2019 COMMUNITY HEALTH NEEDS ASSESSMENT

IMPLEMENTATION STRATEGY

Building Healthier Lives and Communities

Beaumont, Farmington Hills

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Executive summary

Beaumont Health understands the importance of serving the health needs of its communities. To do that successfully, we must first take a comprehensive look at the issues our patients, their families and neighbors face when making healthy life choices and health care decisions.

Beginning in January 2019, Beaumont began the process of assessing the health needs of the communities served by the eight Beaumont hospital facilities for an updated community health needs assessment. IBM Watson Health was engaged to help collect and analyze the data for this process and to compile a final report made publicly available by Tuesday, Dec. 31, 2019.

FARMINGTON HILLS

The community served by Beaumont includes Macomb, Oakland and Wayne counties. These counties comprise the majority of the geography covered by the combined primary service areas of each of the eight hospitals and contains 3.9 million people. Each hospital's primary service area is defined by the contiguous ZIP codes where 80% of the hospital's admitted patients live.

IBM Watson Health performed a quantitative and qualitative assessment. More than 200 public health indicators were examined, and a benchmark analysis of the data was conducted. The analysis compared community values to the overall state of Michigan and United States values. For a qualitative analysis and to get input from the community, focus groups, key informant interviews and a survey were conducted. The focus groups solicited feedback from leaders and representatives who served the community and had insight into community needs. The interviews were conducted with public health and community leaders along with key Beaumont leaders to gain their perspective on the community needs. Participants in these sessions included state, local or regional governmental public health departments (or an equivalent department or agency) with knowledge, information or expertise relevant to the health needs of the community, as well as individuals or organizations serving and/or representing the interests of medically underserved, low-income and minority populations in the community. Additionally, a community survey was fielded to solicit input directly from community members regarding their perception of community health needs.

Needs were first identified when an indicator for a hospital community was worse than the state benchmark. A need differential analysis conducted on all the low performing indicators determined the relative severity by using the percent difference from benchmark. The outcome of this quantitative analysis aligned with the qualitative findings of the community input sessions to create a list of health needs in the community. Each health need received assignment into one of four quadrants in a health needs matrix. The matrix shows the convergence of needs identified in the qualitative data (interview and focus group feedback) and quantitative data (health indicators) and identifies the top health needs for each community.

The results were aggregated across the eight hospital communities to identify the predominant health needs for the overall Beaumont community. Needs were identified for the overall Beaumont community if they were common across at least five of the eight Beaumont hospital communities.

In June 2019, the Beaumont CHNA Prioritization Workgroup met to review the health needs matrix and prioritize significant community health needs for Beaumont. The meeting was moderated by IBM Watson Health and included an overview of the CHNA process for the Beaumont community, the methodology for determining the top health needs and the selection and prioritization of significant health needs for the community Beaumont serves.

The group reviewed the Beaumont Health needs matrix and identified the significant community health needs to prioritize. They next used criteria selected by the Beaumont CHNA Steering Committee to score the community's significant health needs. The list of significant health needs was then prioritized based on the overall scores. The session participants subsequently reviewed the prioritized health needs for each community and chose the four community health needs with the highest prioritization scores as those to be addressed by Beaumont through subsequent implementation strategies. The health needs to be addressed by Beaumont include:

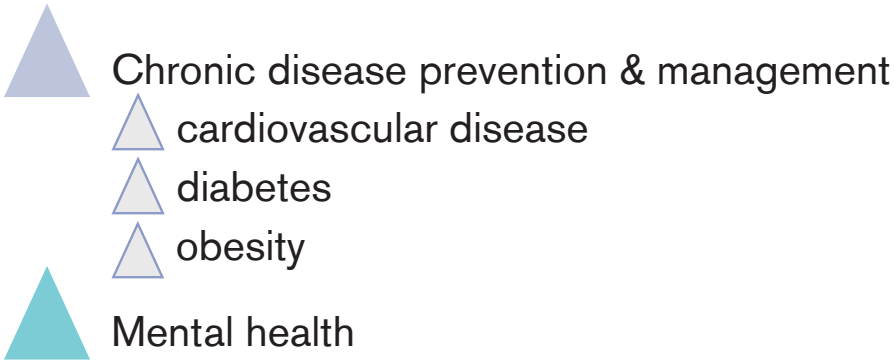
- Chronic disease prevention and management (cardiovascular disease, diabetes, obesity)
- Mental health

A description of these needs is included in the body of the full report. The hospital facilities will each develop implementation strategies with specific initiatives to address the chosen health needs, to be completed and adopted by Beaumont by April 15, 2020.

The Community Health Needs Assessment for Beaumont has been presented and approved by the Beaumont Health board of directors, and the full assessment is available to the public at no cost for download and comment on our website at beaumont.org/chna.

This assessment and corresponding implementation strategies are intended to meet the requirements for community benefit planning and reporting as set forth in federal law, including but not limited to the Internal Revenue Code Section 501(r).

The health needs to be addressed by Beaumont include:



FARMINGTON HILLS

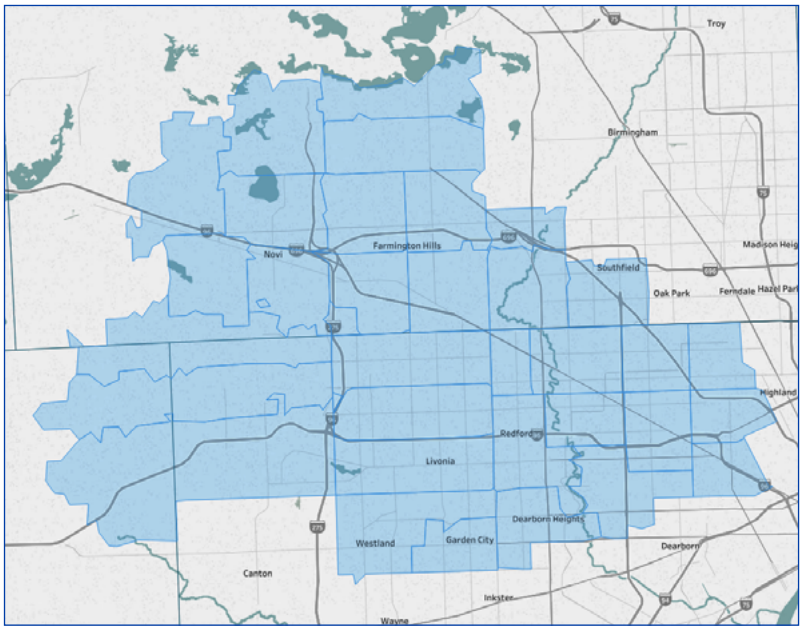
Beaumont, Farmington Hills

Beaumont, Farmington Hills opened on Jan. 19, 1965 as a 200-bed community hospital. Today, the hospital is a 330-bed teaching facility with Level II trauma status. With 176 residents and 18 accredited residency and fellowship programs, Beaumont, Farmington Hills offers high-quality, patient and family-centered care in orthopedics, neurology, cardiology, women's services, oncology and surgical services.

Community served

The Beaumont, Farmington Hills community (Beaumont, Farmington Hills) is defined as the contiguous ZIP codes that comprise 80% of inpatient discharges. Below is a map that highlights the community served (in blue) as a portion of the overall Beaumont community.

Beaumont, Farmington Hills: Map of community served

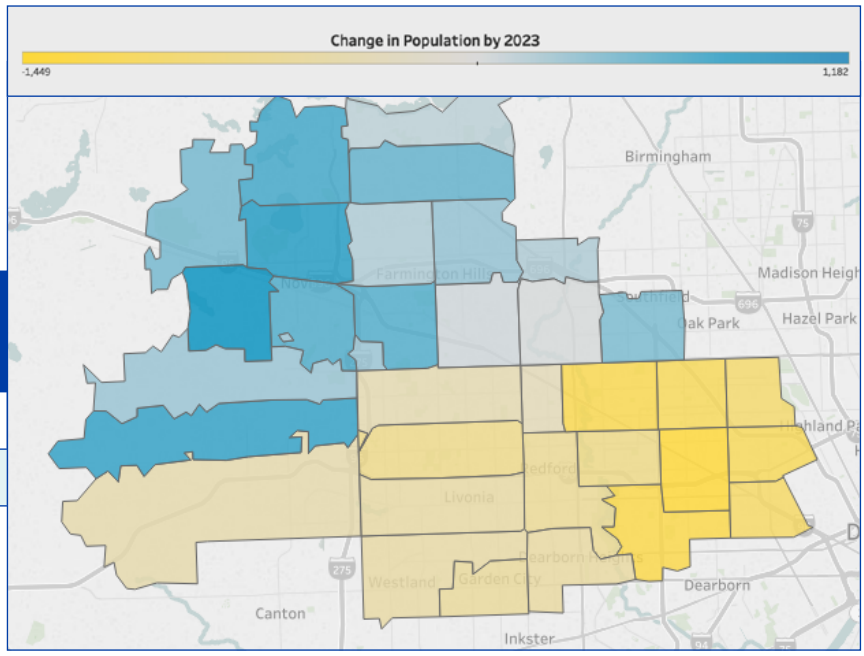


Source: Beaumont Health, 2019

Demographic and socioeconomic summary

The population of the community served is expected to decrease 0.6% by 2023, a decline of more than 5,000 people. The community's population decline contrasts with Michigan's slow projected growth rate (0.6%) and higher national projected growth rate (3.5%). However, 16 of the 33 community ZIP codes are expected to experience growth in the next five years, two ZIP codes are expected to add more than 1,000 people each:

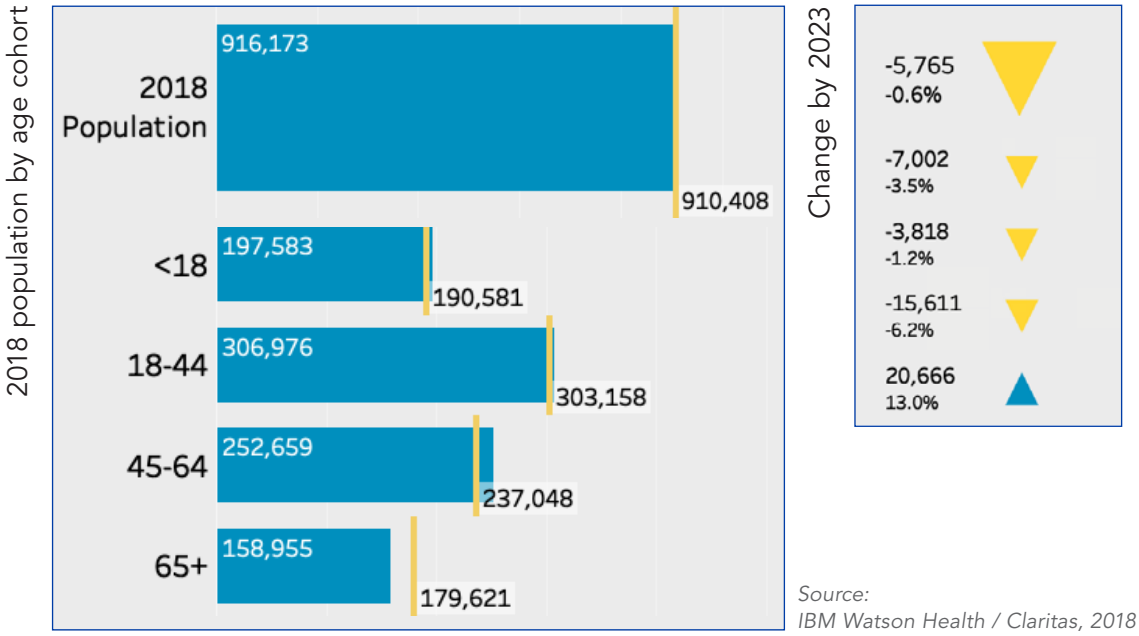
2018 - 2023 Total population projected change by ZIP code



Zip Codes	Growth in five years (# of people)
48374 Novi	**1,182**
48377 Novi	**1,012**

Source: IBM Watson Health / Claritas, 2018

The community's population skews relatively younger with 33.5% of the population ages 18-44 and 21.6% under age 18. The largest cohort (18-44) is expected to decrease by 3,818 people by 2023, while the age 65-plus cohort (the smallest at 17.3% of the total population) is the only age group expected to experience growth (13.0%) over the next five years, adding 20,666 seniors to the community. Growth in the senior population will likely contribute to increased utilization of services as the population continues to age.

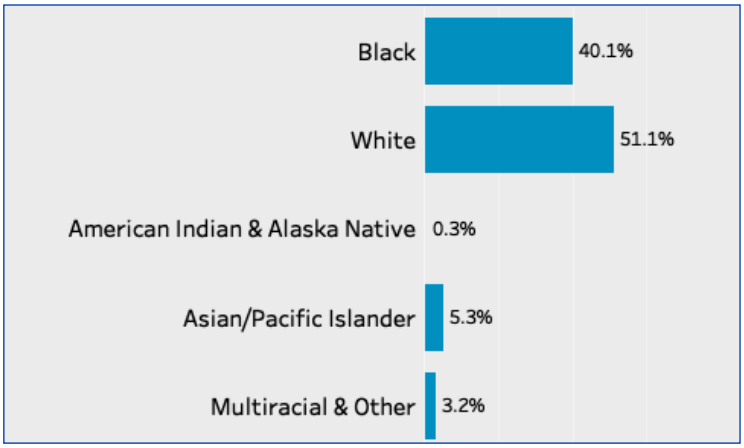


Population distribution by age

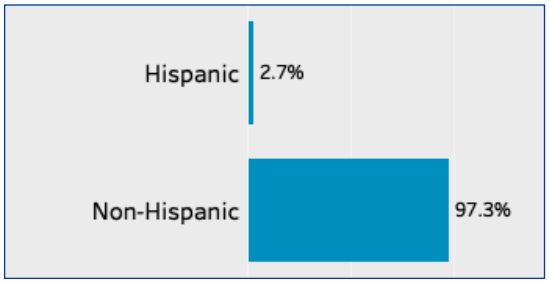
Source:
IBM Watson Health / Claritas, 2018

Population statistics are analyzed by race and by Hispanic ethnicity. The community is primarily racially white (51.1%) and black (40.1%). These population groups are the only ones projected to decrease over the next five years, the white population by -2.0% (9,186 people) and the black population by -2.4% (8,893 people). The Asian/Pacific Islander population is projected to grow by 8,160 people (16.8%). In terms of ethnicity, the Hispanic population (all races) is expected to grow by 2,958 people (12.1%) by 2023, while the non-Hispanic population (all races) is expected to decline by over 8,000 people (-1%) by 2023.

2018 Population by race

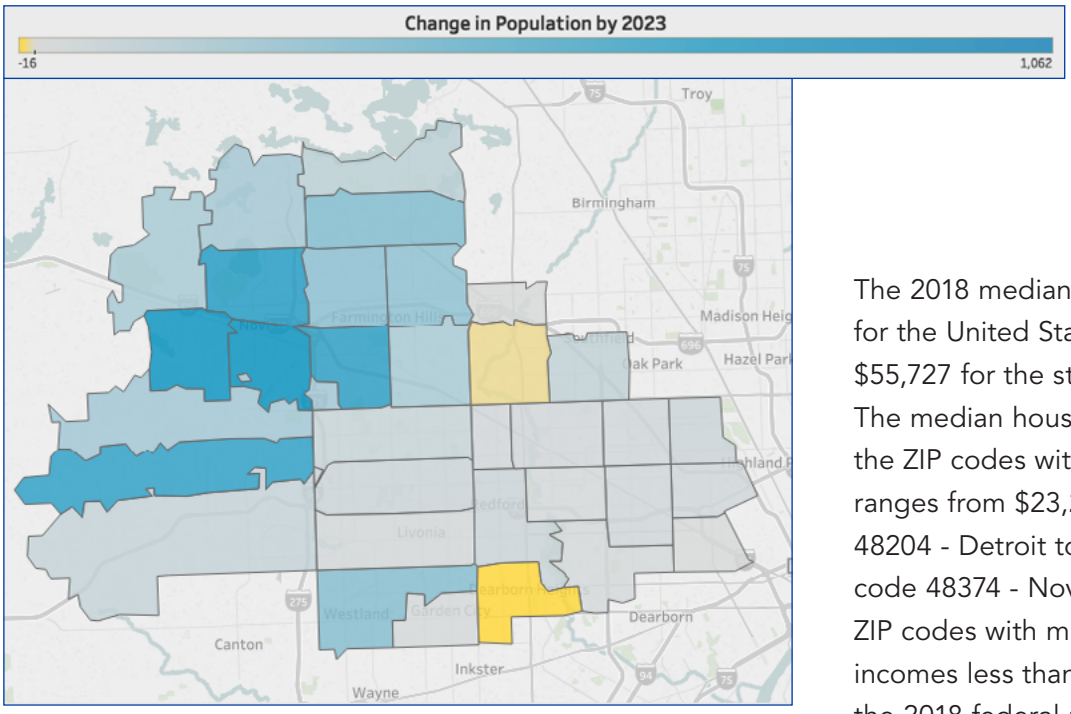


2018 Population by ethnicity



Source: IBM Watson Health / Claritas, 2018

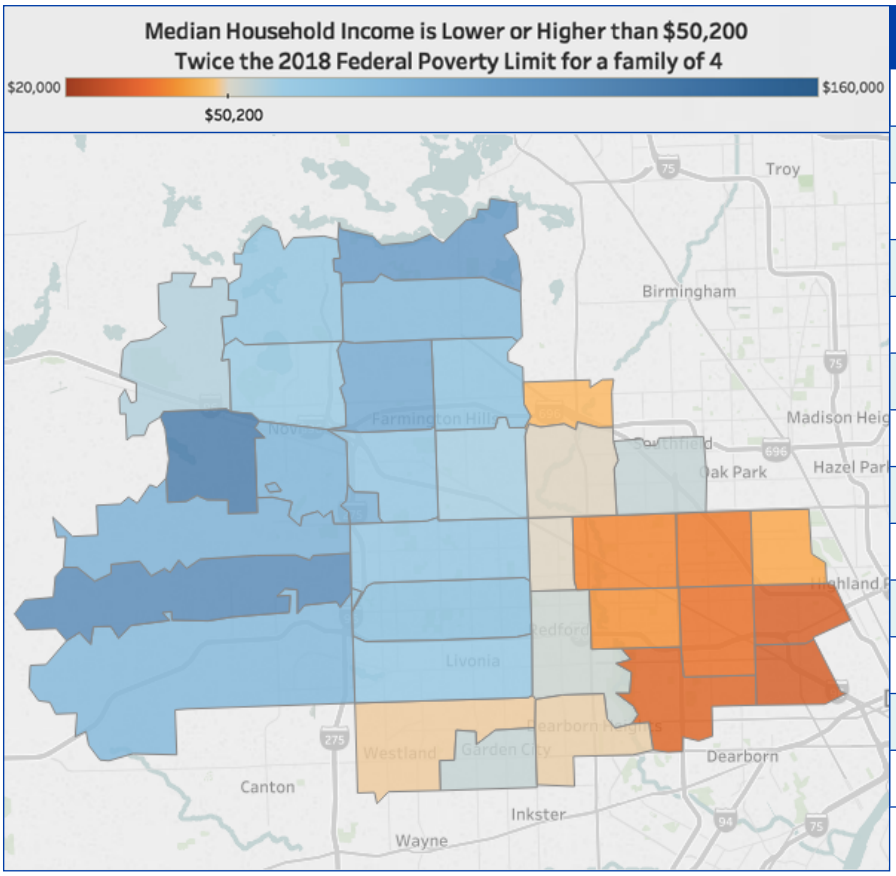
2018 - 2023 Asian/Pacific Islander race population projected change by ZIP code



Source: IBM Watson Health / Claritas, 2018

The 2018 median household income for the United States is $62,175 and $55,727 for the state of Michigan. The median household income for the ZIP codes within this community ranges from $23,218 for ZIP code 48204 - Detroit to $161,301 for ZIP code 48374 - Novi. There are 13 ZIP codes with median household incomes less than $50,200, twice the 2018 federal poverty limit for a family of four:

2018 Median household income by ZIP code

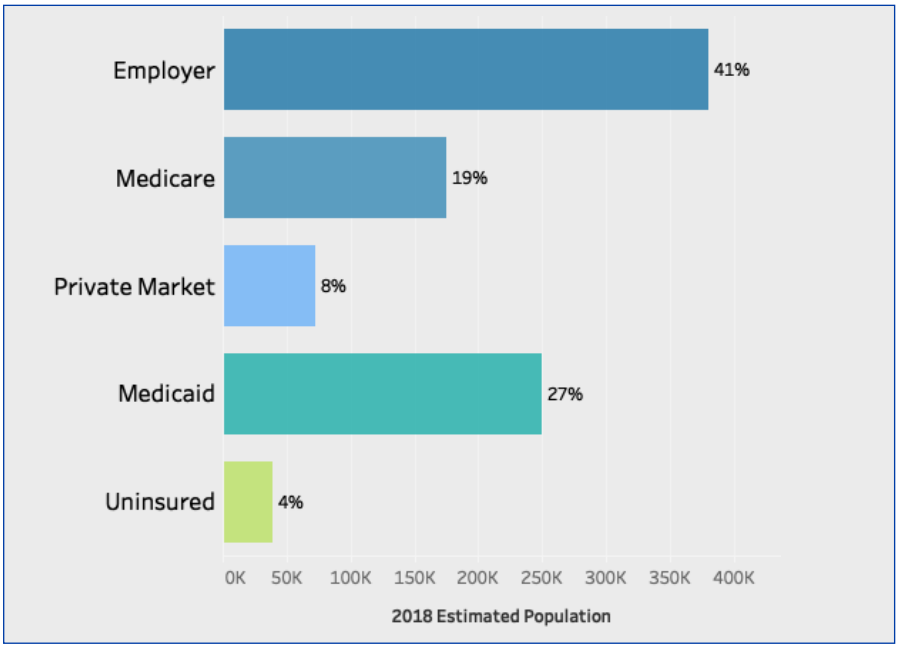


Zip Codes	Income
48204 Detroit	**$23,218**
48238 Detroit	**$24,154**
48228 Detroit	**$26,089**
48227 Detroit	**$29,243**
48235 Detroit	**$31,449**
48219 Detroit	**$34,018**
48240 Redford	**$49,871**
48223 Detroit	**$35,961**
48221 Detroit	**$40,536**
48034 Southfield	**$44,544**
48185 Westland	**$48,313**
48127 Dearborn Heights	**$48,824**
48033 Southfield	**$49,761**

Source: IBM Watson Health / Claritas, 2018

The majority of the population (87%) is insured through employer-sponsored health coverage (41%), Medicaid (27%) and Medicare (19%). The remainder of the population is divided between the uninsured (4%) and 8% private market insurance (the purchasers of coverage directly or through the health insurance marketplace).

2018 Estimated distribution of covered lives by insurance category

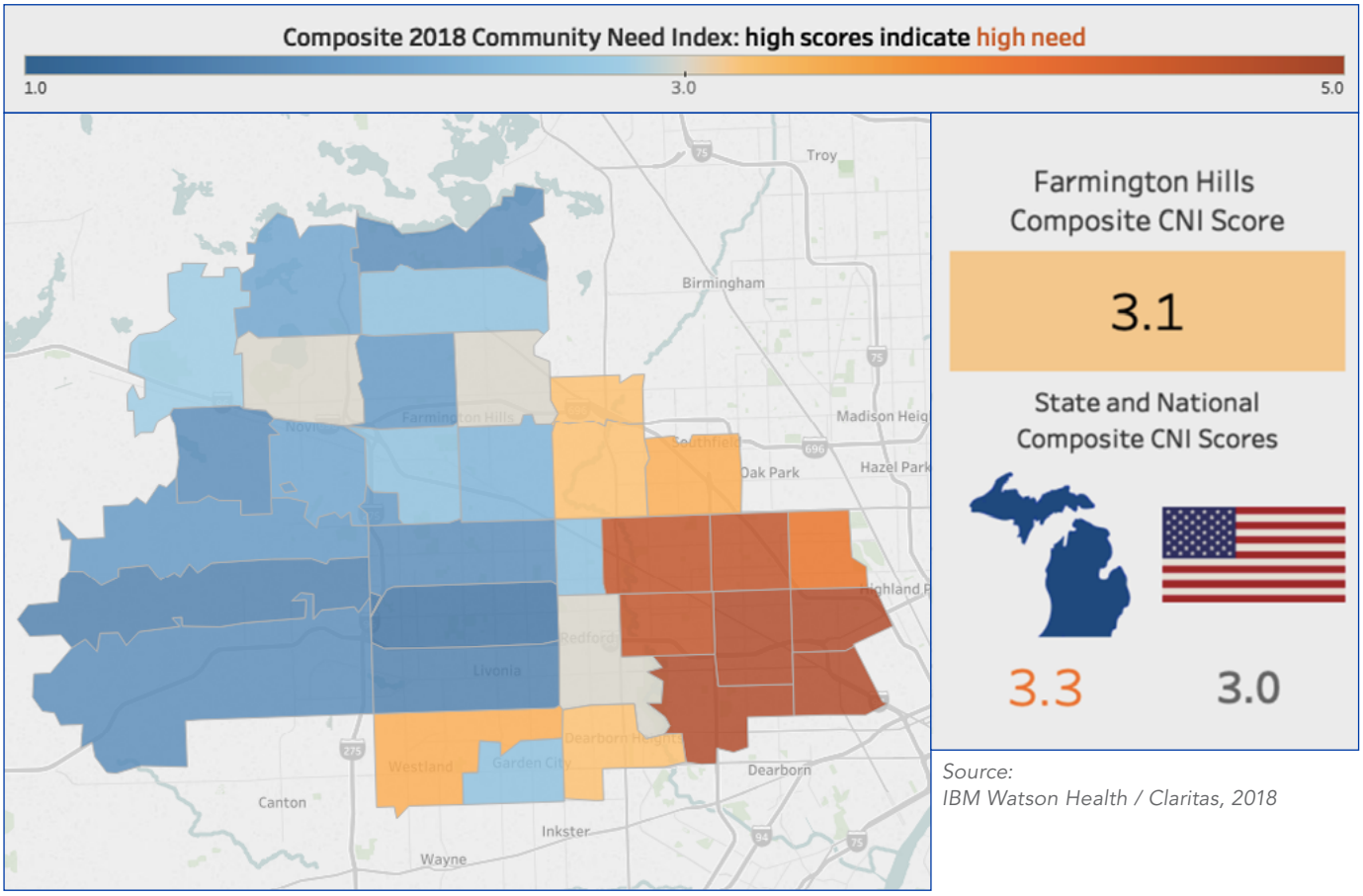


Source: IBM Watson Health / Claritas, 2018

Beaumont, Farmington Hills

The IBM Watson Health Community Need Index is a statistical approach to identifying areas within a community where health disparities may exist. The CNI takes into account vital socioeconomic factors (income, cultural, education, insurance and housing) about a community to generate a CNI score for every populated ZIP code in the United States. The CNI strongly links to variations in community health care needs and is an indicator of a community's demand for various health care services. The CNI score by ZIP code identifies specific areas within a community where health care needs may be greater. Overall, the CNI composite score for the community served is 3.1, just slightly higher than the CNI national benchmark of 3.0 and lower than the state average of 3.3. In seven (7) of the eight (8) Detroit ZIP codes (48238, 48228, 48227, 48204, 48235, 48223, 48219) the CNI score is greater than 4.5, pointing to potentially more significant health needs among those populations.

2018 Community need index by ZIP code



ZIP Map where color shows the community need index on a scale of 0 to 5. Orange color indicates high need areas (CNI = 4 or 5); blue color indicates low need (CNI = 1 or 2). Gray colors have needs at the national average (CNI = 3).

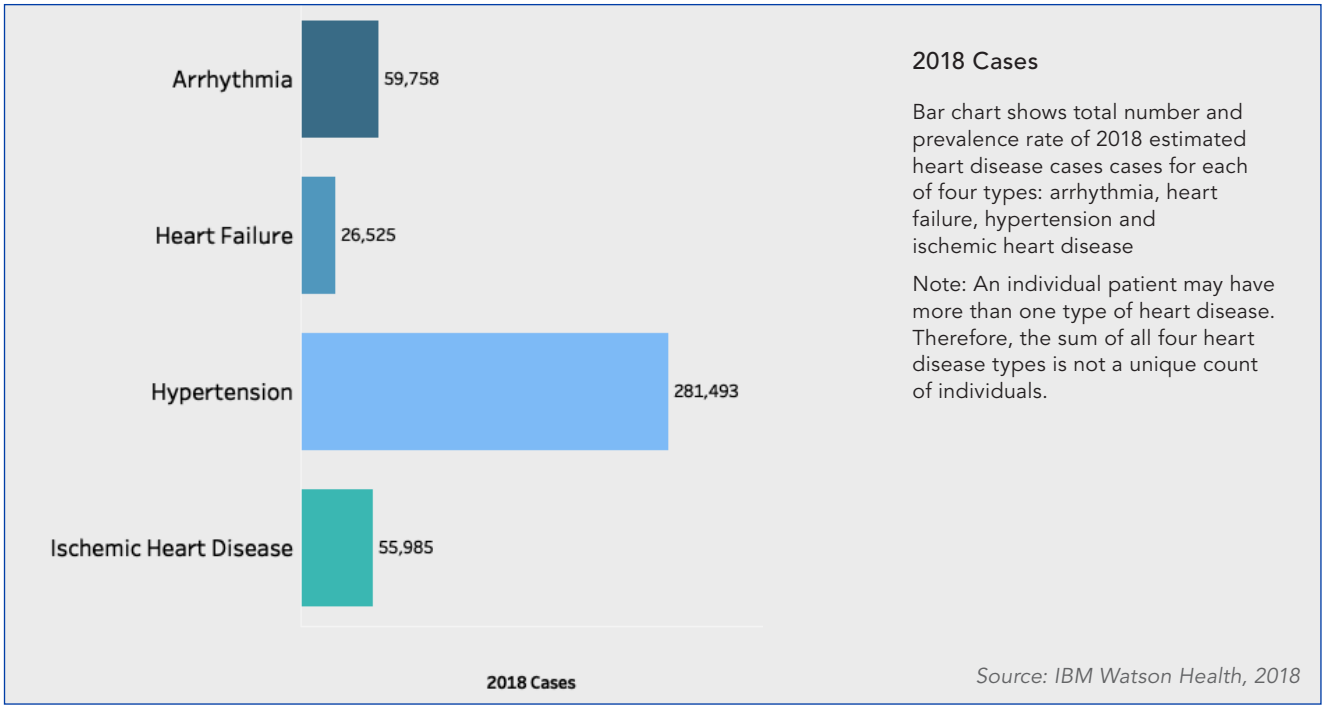
Source:
IBM Watson Health / Claritas, 2018

IBM Watson Health community data

IBM Watson Health supplemented the publicly available data and population statistics with estimates of localized disease prevalence of heart disease and cancer as well as Emergency Department visit estimates.

IBM Watson Health heart disease estimates identified hypertension as the most prevalent heart disease diagnoses; there are over 281,000 estimated cases in the community overall. The 48185 ZIP code of Westland has the most estimated cases of hypertension, arrhythmia and heart failure, while the 48154 ZIP code of Livonia has the most estimated cases of ischemic heart disease. The 48154 ZIP code of Livonia also has the highest estimated prevalence rates for heart failure (36 cases per 1,000 population) and hypertension (356 cases per 1,000 population), while the 48033 ZIP code of Southfield has the most estimated prevalence rates for arrhythmia (80 cases per 1,000 population), and the 48323 ZIP code of West Bloomfield has the highest estimated prevalence rates for ischemic heart disease (77 cases per 1,000 population).

2018 Estimated heart disease cases

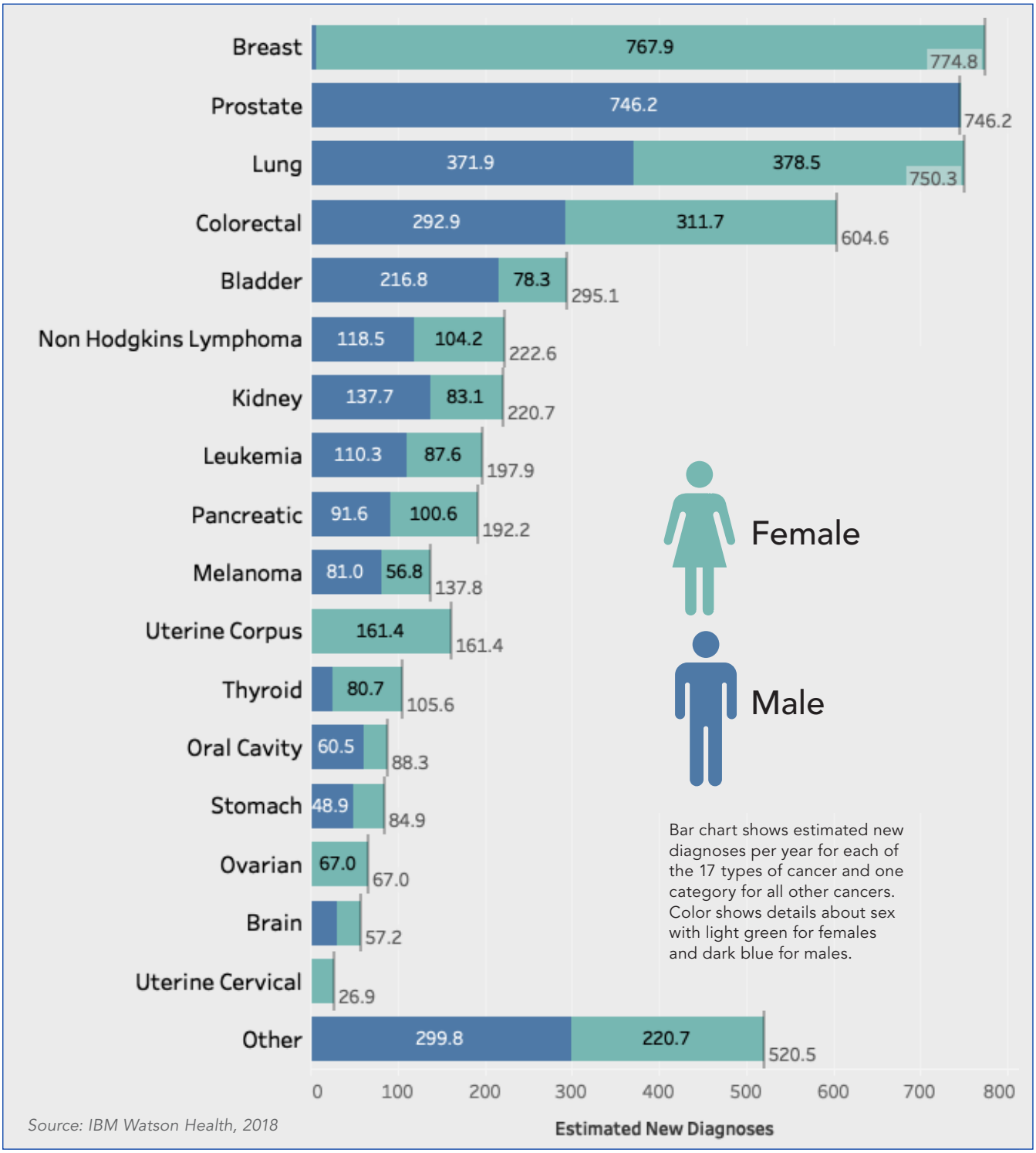


Source: IBM Watson Health, 2018

Beaumont, Farmington Hills

For this community, IBM Watson Health's 2018 cancer estimates revealed the cancers estimated to have the greatest number of new cases in 2018 are breast, lung, prostate and colorectal cancers. The cancers projected to have the greatest rate of growth in the next five years are melanoma, pancreatic and bladder, based on both population changes and disease rates.

2018 Estimated new cancer cases



Estimated cancer cases and projected five-year change by type

Cancer type	2018 Estimated new cases	2023 Estimated new cases	5-year growth (%)
Bladder	205	224	8.9%
Brain	57	59	2.7%
Breast	775	804	3.8%
Colorectal	605	562	-7.0%
Kidney	221	236	6.8%
Leukemia	198	210	6.3%
Lung	750	781	4.0%
Melanoma	138	151	9.3%
Non-Hodgkin's lymphoma	223	237	6.4%
Oral cavity	88	93	5.2%
Ovarian	67	69	2.7%
Pancreatic	192	209	8.5%
Prostate	746	721	-3.4%
Stomach	85	88	3.4%
Thyroid	106	114	7.9%
Uterine - cervical	27	25	-6.9%
Uterine - corpus	161	171	5.9%
Other	521	553	6.3%
Grand total	**5,254**	**5,402**	**2.8%**

Note: Case numbers are rounded to the nearest integer, which may mask minor differences. *Source: IBM Watson Health, 2018*

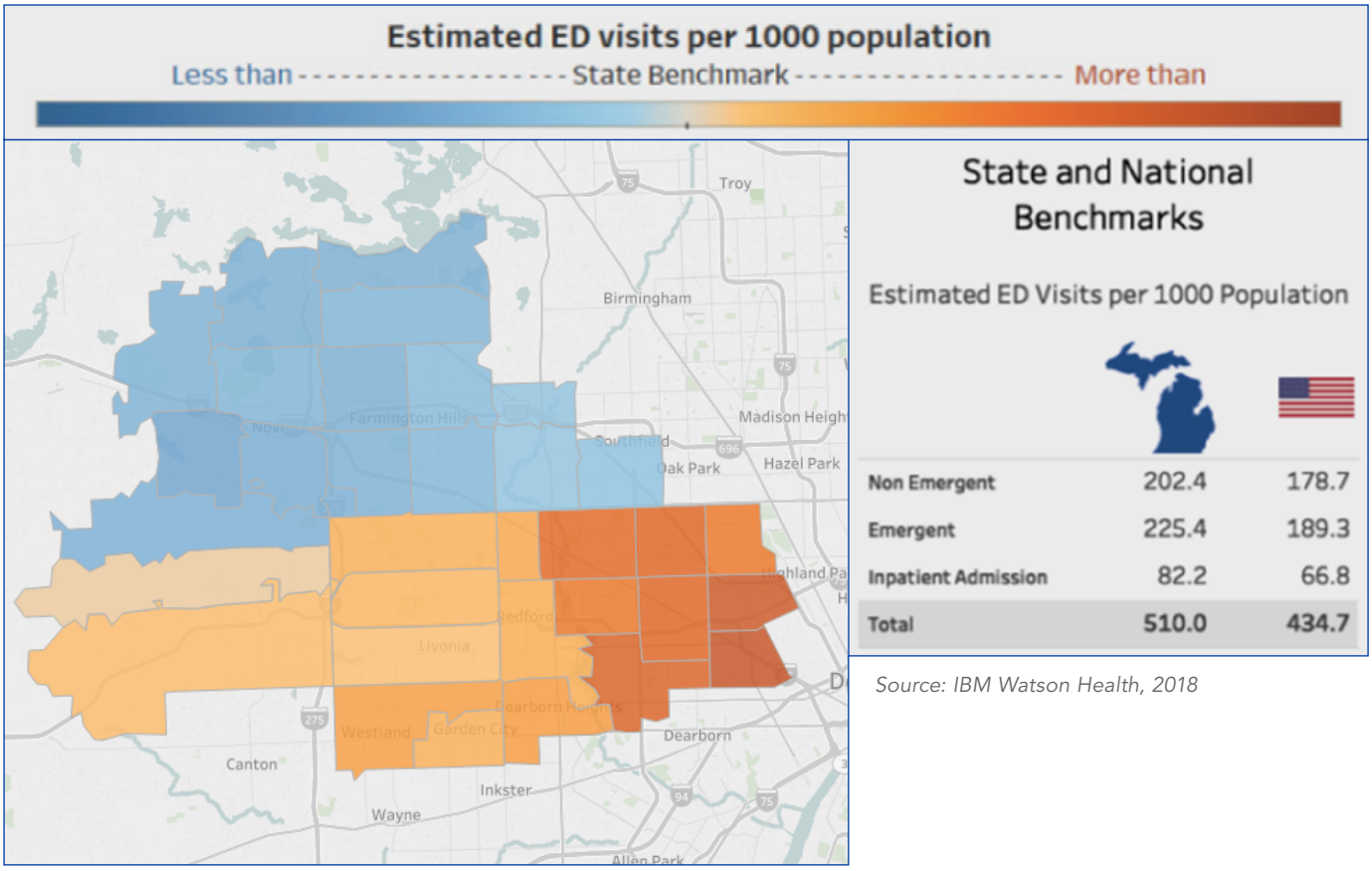
Beaumont, Farmington Hills

Based on population characteristics and regional utilization rates, IBM Watson Health projects all Emergency Department visits in this community to decrease by 0.5% over the next five years. The highest estimated ED use rates are in the ZIP codes of Detroit: 879.0 to 735.7 ED visits per 1,000 residents compared to the Michigan state benchmark of 510.0 visits and the U.S. benchmark of 435.7 visits per 1,000.

These ED visits consisted of three main types: those ED visits resulting in an inpatient admission, emergent ED visits treated and released, and non-emergent ED visits that are lower acuity. Non-emergent ED visits present to the ED but can potentially be treated in more appropriate and less intensive outpatient settings.

Non-emergent outpatient ED visits could be an indication of systematic issues within the community regarding access to primary care, managing chronic conditions or other access to care issues such as ability to pay. IBM Watson Health estimates non-emergent ED visits to decrease by an average of 2.9% over the next five years in this community.

Total estimated 2018 Emergency Department visit rate

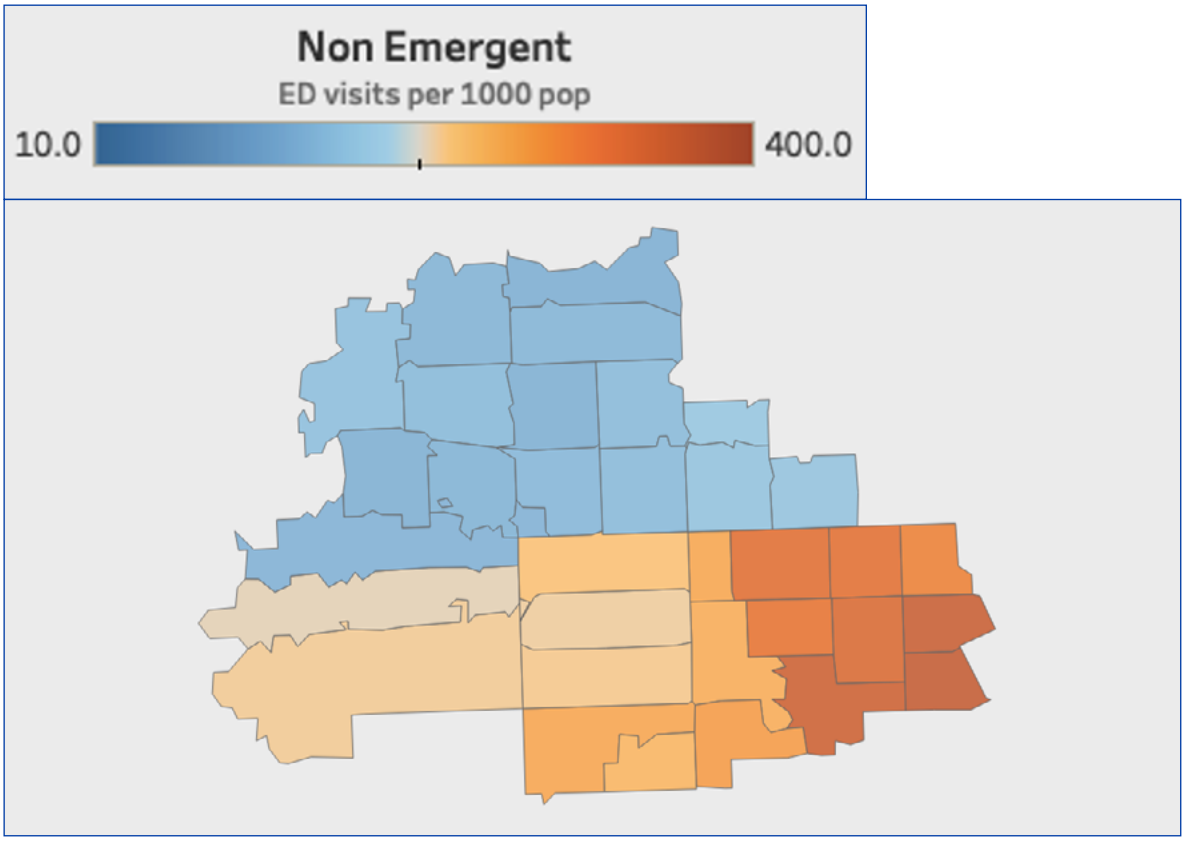


Source: IBM Watson Health, 2018

ZIP map color shows total Emergency Department visits per 1,000 population. Orange colors are higher than the state benchmark, blue colors are less than the state benchmark and gray colors are similar.

Note: These are not actual hospital ED visit rates. These are statistical estimates of ED visits for the population.

Non-emergent estimated 2018 Emergency Department visits by ZIP code



Source: IBM Watson Health, 2018

ZIP map color shows total Emergency Department visits per 1,000 population by non-emergent status. Orange colors are higher than the state benchmark, blue colors are less than the state benchmark and gray colors are similar. Color range is set for the entire study region. ED visits are defined by the presence of specific CPT® codes in claims. Non-emergency visits to the ED do not necessarily require treatment in a hospital Emergency Department and can potentially be treated in a fast-track ED, an urgent care treatment center, or a clinical or physician's private office.

Note: These are not actual hospital ED visit rates. These are statistical estimates of ED visits for the population.

2019 CHNA implementation strategy

The implementation strategy for the chosen health needs of 1) chronic disease prevention and management (cardiovascular disease, diabetes, obesity) and 2) mental health are outlined in the following pages.

Over the next three years each Beaumont Health hospital will execute its implementation strategies which will be evaluated and updated on an annual basis.

Priority #1

Chronic disease prevention and management (cardiovascular disease, diabetes, obesity)

Goal #1: Decrease rates of chronic disease in children and adults by promoting healthy eating and active living behaviors.	
Objective #1: Provide education and services that support healthy eating, active living and maintaining a healthy weight.	
OUTCOME MEASURES	• Decrease percent of adult obesity. • Decrease percent of students who are obese.
STRATEGIES AND TACTICS	• Implement Cooking Matters program, cooking classes, grocery store tours and food demonstrations to equip families with knowledge and skills to prepare healthy meals. • Continue multi-sector Healthy Greater Farmington coalition to implement community and worksite strategies on healthy eating and active living. • Implement initiatives and partner collaborations to increase access to fresh fruits and vegetables and reduce food insecurity. • Provide education on chronic disease prevention and management through community events and Beaumont Speakers Bureau. • Explore educational and transit opportunities to increase healthy living opportunities.
COMMITTED RESOURCES	Beaumont, Farmington Hills will commit both financial and in-kind resources, including staff time, charitable contributions and employee volunteerism.
PARTNERS	• Gleaners Community Food Bank of SE Michigan • Healthy Greater Farmington coalition • Cities of Farmington and Farmington Hills • Farmington Public Schools • Farmington Farmers Market • CARES of Southeast Michigan • Redford School District • Taste the Local Difference • Chamber of Commerce
EVALUATION	• Pre/post participant surveys • Partnership agreements • Participation surveys
Objective #2: Increase opportunities for physical activity.	
OUTCOME MEASURES	• Increase percent of physically active adults. • Increase education and opportunities for physical education.
STRATEGIES AND TACTICS	• Implement community-wide walking, wellness and fitness activities to increase physical activity and social interaction across the community. • Support the Healthy Greater Farmington coalition to improve walkability and bikeability across the community. • Provide training for physical education teachers to implement the Coordinated Approach to Child Health (CATCH) PE nutrition and physical activity program. • Implement the program A Matter of Balance: Managing Concerns About Falls to support physical activity among older adults.
COMMITTED RESOURCES	Beaumont, Farmington Hills will commit both financial and in-kind resources, including staff time, charitable contributions and employee volunteerism.
PARTNERS	• City of Farmington Hills • Farmington School District • Farmington Hills Parks and Recreation
EVALUATION	• Participant surveys • Participation rates • Walking log metrics • Up and Go Test • Physical Education teacher evaluation surveys

Goal #2: Decrease cardiovascular disease risk factors and prevent death from sudden cardiac arrest.	
Objective #1: Provide education programs and services.	
OUTCOME MEASURES	• Decrease percent of adult hypertension. • Decrease in cardiovascular disease risk factors. • Increase knowledge and awareness of self-monitoring practices.
STRATEGIES AND TACTICS	• Implement Blood Pressure Self-Monitoring Program in churches and community organizations. • Mentor and assist schools in attaining the state Heart Safe School designation and provide AED equipment as needed.
COMMITTED RESOURCES	Beaumont, Farmington Hills will commit both financial and in-kind resources, including staff time, charitable contributions and employee volunteerism.
PARTNERS	• Local churches • Schools • Community agencies
EVALUATION	• Attainment of Heart Safe School designation • Pre/post participant surveys • Participation rates
Objective #2: Provide early detection screenings.	
OUTCOME MEASURES	• Decrease percent of adult hypertension. • Decrease in cardiovascular disease risk factors. • Decrease in deaths from sudden cardiac arrest.
STRATEGIES AND TACTICS	• Provide blood pressure, cholesterol, glucose, BMI, heart and vascular screenings across the community. • Implement the Student Heart Check Program to detect abnormal heart structure or abnormal rhythms and explore development of student support group for those currently diagnosed or affected by abnormal diagnoses.
COMMITTED RESOURCES	Beaumont, Farmington Hills will commit both financial and in-kind resources, including staff time, charitable contributions and employee volunteerism.
PARTNERS	• Local churches • Schools • Community agencies
EVALUATION	• Screening results • Participant survey
Goal #3: Decrease rate of new diabetes cases and of diabetes complications.	
Objective #1: Provide early detection screenings, diabetes prevention programs and diabetes education services.	
OUTCOME MEASURES	• Decrease in new incidences of diabetes.
STRATEGIES AND TACTICS	• Provide the Diabetes PATH chronic disease self-management program. Explore implementation of online version. • Implement National Diabetes Prevention Program for adults with pre-diabetes or at high risk for diabetes.
COMMITTED RESOURCES	Beaumont, Farmington Hills will commit both financial and in-kind resources, including staff time, charitable contributions and employee volunteerism.
PARTNERS	• National Kidney Foundation of Michigan • AAA 1-B • Local churches • Libraries • Senior centers • Community organizations
EVALUATION	• Participation rates/ volumes • Outcome measures • Increase in physical activity • Screening results • Average weight loss • Pre/post participant surveys • Participation rates

Priority #2

Mental health

Goal #1: Decrease rate of mental health and substance use disorders.	
Objective #1: Improve access and coordination of services.	
OUTCOME MEASURES	• Increase referral linkages for mental health and opioid use disorders.
STRATEGIES AND TACTICS	• Support partnerships to improve integration of health care and community-based mental health services.
COMMITTED RESOURCES	Beaumont, Farmington Hills will commit both financial and in-kind resources, including staff time, charitable contributions and employee volunteerism.
PARTNERS	• Community mental health agencies • Universal Health Services
EVALUATION	• Partnership agreements • Patients connected to community resources
Objective #2: Provide education program and services.	
OUTCOME MEASURES	• Increase knowledge and awareness of mental health.
STRATEGIES AND TACTICS	• Explore development of mental health toolkit and mental health first aid training to equip local leaders and the broader community with educational resources. • Explore development of social interaction program to engage older adults with youth via leisure activities to reduce social isolation. • Implement mindfulness classes to address anxiety, depression, stress and chronic pain. • Provide education on mental health through community events and Beaumont Speakers Bureau.
COMMITTED RESOURCES	Beaumont, Farmington Hills will commit both financial and in-kind resources, including staff time, charitable contributions and employee volunteerism.
PARTNERS	• S.A.F.E. • Michigan School of Psychology • Healthy Greater Farmington coalition • Farmington Public Schools • Farmington Parks and Recreation • Oakland Community Health Network • Cities of Farmington and Farmington Hills
EVALUATION	• Perceived Stress Scale • Self-Compassion Scale • Qualitative measures • Participant rates • Participation surveys