People’s Resource Center
B.R. Ryall YMCA of Northwestern DuPage County	Public School District, DuPage County
Bartlett Park District	SamaraCare
Benedictine Public Health Department	Senior Services Associates, Inc.
Breaking Free	Warrenville Park District
Catholic Charities Diocese of Joliet	Western DuPage Special Recreation Association
DuPage Foundation	West Chicago Public Library District
DuPage Senior Citizens Council	Winfield Park District
DuPage United	World Relief DuPage Aurora
Educare West DuPage	

Through this process, input was gathered from several individuals whose organizations work with low-income, minority populations and other medically underserved populations. Key informants were asked to rate the degree to which various health issues are a problem in their own community. Follow-up questions asked for a description of how these issues may be better addressed.

Minority/medically underserved populations that were represented within the key informant survey included:

African American	Homeless	Mentally ill
Arabic	Immigrant/refugee	Non-English-speaking
Asian	Laotian	Teen parent
Elderly	Low income	Undocumented
Hispanic	Medicaid recipient	Unemployed

Determination of significance

Differences noted in this report represent those determined to be significant. Statistical significance is determined based on confidence intervals (at the 95 percent confidence level) using question-specific samples and response rates. For purposes of this assessment, “significance” of secondary data indicators is determined by a 5 percent variation from the comparative measure.

Information gaps

While this NMCDH CHNA is quite comprehensive, it cannot measure all possible aspects of health in the community, nor can it adequately represent all possible populations of interest. It must be recognized that these information gaps might in some ways limit the ability to assess all of the community’s health needs.

For example, certain population groups – such as those who are homeless, institutionalized or only speak a language other than English or Spanish – may not be fully represented in the survey data. Other population groups – for example, pregnant women, lesbian/gay/bisexual/transgender residents, undocumented residents, and members of certain racial/ethnic or immigrant groups – might not be identifiable or might not be fully represented in numbers sufficient for independent analysis.

In terms of content, this assessment was designed to provide a comprehensive and broad picture of the health of the overall community. However, it is recognized that there are a number of medical conditions that were not specifically addressed.

Public dissemination

This NMCDH CHNA is available to the public:

It can be viewed, downloaded and/or printed without special computer hardware or software (other than software that is available to members of the public at no cost) without fee at <https://www.nm.org/about-us/community-initiatives/community-health-needs-assessment>.

A hard copy can be viewed at NMCDH without fee upon request.

Key Findings and Opportunities: Quantitative Data

Community description

DuPage County encompasses 327.51 square miles and is home to a total population of 930,412 residents, according to latest census estimates. The county's population density is reported at 2,840.83 per square mile. DuPage County is predominately urban, with nearly all the population living in areas designated as urban.

Demographics

It is important to understand the age distribution of the population, as different age groups have unique health needs that must be considered in planning to meet the needs of county residents. In DuPage County, 23.8 percent of the population are infants, children or adolescents age 0 to 17 years (up 0.4 percent from the 2015 CHNA). Another 63.3 percent are age 18 to 64 (up 1.1 percent), while only 12.9 percent are 65 and older (up 0.6 percent).

Race and ethnicity

In looking at race independent of ethnicity, 79.4 percent of residents in DuPage County are White and 4.7 percent are Black. When considering ethnicity, 13.9 percent of DuPage County residents are Hispanic or Latino. The county has a higher proportion of White residents and a lower proportion of Black residents than the state and U.S. The percentage of Hispanic and Latino residents is also lower than found in the state and U.S.

Social determinants of health

Health starts in our homes, schools, workplaces, neighborhoods and communities. We know that taking care of ourselves (including eating well, staying active, not smoking and making regular visits to the doctor) influences our health. Our health is also determined in part by access to social and economic opportunities, community resources, quality education, workplace safety, environmental factors and our relationships. The conditions in which we live explain, in part, why some Americans are healthier than others.

Poverty

The U.S. Census Bureau American Community Survey 5-Year Estimates (2011 to 2015) show 7.4 percent of the DuPage County population living below 100 percent of the Federal Poverty Level. This represents an increase of 0.5 percent over 2009-2013 census data.

A total estimated 19.1 percent of residents (175,652 individuals) live below 200 percent of the Federal Poverty Level. This represents a notable 10.5 percent increase (6,807 individuals) from our previous assessment.

Education and employment

Among the DuPage County population age 25 and older, an estimated 7.6 percent (47,837 people) do not have a high school education, which is a more favorable number than state and national findings.

According to data derived from the U.S. Department of Labor, the unemployment rate in DuPage County was 4.8 percent in May 2015, trending more favorably than both state and national unemployment rates. Recent reports indicate the current unemployment rate in DuPage County at 3.4 percent as of March 2018.

General health status

- A total of 60.7 percent of NMCDH service area adults rated their overall health as “excellent” or “very good.”
- Another 11.6 percent described their overall health status as “fair” to “poor.”
- The remaining 27.7 percent rated their health as “good.”
- When queried regarding activity limitations, 15.8 percent of respondents reported limitation(s) due to a physical, mental or emotional problem.

Mental health status

- A total of 64 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.

Morbidity and mortality

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. Healthy People 2020 (HP2020) 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 HP2020 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 HP2020 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.

Injury and violence

Injuries and violence are widespread in society. HP2020 notes that both unintentional injuries and those caused by acts of violence are among the top 15 killers for Americans of all ages. Poisoning (including accidental drug overdose), falls, motor vehicle accidents and suffocation accounted for the majority of accidental deaths in the hospital’s service area in 2015.

Between 2013 and 2015, the average annual age-adjusted motor vehicle crash mortality rate was 4.0 per 100,000 residents in DuPage County – notably below state and national rates and significantly below the HP2020 target of 12.4 or lower.

Among survey respondents, 90.3 percent reported “always” wearing a seat belt when driving or riding in a vehicle and 92.6 percent of parents reported their child “always” wearing a seat belt.

Among NMCDH service area children, 41.8 percent were reported to “always” wear a helmet when riding a bicycle. This is significantly increased over the 2015 report of 27.8 percent.

The annual average age-adjusted homicide rate was 0.9 deaths per 100,000 residents in DuPage County, notably below state and national rates.

Violent crimes were reported at a rate of 86.5 crimes per 100,000 residents, well below regional, state and national rates.

Ten percent of respondents reported having been hit, slapped or hurt in any way by an intimate partner. While this was lower than the U.S. rate of 14.2 percent, it was an increase from the 2015 assessment of 7.4 percent.

Injury and violence were rated as moderate problems in the community by 31.3 percent of respondents.

Infectious disease

Respiratory illnesses

Acute respiratory infections, including pneumonia and influenza, are the eighth-leading cause of death in the U.S., accounting for 56,000 deaths annually.

Among older adult respondents, 78.8 percent reported having received a flu vaccination in the past year. This was up significantly from 59.3 percent in 2015.

Among older adult respondents, 80.5 percent reported ever having had a pneumonia vaccination. This was up significantly from 70.1 percent in 2015.

A total of 6.9 percent of respondents reported having COPD. This was slightly higher than the Illinois rate of 6.2 percent, but less than the 2015 service area rate of 9.0 percent.

A total of 7.3 percent of respondents reported having adult asthma. This was lower than state and national rates.

Ten percent of respondents reported having a child with asthma. This was higher than the 2015 assessment, which reported only 7.8 percent of children in the service area with asthma.

Lack of immunizations and infectious disease were perceived by 25 percent of respondents as major problems in the NMCDH service area.

Human immunodeficiency virus (HIV)

Human immunodeficiency virus (HIV) continues to be a major public health crisis with an estimated 1.1 million Americans affected.

HIV continues to spread, leading to about 56,000 new cases annually in the U.S.

In 2013, there were 88.3 HIV cases per 100,000 residents in DuPage County. This rate was significantly lower than the state rate of 322.9 and national rate of 353.2 per 100,000 residents.

Sexually transmitted diseases

In 2014, the chlamydia incidence rate in DuPage County was 220.6 cases per 100,000 residents, and the gonorrhea incidence rate was 26 cases per 100,000 residents, both notably lower than regional, state and national rates.

Births

- Between 2013 and 2015, 20.1 percent of all DuPage County births occurred with no prenatal care during the first trimester.
- A total of 7 percent of all births between 2013 and 2015 were low-birth-weight.
- The average infant death rate during that same period remained 4.4 infant deaths per 1,000 live births, which is lower than regional, state and national rates.
- Low birth weights were almost double among Black infants in DuPage County.
- Infant and child health was noted to be a major problem by 18.2 percent of survey respondents, while 21.2 percent reported it to be a moderate problem.
- Between 2013 and 2015, 2.7 percent of live births in DuPage County were to mothers under the age of 20. This is a decrease from 3.4 percent in 2013.

Factors contributing to premature death

The most prominent contributors to mortality in the U.S. in 2000 were tobacco, diet, activity patterns, alcohol, microbial agents, toxic agents, motor vehicles, firearms, sexual behavior and illicit use of drugs. Smoking remains the leading cause of mortality, although many researchers believe that poor diet and physical inactivity may soon overtake tobacco as the leading cause of death. These findings, coupled with escalating healthcare costs and an aging population, indicate an urgent need to establish a more preventive orientation in today's U.S. healthcare model.

At NMCDH, we believe that this is a shared responsibility between public health systems and the hospitals and medical centers that provide care to populations within their respective service areas. Utilizing a collaborative, evidence-based approach to prevention, screening and chronic disease management will allow for an optimum impact in the reduction/elimination of many of the prominent contributors to mortality in U.S. healthcare system.

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 they did not get the recommended daily servings.

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 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.

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.

Access to care

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 | Reduce the likelihood of premature (early) death |
| Detect and treat illnesses or other health conditions | Increase life expectancy ² |
| Increase quality of life | |
-

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 respondents age 18 to 64, 4.1 percent reported having no insurance coverage for healthcare expenses. This is 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 | Cost of prescriptions |
| Difficulty obtaining a provider appointment | Difficulty finding a doctor |
| Cost of a doctor visit | Lack of transportation |
-

¹Healthy People 2020

²Healthy 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, 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

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 provides 145.6 PCPs per 100,000 population as compared to between 80 and 95 PCPs at the state and national level.

A specific source of primary care was acknowledged by 82.8 percent of respondents.

A total of 72.8 percent utilize their doctor's office for medical care.

A total of 73.7 percent have visited their healthcare provider for a checkup in the past year.

Among respondent's children, 85.4 percent have visited a primary care provider 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)

Dental care

A source of dental care was acknowledged by 73.5 percent of survey respondents, exceeding state (65.5 percent) and national (59.7 percent) rates, and HP2020 targets (49 percent or higher).

Insurance coverage for all or part of dental care costs was reported by 75.9 percent of respondents.

Among key informants, 9.7 percent identified oral health as a major problem and 45.2 percent noted it as a moderate problem. Concerns noted by key informants included:

Access to dental care by refugee population

Lack of access

Inadequate number of dentists who accept Medicaid reimbursement

Vision care

A total of 62.4 percent of respondents acknowledged having a dilated eye exam within the past two years.

Summary of key informant perceptions

As noted throughout this report, key informants were asked to rate the degree to which each of the health issues were perceived to be a problem in the community.

The following top concerns were identified:

Mental health

Nutrition, physical activity and weight

Substance abuse

Chronic diseases (cancer, heart disease, diabetes)

Access to healthcare services

Areas of opportunity for community health improvement

The following areas of opportunity were identified through this CHNA and represent potential areas to consider for intervention.

Topic	Identified Need/Concern
<p>Access to healthcare services</p>	<p>Barriers to access medical care:</p> <ul style="list-style-type: none"> Finding a physician Inconvenient office hours Difficulty obtaining an appointment <p>Cost of physician visit Cost of prescriptions Lack of transportation</p> <p>Bi-annual dilated eye examinations Annual dental examinations</p> <p>Access to health care ranked as one of the top concerns in the online key informant survey</p>
<p>Chronic disease</p>	<p>Cancer A leading cause of death in DuPage County Cancer deaths (including lung and female breast cancer) Cancer incidence (including female breast cancer incidence) Colorectal cancer screening (including blood stool exams) Skin cancer prevalence Access to cancer screenings Ranked as a top concern in online key informant survey</p> <p>Diabetes Prevalence of borderline/pre-diabetes Diabetes ranked as one of the top concerns in the online key informant survey</p> <p>Heart disease and stroke Blood pressure screening High blood pressure prevalence High blood pressure management High blood cholesterol management Heart disease and stroke ranked as one of the top concerns in the online key informant survey</p> <p>Respiratory disease Asthma Chronic obstructive pulmonary disease</p>
<p>Injury and violence</p>	<p>Ongoing bicycle helmet education (children) Ongoing car seat safety education/injury prevention</p>

Topic (continued)	Identified Need/Concern (continued)
Mental health	"Fair/Poor" mental health Moderate to extreme daily stress Key informants ranked mental health as a top concern in the online key informant survey
Nutrition, physical activity and weight	Older adults less likely to get recommended servings of fruits and/or vegetables daily Low food access/reside in a food desert Overweight and obesity in children and adults Access to nutrition and exercise counseling Physical activity, nutrition and weight were rated as major problems in the online key informant survey
Tobacco use	Environmental tobacco smoke exposure at home Teen smoking E-cigarette and vapor smoking
Substance abuse	Overall alcohol use and binge drinking Drug-induced deaths Liver disease Illicit drug use Substance abuse ranked as a top concern in the online key informant survey

Additional sources of input and key partnerships

DuPage County Health Department

Concurrent with the development of the NMCDH CHNA, the DuPage County Health Department is conducting a comprehensive needs assessment of residents in DuPage County. NMCDH staff and leadership are actively involved in the development of this assessment and will continue to interface with the health department and other key health/social service organizations to meet the need within the county.

The Illinois Project for Local Assessment of Needs (IPLAN) is a community health assessment and planning process that is conducted every five years by local health jurisdictions in Illinois. Utilizing the Assessment Protocol for Excellence in Public Health (APEX-PH) model, IPLAN is grounded in the core functions of public health and addresses public health practice standards. The completion of IPLAN fulfills most of the requirements for Local Health Department certification under Illinois Administrative Code Section 600.400: Certified Local Health Department Code Public Health Practice Standards.

Impact DuPage

In August 2013, a group of community leaders formed Impact DuPage, a countywide initiative aimed at creating a common understanding of community needs, gaps and priorities that will advance the well-being of the DuPage County community. Utilizing the MAPP process, Impact DuPage completed four countywide assessments between June 2014 and December 2014. The assessments included:

Landscape review

Conducted in fall 2014, this assessment collected community voices to learn perceptions about quality of life in DuPage County. This countywide survey received more than 2,000 responses.

Local system assessment

This assessment gathered partners in a day-long event that assessed the strengths and weaknesses of local systems that support the well-being of DuPage County residents. It provided valuable feedback regarding system performance and opportunities for improvement.

Forces of change assessment

During the forces of change assessment, community leaders brainstormed trends, factors and events that affected the quality of life and the associated threats and opportunities.

Community profile

The community profile provided a snapshot of the well-being of DuPage County residents by displaying quantitative information on health status, quality of life and risk factors.

Additional information regarding the Impact DuPage Community Assessment may be accessed at www.impactdupage.org/index.php?module=htmlpages&func=display&pid=5011.

Impact DuPage priorities

Data from the current assessments described above formed the basis for the top five priorities identified by DuPage County:

Increasing access to affordable housing	Combatting substance abuse
Improving mental health	Promoting healthy lifestyles
Increasing access to health services	

NMCDH continues to support Impact DuPage and is building a stronger relationship with the organization to further promote access to care for the underserved. NMCDH has recently signed a Memorandum of Understanding to help fund Impact DuPage.

Interpreting and prioritizing health needs

External Steering Committee

Following completion of the CHNA, NMCDH leadership convened the 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, IPLAN data, an organizational asset inventory and alignment with guiding principles for response to community need. Organizational guiding principles included:

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 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.

An identified need is not addressed if NMCDH is 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

Prioritization timeline

An email invitation to join the ESC was extended to prospective members. The focus of the initial email was to provide committee members with an introduction to the 2016 CHNA and request members to consider the following issues in anticipation of an upcoming conference call:

Does the CHNA accurately reflect issues in the community?

Are there community health needs missing from the assessment that should be considered in the prioritization process?

Do the issues identified seem modifiable (are there ways these needs can be addressed)?

Any other additional thoughts or feedback?

Two telephone conferences were conducted as follow-up to the email.

The goal of the first facilitated call was to gather external input around the CHNA findings. Content covered in the first teleconference included:

CHNA background (goals and requirements)

Community partner's role

Reporting process, timelines, goals and deliverables

Introduction to the 2016 CHNA findings

Solicitation of committee feedback

The goal of the second facilitated call was to discuss the areas of opportunity identified through the CHNA and prioritize the health needs. Content covered in the second teleconference included:

Introduction to the NMCDH prioritization process

Discussion to reach consensus on priority health needs of the NMCDH service area

Status report on what NMCDH and partners have accomplished in the last three years

Visioning for the next three years

Priority health needs

Americans are living longer, but they are sicker. While we are experiencing consistent increases in life expectancy, our longer lives are burdened with increasing chronic illnesses. Sedentary behavior and preventable chronic disease are compromising our community's health. More than one-quarter of the population is obese, and diabetes is at epidemic levels.

Hand-in-hand with a decreasing quality of life is an astounding increase in the economic impact of managing these diseases. The Robert Wood Johnson Foundation estimates that by the year 2030, annual medical costs associated with treating preventable obesity-related diseases are estimated to increase to \$66 billion, with a resultant loss in economic productivity of between \$390 and \$580 billion annually.

A 2012 CNN documentary entitled *Escape Fire* drives home the stark reality that we can no longer afford to focus on acute care as the center of health care, but must also focus on prevention, education, chronic disease management and case coordination to maximize the health of our nation's most valuable asset: our people. As healthcare providers, we must continue to challenge ourselves to provide high-quality, state-of-the-art health care to our community. As experts and leaders in the healthcare industry, we must also look outside our doors and reach out to the communities we serve, striving to enhance the quality of life by engaging in evidence-based activities that will promote health across the lifespan.

To that end, NMCDH has identified three priority health needs that will enable us and our community partners to maximize the health benefits generated by our collective resources over the next few years. In selecting these priorities, we considered the degree of community health need, capacity and available resources of other agencies to meet the need, and the suitability of our own expertise and resources to address the need. In particular, we identified health needs that would be addressed through a coordinated response from a range of healthcare and community resources. We believe these health needs will be impacted through the integrated efforts of our organization and our community partners.

Through this process, the 2018 NMCDH priority health needs were identified as follows:

1. Access to healthcare services
 2. Chronic disease
 3. Mental health/substance abuse
-

Development of Implementation Plan

NMCDH will continue to work with the ESC to develop a comprehensive Implementation Plan that addresses each priority health need. NMCDH and its community health partners share a vision of a healthy community and are committed to working together to address significant health needs.

Through its affiliation with Northwestern Memorial HealthCare, NMCDH and its sister organizations within Northwestern Medicine can support efforts to positively change the health status of our community by taking on any of a number of roles:

- A direct clinical service provider, through application of our research and education expertise
 - An educator, by sharing our knowledge of health literacy, quality improvement or information technology
 - A supporter, by providing indirect support to organizations that can impact health
 - A funder, by funding initiatives undertaken by others
-

The Implementation Plan will specify resources NMCDH and its community partner organizations will direct toward each priority health need. A general listing of the collective assets that could potentially be directed toward impacting priority health issues includes:

- Clinical care resources and facilities of NMCDH and its community partner organizations
 - Established, replicable, community-based clinical and health promotion programs addressing both highly prevalent and targeted chronic health conditions
 - Research and education expertise among Northwestern University Feinberg School of Medicine physicians
 - Financial assistance programs at NMCDH
 - Policies and procedures that broaden and simplify access to health care for the uninsured or underinsured
 - Advocacy resources at NMCDH and its community partner organizations
 - Planning and oversight resources
 - Management expertise in quality improvement and information technology
-

Existing healthcare facilities and resources

NMCDH also recognizes that a large number of healthcare facilities and organizations within DuPage County respond to health needs and support health improvement efforts. A list of those that were found through publicly available information sources as of January 2018 is included in Appendix B.

Actions taken to address the 2015 CHNA priority health needs

Introduction

An aging population, coupled with a rise in the incidence of chronic disease, challenges all U.S. healthcare providers to think outside of the box when it comes to the future of health care. Maintaining awareness of a community's health needs is imperative in an environment as dynamic and diverse as Chicago's western suburbs, especially when it involves planning and responding to the needs of demographically diverse populations.

The successful implementation of any community benefit strategy requires a comprehensive assessment of need coupled with knowledge of key community stakeholders and existing health collaboratives. No single institution can comprehensively address all of the health needs of a community, nor can it work independently of other key community stakeholders and existing outside initiatives.

A quality CHNA and its ensuing Implementation Plan must consider the strengths and expertise of its organization in addition to its ability to mobilize effective partnerships, which will result in the maximized use of every dollar expended to address unmet community need.

In 2015, NMCDH identified three priority health needs in response to the CHNA. In selecting priorities, NMCDH considered the degree of community need for additional resources, the capacity of other agencies to meet the need, and the suitability of its own expertise and resources to address the health need.

The priority health needs identified for targeted efforts were:

1. Access to healthcare services
 2. Chronic disease
 3. Mental health and substance abuse
-

NMCDH and key community partners collaborated to address the above priority health needs. This status report summarizes the impact of the strategies outlined in NMCDH's 2015 Community Health Implementation Plan (CHIP) and the Community Health Implementation Plan Report (CHIP-R). For a more comprehensive discussion of the strategies and related outcomes/impact, please refer to NMCDH's 2015 Community Health Implementation Plan.

Summary of outcomes of strategies implemented as part of the Community Health Needs Assessment Implementation Plan

I. Access to healthcare services

In conjunction with national and local benchmarks, the following goals were established in response to the problem of limited access to care:

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.

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.

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

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

NMCDH strategies to address access to health care included:

NMCDH will ensure financial assistance policies are easily accessible, respectful and in compliance with all regulatory requirements.

NMCDH will continue to provide medically necessary inpatient and outpatient hospital services to uninsured and underinsured patients.

NMCDH will provide assistance with application for government-sponsored healthcare programs.

NMCDH will collaborate with community partners to enhance the county's Health Safety Net Plan to ensure a comprehensive continuum of care.

NMCDH will provide operational grants to community partners in support of the Health Safety Net.

NMCDH will provide supportive funding to allow county residents within the ACA marketplace to increase the scope of their healthcare coverage.

NMCDH will provide timely, coordinated and efficient care to Access DuPage clients who have been determined presumptively eligible through the Access DuPage Program.

NMCDH will provide breast cancer screening and subsequent care to individuals without health insurance or who cannot afford breast cancer screening.

NMCDH will provide supportive funding to the Engage DuPage Program for the hiring of Community Access Specialists to identify potentially eligible clients.

NMCDH will serve as a training center for nursing and allied health professionals to ensure the continuation of a diverse, culturally sensitive and highly-skilled workforce.

NMCDH will utilize trained, professional healthcare interpreters in an effort to reduce barriers to care, promote access and ensure high-quality, culturally competent care.

NMCDH will provide continued support to the local free clinic, Tri-City Health Partnership, by assuming costs related to laboratory and other hospital services to presumptively eligible patients.

NMCDH will provide office space and support to the Senior Health Insurance Program, which provides Medicare counseling and support to seniors.

NMCDH will offer small community benefit grants targeted to enhance/promote safe access to care.

NMCDH will work collaboratively with local federally qualified healthcare centers (FQHCs) to promote a seamless continuum of care to underserved individuals.

Key outcomes/metrics:

All financial assistance policies were reviewed annually.

More than 18,000 individuals received financial assistance at NMCDH and Northwestern Medicine Delnor Hospital (NMDH).

A total of \$80,689,729.34 was rendered in financial assistance to uninsured and underinsured individuals at NMCDH and NMDH.

A total of 2,868 Medicaid applications were processed through Engage DuPage services.

NMCDH leadership and staff participated in various community task forces to further the development of the health and human services safety net.

A \$60,000 grant was awarded for the Winfield Fire Department Disaster Planning Project.

A total of 5,364 individuals were enrolled in the DuPage County Health Safety Net System, resulting in links to 229 primary care providers, 3,961 links to local FQHCs, 10,306 primary care visits and 2,424 specialty referrals. A total of 19,471 prescriptions were filled.

The Silver Access Premium program provided assistance to 564 individuals in calendar years 2016 and 2017.

A total of \$5,717,854 was rendered to Access DuPage clients for outpatient and other specialty care services.

A total of \$1,741,636 was rendered to Access DuPage clients for inpatient care.

Funding was provided to Engage DuPage for the provision of Community Access Specialists in the Emergency Room.

A total of 1,235 individuals received breast cancer screening.

A total of 69,421 hours were committed to nursing and allied health professions training (NMCDH/NMDH).

A total of 23,144 encounters were completed utilizing trained professional healthcare interpreters (NMCDH/NMDH).

Support and assistance from the Senior Health Insurance Program was provided to 156 seniors (NMCDH/NMDH).

A comprehensive tabletop exercise that included a workshop element involving an active shooter response within NMCDH was conducted.

A formal agreement was executed in December 2016 with VNA Health Care. Workgroups are currently developing a process for referring patients, and the program is set to launch in FY18.

II. Chronic disease

In conjunction with national and local benchmarks, the following goals were established in response to the growing incidence and prevalence of chronic disease by addressing chronic disease across its lifespan:

NMCDH will continue to provide community education related to chronic disease in the areas of evidence-based **primary interventions** (disease prevention, health promotion).

NMCDH will offer evidence-based **secondary interventions** (screenings).

NMCDH will offer evidence-based **tertiary interventions** (programs targeting individuals affected with a chronic disease in an effort to promote an optimum state of wellness).

NMCDH will also continue to bring leading-edge, acute chronic disease and chronic disease management care to all individuals, regardless of ability to pay.

NMCDH strategies to impact chronic disease across its lifespan included:

NMCDH will host/offer evidence-based community health and wellness programming in the areas of cardiovascular disease, peripheral vascular disease and diabetes.

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.

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.

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 nursing services.

NM will offer small community benefit grants targeted to enhance/promote health and minimize chronic disease and obesity.

- DuPagePads: Medical Respite Program (Grant amount: \$13,000)
- Common Threads: Healthy Cooking and Nutrition Education Program (Grant amount: \$15,000)
- Winfield Fire Department (Grant Amount: \$80,000)

NMCDH will provide in-kind leadership and financial support to the Forward Project.

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.

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.

NMCDH staff will continue efforts to promote referral patterns of physicians and ancillary staff to smoking cessation resources.

NMCDH will offer the nationally recognized Think First Injury Prevention Program.

Key outcomes/metrics:

Five educational seminars were offered in the areas of cardiovascular health. A total of 809 individuals attended these seminars.

Meeting space was provided at no charge for 20 support groups.

Four educational seminars were offered in the area of cancer. A total of 370 individuals attended these seminars.

Eleven additional educational seminars were offered, with 1,326 attendees.

Rehabilitation Services offered 15 community programs, 375 attendees.

Diabetes Education Services offered nine community programs, with 90 attendees.

A total of 340 individuals were enrolled in the Community-Based Heart Failure program at NMCDH and NMDH with the following results:

- The 30-day readmission rate for HF diagnosis was 1 percent (markedly below the national rate).
- A total of 97 percent of clients demonstrated the ability to identify appropriate action in the event of a worsening of their condition.
- A total of 98 percent of clients utilized an effective medication management system.
- Compliance with symptom tracking was demonstrated by 82 percent of clients.

The Medical Respite Program served 55 individuals in 50 households: 51 adults and four children. All participants received information about importance of regular physicals. A total of 94 percent exited the program with insurance, and 4 percent received help with Medicaid application. A total of 80 percent of participants had a PCP, and 66 percent exited the program with a follow up-appointment for a PCP visit. Additionally, 60 percent of participants have moved into housing or have a housing plan.

A total of 200 students and parents participated in the Common Threads: Healthy Cooking and Nutrition Education Program. A total of 1,640 healthy meals and snacks were provided. Confidence in their ability to execute cooking skills was verbalized by 90 percent of students.

The Winfield Fire Department trained 127 healthcare professionals and community members in Cardiopulmonary Resuscitation (CPR).

The Winfield Fire Department installed 251 car seats. Car seat safety education was also offered.

Results of FORWARD initiatives at NMCDH for FY17:

- Salt shakers were removed from the seating area and all tables in the café.
- A total of 75 percent of bottled beverages are healthier.
- Catering menus focus on lean protein, fresh fruits and vegetables, and whole grains.
- High-sodium/fried/high-fat food options have been eliminated.
- Vending machines focus on organic, low-sodium options.
- Patient menus are based on a therapeutic lifestyle menu (lower in sodium and fats); there is no longer a "regular" menu vs. a "cardiac" menu.

The CATCH Program (NMCDH/NMDH) reached more than 1,500 students and teachers; 91 percent of children were able to verbalize 6 out of 8 healthy (GO) foods and recognized the importance of consuming GO foods daily. All participating schools/programs adjusted their snack lists to include GO foods. Twenty minutes of moderate physical activity was organized by 98 percent of teachers, and 95 percent of teachers continued to reinforce the GO-WHOA healthy food message in the classroom.

A total of 433 Kits for Kids (NMCDH/NMDH) were disseminated in the areas of hand-washing, bicycle safety and healthy nutrition.

A total of 75 individuals participated in smoking cessation programs, and 91 percent self-reported smoking cessation by the end of the third week (NMCDH/NMDH).

The Think First Curriculum was offered to 24,591 children from kindergarten through high school, and 7,168 individuals participated in Think First community events. Through NMCDH and NMDH:

- A total of 5,627 children were fitted for and received bike helmets.
 - A total of 61 couples attended child safety classes.
 - A total of 519 car seats were checked and/or distributed.
-

III. Mental health/substance abuse

In conjunction with national and local benchmarks, the following goals were established in response to the priority need to address mental health and substance abuse:

NMCDH will 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.

NMCDH strategies to impact mental health/substance abuse:

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.

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.

NMCDH will provide in-kind leadership and support to the implementation of the Substance Abuse Action Plan developed by the DuPage Behavioral Health Collaborative.

NMCDH will offer evidence-based wellness programs in the areas of mental health and substance abuse via programmatic venues including but not limited to the Dinner with the Doc series, clinician-led educational offerings, self-help groups, Rehabilitation Services programs, support groups and professional development.

NMCDH will offer community benefit grants targeted to address mental health needs in the NMCDH service area.

- Western DuPage Special Recreation Association: Drop-In Center (Grant amount: \$8,000)
- NAMI DuPage: Education and Resource Services (Grant amount: \$6,800)
- Samaritan Interfaith: Mental Health Access Program (Grant amount: \$9,150)
- World Relief: Refugee Wellness Program (Grant amount: \$6,000)

NMCDH will implement the National Council for Behavioral Health Mental Health First Aid (MHFA) Program and offer programming to members of the community.

Key outcomes/metrics:

In July 2017, a Sequential Intercept Model (SIM) workshop was convened and facilitated by Policy Research Associates. Thirty-seven community partners participated from areas including, but not limited to, mental health, substance abuse, criminal justice and consumer sectors. The workshop focused on the development of a county-specific SIM.

An assessment of the current system was completed. Site visits were conducted at Rosecrance Mulberry Center and Christ Hospital Crisis Unit. Six priority areas were established:

- 24/7 central receiving center or system for adults and youth
- Change transportation process to remove EMS
- Post-incarceration support
- Collaborative group to move the process along
- Education to the community about the incarcerated population and needs to reduce stigma
- Increased/improved data sharing

A workgroup was formed to evaluate the feasibility of starting a crisis unit within DuPage County for medical detox patients. The DuPage County Health Department has engaged a resource to propose different options. No formal project has been initiated at this time.

A resource directory has been developed and distributed to law enforcement agencies in DuPage County.

A committee was established to develop a navigation model for the behavioral health treatment system. The committee researched other models from other counties and states. A potential model for DuPage was in discussions but due to funding, technology and staffing, it was not launched, and the decision was made to work on other strategies and initiatives.

A Quality Indicator committee was developed and three to five core questions were chosen to be measured. Currently they are in the process of working with collaborative leaders to see if they can implement the questions.

NMCDH Behavioral Health Services spearheaded a project collaborating with DuPage County Health Department to identify potential resources and sharing of potential hires for physician and mid-level providers. It was determined that there is not funding to support sharing costs of recruiting professionals at this time, but when the NMDH Primary Care Residency Program is operational, there will be consideration as a partnership site.

In 2016 (last report available), 91 percent of 12th graders perceive moderate to great risk to use prescription drugs not prescribed to them.

An Opioid Safety Seminar was held in DuPage County for prescribers, and 212 individuals attended the program.

As part of the Safe Prescriber Campaign, a heroin prevention awareness campaign was launched in December 2015. The campaign targeted 20,000 DuPage County residents and included information aimed at increasing awareness about prescription drug disposal programs and the 911 Good Samaritan Law. A heroin prevention PSA (public service announcement) was promoted by WGN Media Group and digital ads were run on desktop and personal computers. These ads were then linked to the Heroin DuPage website for more information.

NMCDH Behavioral Health Services hosted four evidence-based wellness events at NMCDH and NMDH:

- CCPC Conference
- Congressional Forum on Opiates
- Kaneland High School Compassion Fatigue Presentation
- Clare Woods Academy: Job Stress and Burnout

Office space was provided at no charge for 12-step programs offered Sundays through Saturdays (NMCDH/NMDH).

- A total of 1,530 hours of room usage was recorded.
- Throughout the year, 29,016 individuals attended a program.

An average of 37 individuals participated in the Western DuPage Special Recreation Drop-In Center project.

- A total of 80 percent of the participants engaged in the weekly recreational or art activity.
- All participants enjoyed a healthy and nutritious meal each week.
- Staff reported that participants felt more confident and interested in pursuing outside activities.

More than 80 percent of individuals who participated in NAMI DuPage Education and Resource Services reported a decrease in stigma and stated they felt more hopeful for recovery.

- Increased awareness of resources and knowledge to help themselves and their loved ones was confirmed by 99.5 percent of participants.
- More than 90 percent of participants reported increased knowledge of mental illness and hope for recovery.

Individuals impacted by funding from the Samaritan Interfaith: Mental Health Access Program (NMCDH/NMDH) reported:

- An increase in their GAF scale score (83 percent). Of those 83 percent, 61 percent experienced an increase of 5 or more points.
- They agree/strongly agree with the following statements: "I feel I was able to accomplish what I set out to do," "I am better able to handle conflict and stress," and "My counselor interventions and interactions were helpful" (96 percent).

Outcomes reported as the result of NMCDH funding to the World Relief Refugee Wellness Program:

- Symptoms of mental illness could be identified by 83 percent of participants.
- At least three helpful mainstream community resources could be identified by 78 percent of participants, who also reported stronger connectedness to members of their own community.
- Of refugees receiving mental health treatment, 68 percent demonstrated an increased level of functioning, decreased symptoms and completed treatment goals.

Four NMCDH/NMDH staff members were trained to offer the nationally recognized evidence-based Mental Health First Aid program.

- Eleven classes were held.
 - A total of 159 adults and youth attended the programs.
 - All MHFA participants scored a minimum of 85 percent on the MHFA course exam.
-

Appendix A

Organization	Description of medically underserved, low-income or minority populations represented (from publicly available sources, August 2015)
DuPage County Health Department	The mission of the DuPage County Health Department is to promote physical and emotional health; prevent illness, injury and disability; protect health from environmental risk factors; and strive to ensure the provision of accessible, quality service. The department provides active programming in the areas of behavioral health, dental health, disease control, emergency preparedness, environmental health, family health, food safety, obesity and nutrition, health promotion, population health and women's health.
DuPage Federation on Human Services Reform	The DuPage Federation on Human Services Reform is a collaboration of government and key community organizations working together to identify ways a local community can address its human needs using its own resources and resourcefulness. The federation serves as an organizer and catalyst, bringing together responsible organizations and advocating for development of real solutions. Their work involves expanding resources for cross-cutting issues that are the foundations of self-sufficiency. The federation is a unique convergence of people, place and opportunity, accomplishing its mission through a strong and unusually dedicated board that includes community leaders, state and county public officials, clergy, representatives of community groups, business leaders, consumers and providers of human services.
DuPage Medical Group (DMG)	The DuPage Medical Group is one of the largest independent multi-specialty physician groups in Illinois. DMG is led by experienced physicians who continually seek innovations through a model of QEA: Quality, Efficiency and Access. DMG provides quality care in advanced facilities and implements the latest technology. Through secure access of an electronic health record and patient portal (MyChart), physicians and patients stay closely connected.
WeGo Together for Kids	The mission of WeGo Together for Kids is to address the health, safety and well-being of students and families through a collaborative, coordinated and comprehensive approach with West Chicago schools and community.
People's Resource Center (PRC)	<p>People's Resource Center provides food, clothing, job skills programs and much more to help neighbors in need in DuPage County.</p> <p>PRC serves more than 9,000 DuPage families each year. It is a grassroots, community-supported organization, bringing neighbors together to create a future of hope and opportunity for all. Programs include food pantry, emergency rent/mortgage assistance, clothes closet, social services, job assistance and literacy programs.</p>

Appendix B

The following are healthcare facilities and organizations in DuPage County, Illinois, found through publicly available information sources as of August 2015:

Acute-care hospitals/emergency rooms

Alexian Brothers Medical Center	Marianjoy Rehabilitation Hospital, part of Northwestern Medicine
Adventist GlenOaks Hospital	
Advocate Good Samaritan Hospital	Northwestern Medicine Central DuPage Hospital
Edward-Elmhurst Health Center	Presence Mercy Medical Center
Edward Hospital	Rush-Copley Medical Center

Emergency medical services (EMS)

Superior Ambulance Service Elmhurst

Federally qualified health centers and other safety net providers

Access Community Health Network	DuPage Health Coalition
Access DuPage	VNA Health Care
DuPage Federation of Health Services	

Home health care

Addus HomeCare	Family Home Health Services
Advocate Home Health Services	Home Instead Senior Care
ALC Home Health Care	Lexington Healthcare Center of Lombard
Always Best Care	LMR Home Health Care
Amedisys Home Health Care	ManorCare Health Services - Westmont
Assisting Hands Naperville	Metro Home Health Care
BrightStar Care Central DuPage - Wheaton	Pearl Health Care Services
Elite Care Management	

Hospice care

Compassionate Care Hospice	Northwestern Medicine Home Health and Hospice
CovenantCare Hospice - St. Charles	Seasons Hospice & Palliative Care
First Hospice Care	

Mental health services/facilities

Advanced Behavioral Centers of DuPage	Health
Aunt Martha's Aurora Community Health Center	Interfaith Mental Health Coalition
Crisis Intervention Unit	Linden Oaks Outpatient Center
DuPage County Health Department	Meier Clinics
DuPage Mental Health Services	NAMI
Good Samaritan Hospital Outpatient Behavioral	Northwestern Medicine Behavioral Health Services

Skilled nursing facilities

Abbingdon Rehab & Nursing Center	ManorCare Health Services - Naperville
Brighton Gardens of St. Charles	Meadowbrook Manor - Naperville
Brookdale Lisle	Oak Trace
Cordia Senior Residence	Park Place of Elmhurst
DuPage County Convalescent	Presence Pine View Care Center
Franciscan Village	Rehab Care Group
Friendship Village of Schaumburg	Rosewood Care Center
Lemont Nursing and Rehabilitation Center	The Holmstad
Lombard Place Assisted Living & Memory Care	Wynscape Health and Rehabilitation



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