TAYLOR

2019 COMMUNITY HEALTH NEEDS ASSESSMENT

IMPLEMENTATION STRATEGY

Building Healthier Lives and Communities

Beaumont, Taylor

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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.

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:

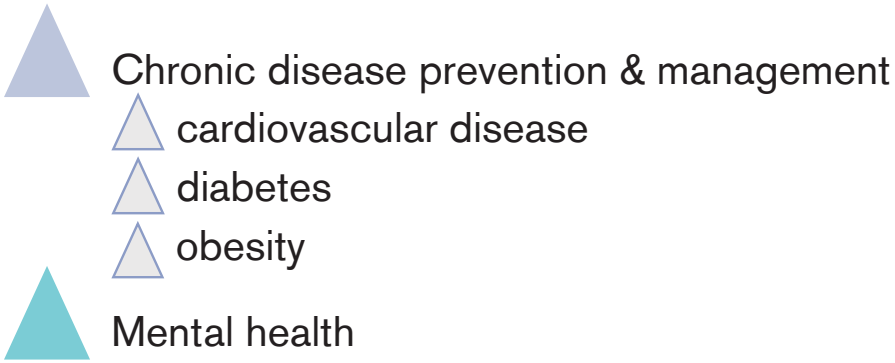
- Chronic disease prevention and management (cardiovascular disease, diabetes, obesity)
- Mental health

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:



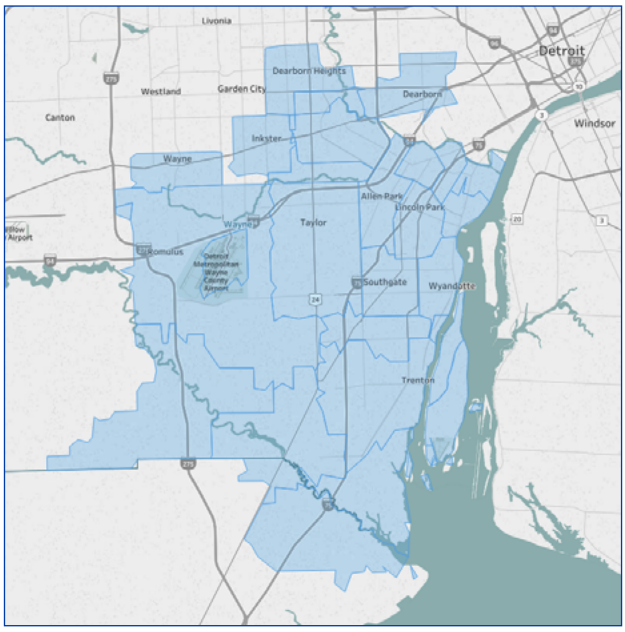
Beaumont, Taylor

Beaumont, Taylor opened its doors in 1977. It became part of Beaumont Health in September 2014. This hospital provides specialty health care services with outstanding service for residents of Taylor and surrounding communities, including 24/7 emergency care, speech/language pathology and audiology, a pain management clinic, orthopedic surgery, mental health services, physical medicine and inpatient rehabilitation and full-service radiology with advanced CT and MRI.

Community served

The Beaumont, Taylor community 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, Taylor: Map of community served

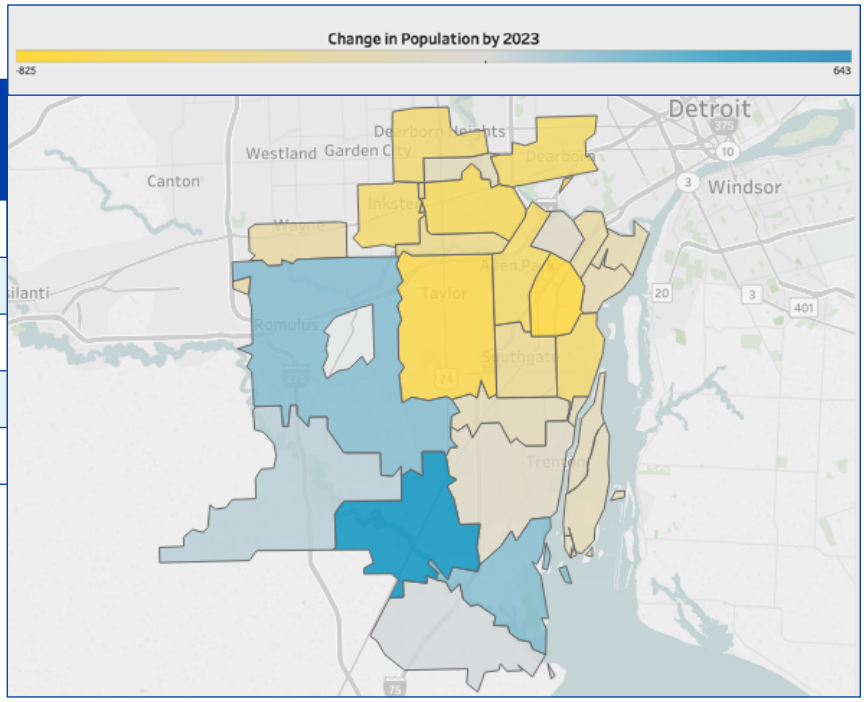


Source: Beaumont Health, 2019

Demographic and socioeconomic summary

The population of the community served is expected to decrease 1.2% by 2023, a decline of almost 6,800 people. The community's population decline contrasts with the slight growth rate projected for Michigan (0.6%) and the higher national projected growth rate (3.5%). Within the community, only five ZIP codes are expected to experience the growth in the next five years:

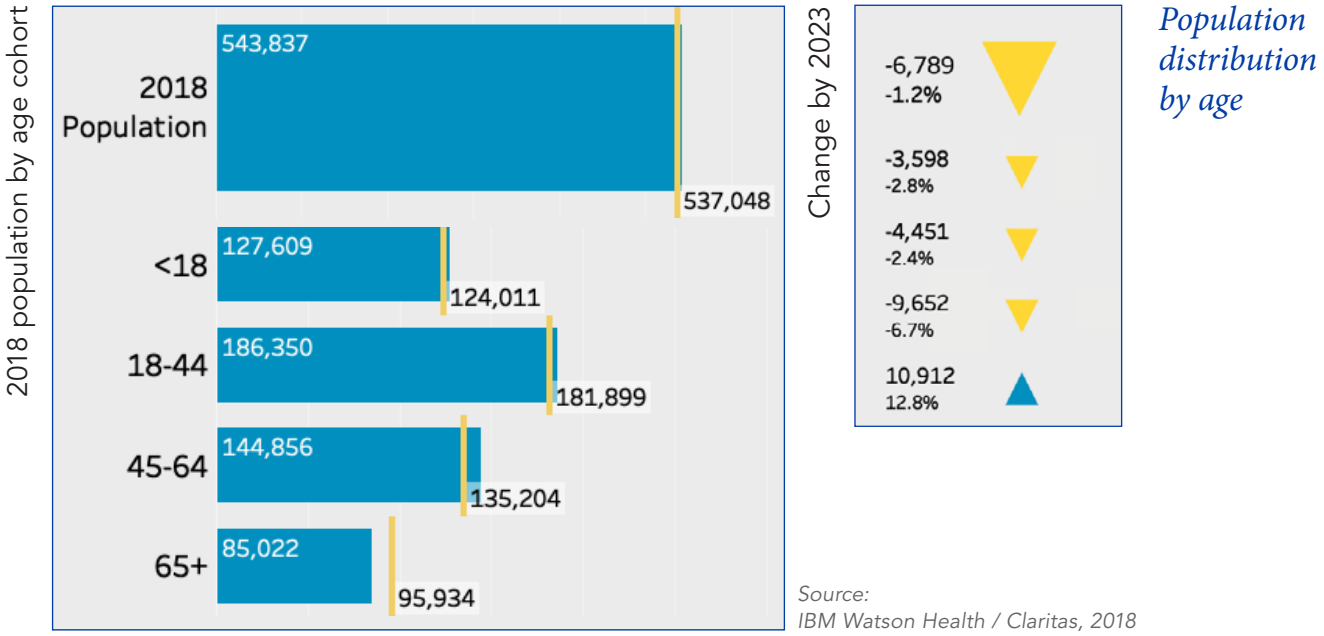
2018 - 2023 Total population projected change by ZIP code



Zip Codes	Growth in five years (# of people)
48134 Flat Rock	**643**
48174 Romulus	**249**
48173 Rockwood	**245**
48164 New Boston	**97**
48179 South Rockwood	**18**

Source: IBM Watson Health / Claritas, 2018

The community's population skews just slightly younger with 34.3% of the population ages 18-44 and 23.5% under age 18. The largest cohort (18-44) is expected to decrease by 4,451 people by 2023 and the age 65-plus cohort (the smallest at 15.6% of the population) is the only age group expected to experience growth (12.8%) over the next five years, adding 10,912 seniors to the community. Growth in the senior population will likely contribute to increased utilization of services as the population continues to age.

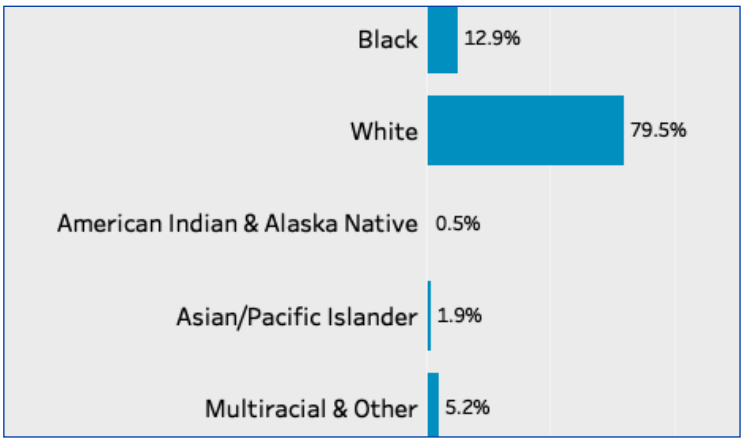


Population distribution by age

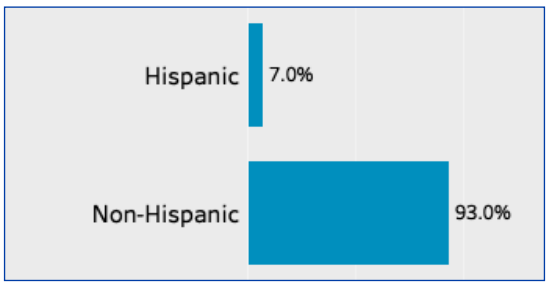
Source:
IBM Watson Health / Claritas, 2018

Population statistics are analyzed by race and by Hispanic ethnicity. The community is predominately white (79.5%) with the black population being the next largest racial group (12.9%). Both of these groups are projected to decline in the next five years (1.1% and 7.1% respectively) resulting in a total decline of 9,617 people from these population groups. Other racial groups in the community, while smaller, are projected to have growth in the next five years; Asian/Pacific Islander (10.4%, 1,081 people) and multi-racial (3.2%, 543 people). In terms of ethnicity (all races), the non-Hispanic population is dominant (93.0%) but is projected to decline by 2.0% (9,956 people) in five years. Meanwhile the smaller non-Hispanic population is expected to grow by almost 3,200 people (8.4%) by 2023.

2018 Population by race



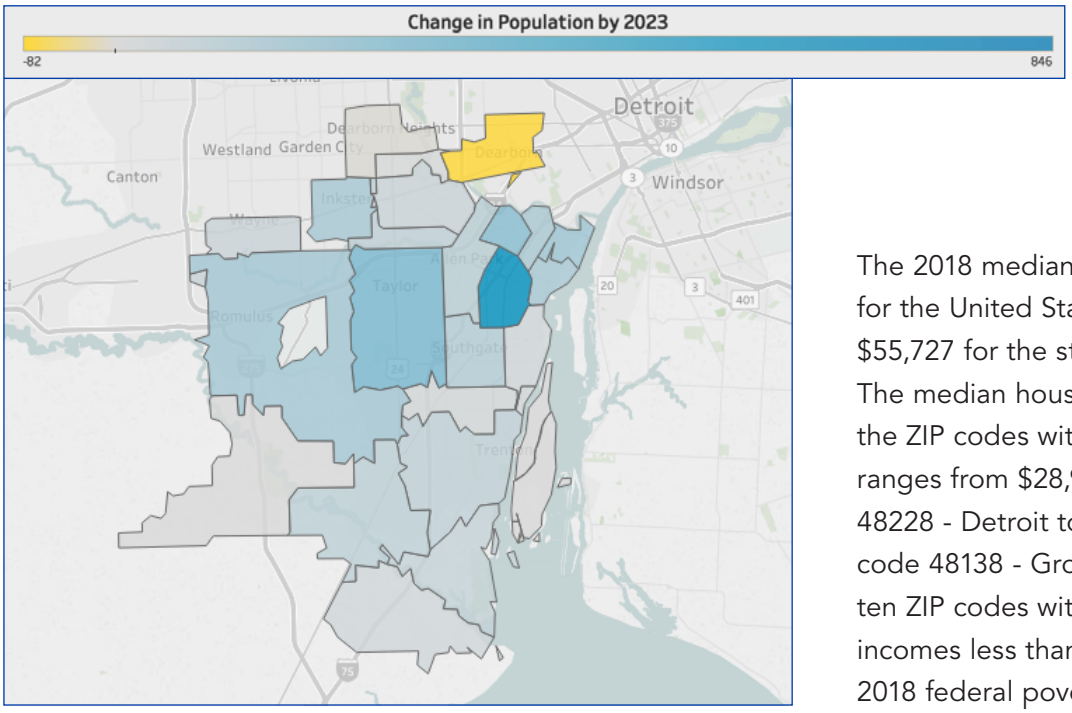
2018 Population by ethnicity



Source: IBM Watson Health / Claritas, 2018

Beaumont, Taylor

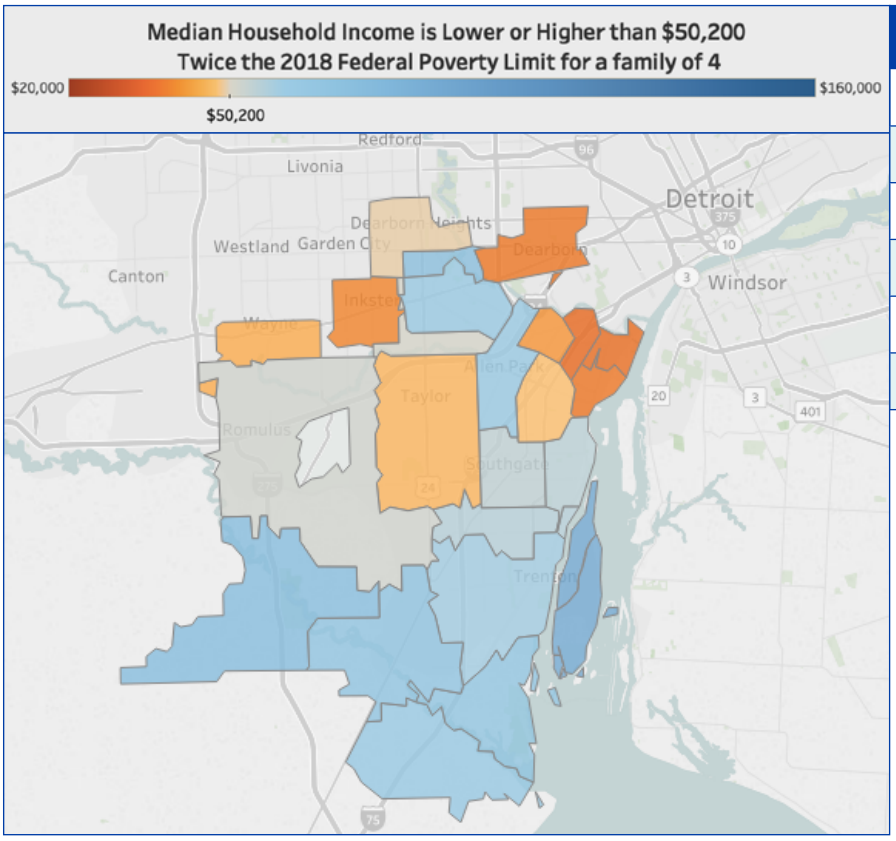
2018 - 2023 Hispanic ethnicity population projected change by ZIP code



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 $28,916 for ZIP code 48228 - Detroit to $104,367 for ZIP code 48138 - Grosse Ile. There are ten ZIP codes with median household incomes less than $50,200, twice the 2018 federal poverty limit for a family of four. Six ZIP codes have median household incomes less than $40,000:

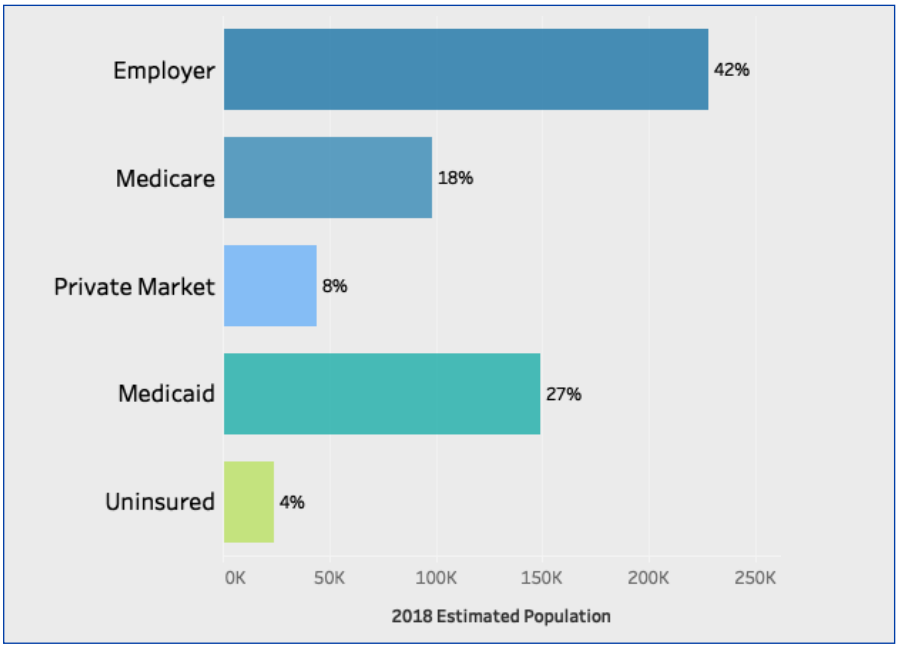
2018 Median household income by ZIP code



Zip Codes	Income
48217 Detroit	**$28,916**
48218 River Rouge	**$29,533**
48229 Ecorse	**$31,775**
48126 Dearborn	**$32,239**
48141 Inkster	**$34,676**
48122 Melvindale	**$37,594**

Source: IBM Watson Health / Claritas, 2018

2018 Estimated distribution of covered lives by insurance category



Source: IBM Watson Health / Claritas, 2018

A majority of the population (42%) are insured through employer sponsored health coverage, followed by those with Medicaid (27%) and Medicare (18%). The remainder of the population is divided between those with private market insurance (8%) (purchasers of coverage directly or through the health insurance marketplace) and the uninsured (4%).

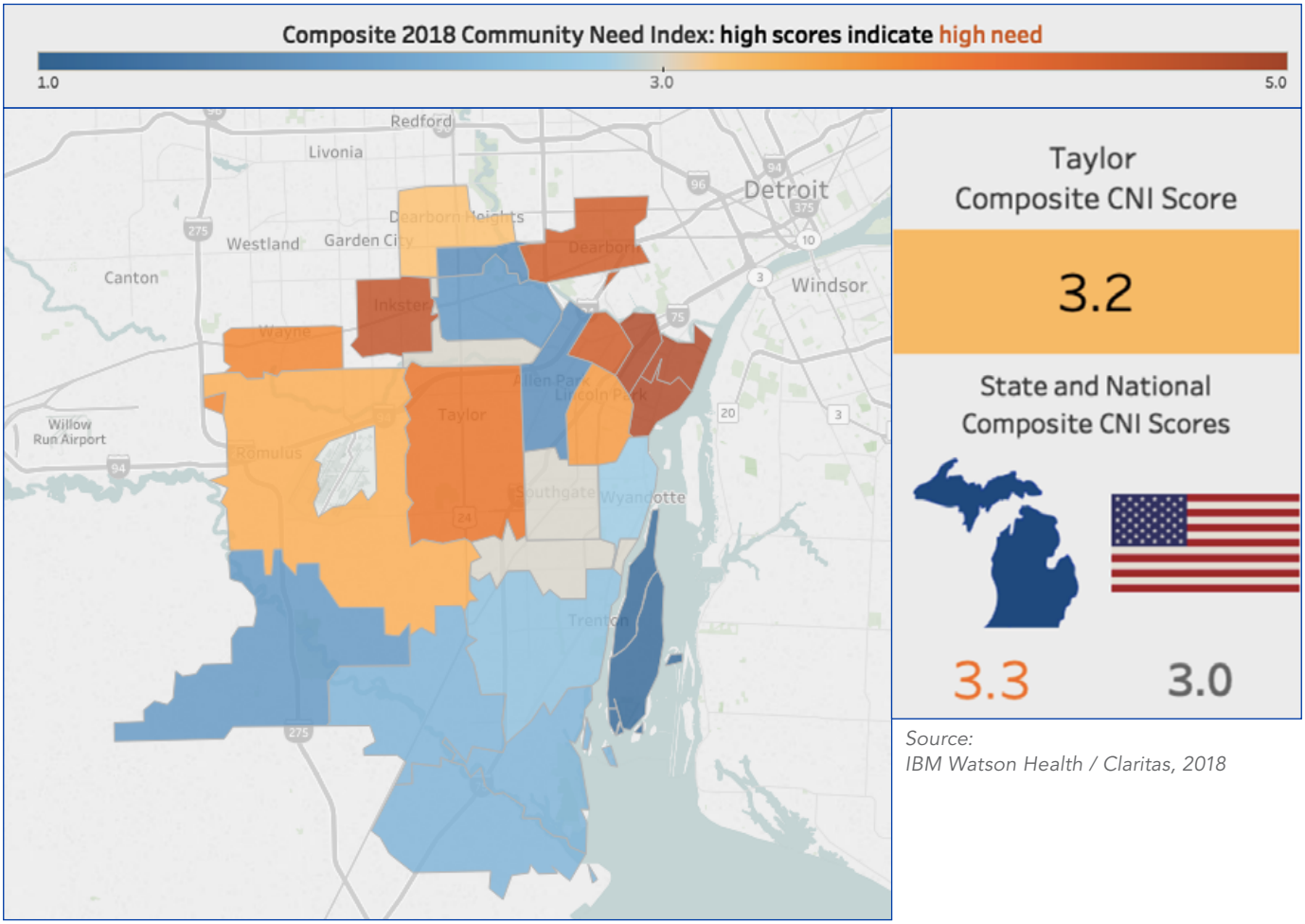
Beaumont, Taylor

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 3.2, higher than the CNI national average of 3.0 but lower than the state average of 3.3.

In four community ZIP codes (48217 - Detroit, 48229 - Ecorse, 48141 - Inkster and 48218 - River Rouge), the CNI score is greater than 4.5, pointing to potentially more significant health needs among those populations. These ZIP codes received scores of 5.0 in three of the five barriers that comprise the composite CNI score: culture, housing and income. In addition, three of the four ZIP codes have scores of 5.0 in the education barrier.

2018 Community need index by ZIP code



Source:
IBM Watson Health / Claritas, 2018

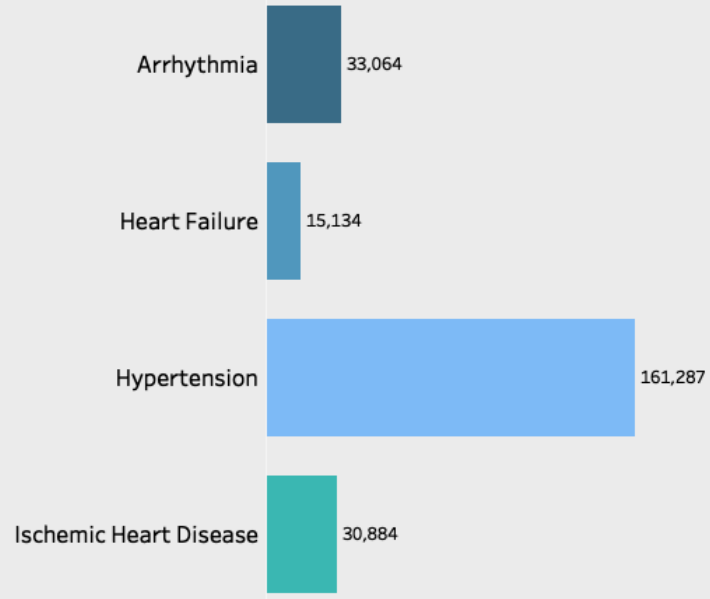
ZIP Map where color shows the Community Need Index on a scale of 0 to 5. Orange color indicates high need areas (CNI = 4 or 5); blue color indicates low need (CNI = 1 or 2). Gray colors have needs at the national average (CNI = 3).

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 161,000 estimated cases in the community overall. The 48180 ZIP code of Taylor has the most estimated cases of each heart disease type, likely due to population size. The 48138 ZIP code of Grosse Ile has the highest estimated prevalence rates for all heart disease types: arrhythmia (85 cases per 10,000 population), heart failure (40 cases per 10,000 population), hypertension (379 cases per 10,000 population) and ischemic heart disease (86 cases per 10,000 population).

2018 Estimated heart disease cases



2018 Cases

Bar chart shows total number and prevalence rate of 2018 estimated heart disease cases for each of four types: arrhythmia, heart failure, hypertension and ischemic heart disease

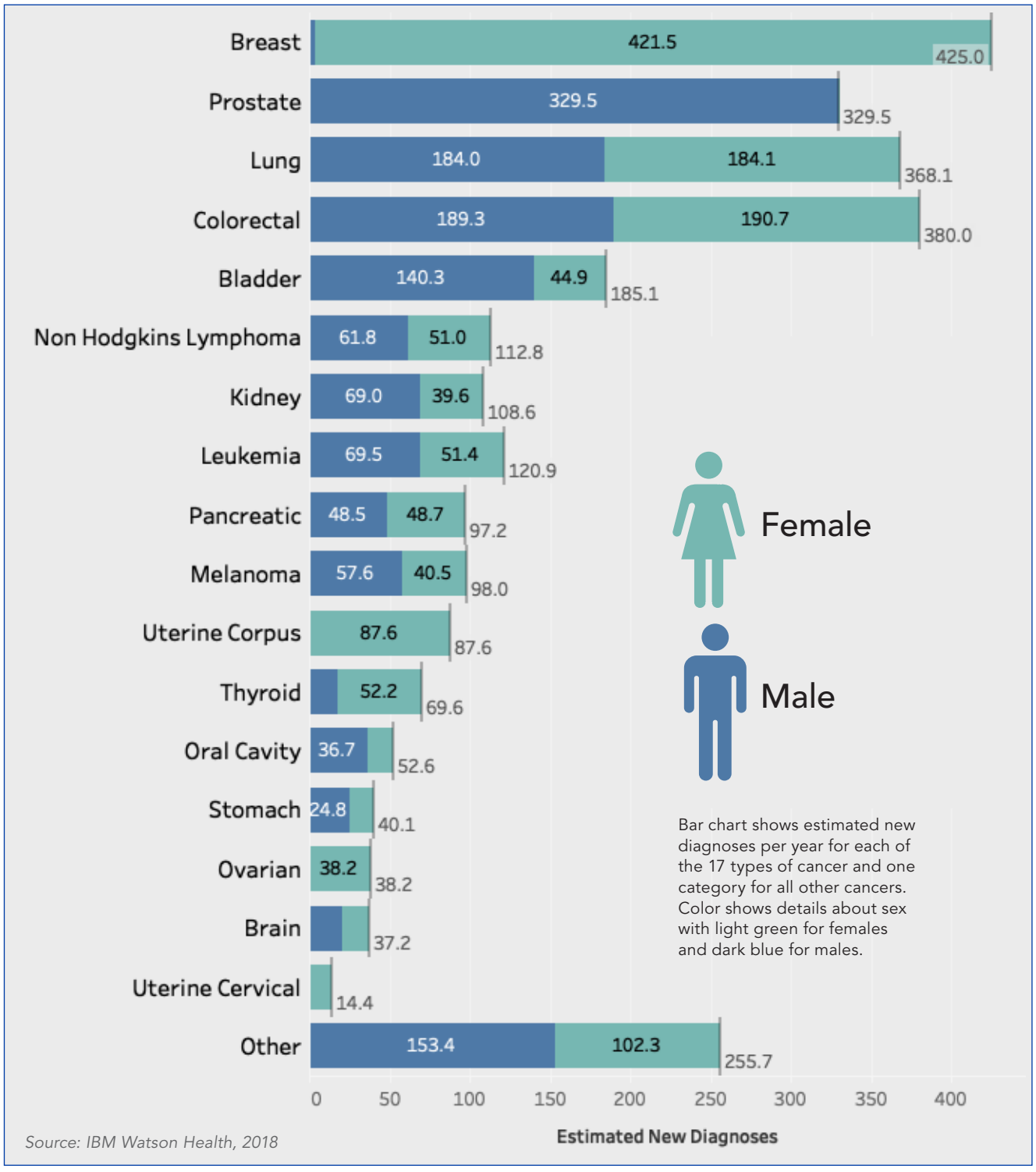
Note: An individual patient may have more than one type of heart disease. Therefore, the sum of all four heart disease types is not a unique count of individuals.

Source: IBM Watson Health, 2018

Beaumont, Taylor

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, colorectal and lung cancers. The cancers projected to have the greatest rate of growth in the next five years are melanoma, bladder and pancreatic, 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	185	202	9.1%
Brain	37	38	2.4%
Breast	425	437	2.8%
Colorectal	380	344	-9.6%
Kidney	109	115	5.8%
Leukemia	121	129	6.3%
Lung	368	382	3.7%
Melanoma	98	107	9.4%
Non-Hodgkin's lymphoma	113	119	5.9%
Oral cavity	53	56	5.7%
Ovarian	38	39	1.8%
Pancreatic	97	106	8.6%
Prostate	329	321	-2.7%
Stomach	40	41	1.7%
Thyroid	70	75	8.0%
Uterine - cervical	14	14	-4.4%
Uterine - corpus	88	92	4.7%
Other	256	271	5.9%
Grand total	**2,821**	**2,885**	**2.3%**

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

Beaumont, Taylor

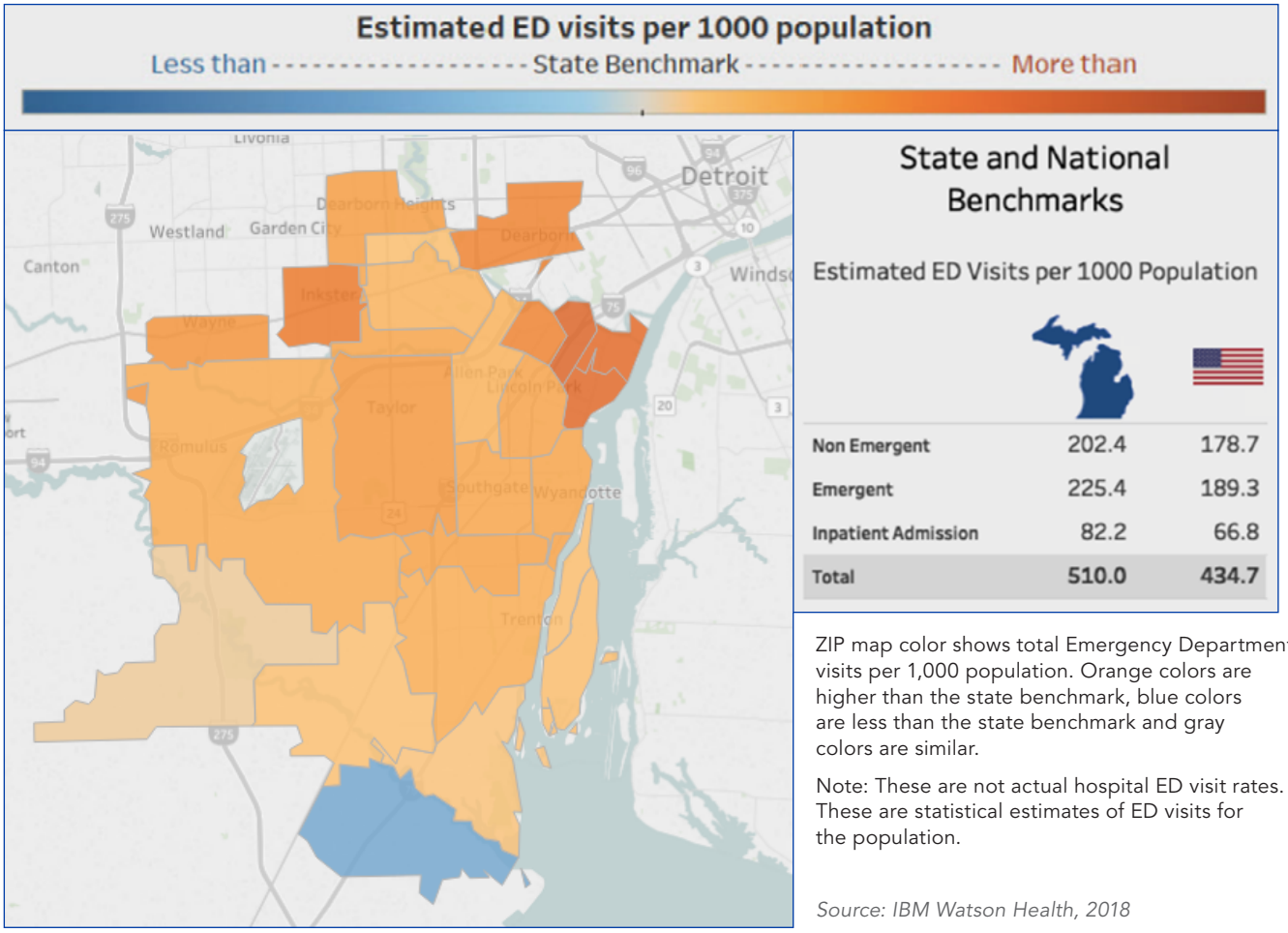
Based on population characteristics and regional utilization rates, IBM Watson Health projects all Emergency Department visits in this community to decrease by 0.7% over the next five years.

Although the number of ED visits are projected to decrease slightly, estimated ED use rates in 23 of 24 community ZIP codes are higher than both the Michigan state and U.S. benchmarks (510 visits and 435 visits per 1,000 respectively). The highest ED use rates are in two ZIP codes, 48217 - Detroit and 48229 - Ecorse (807.5 and 790.1 ED visits per 1,000 residents respectively). The ED use rate in these ZIP codes is more than 80% higher than the U.S. benchmark of 435 visits per 1,000 population and almost 60% higher than the Michigan state benchmark of 510 visits per 1,000.

ED visits consisted of three main types: those resulting in an inpatient admission, emergent ED visits treated and released and non-emergent ED visits that were 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 estimated non-emergent ED visits to decrease by an average of 3.7% over the next five years in this community.

Total estimated 2018 Emergency Department visit rate

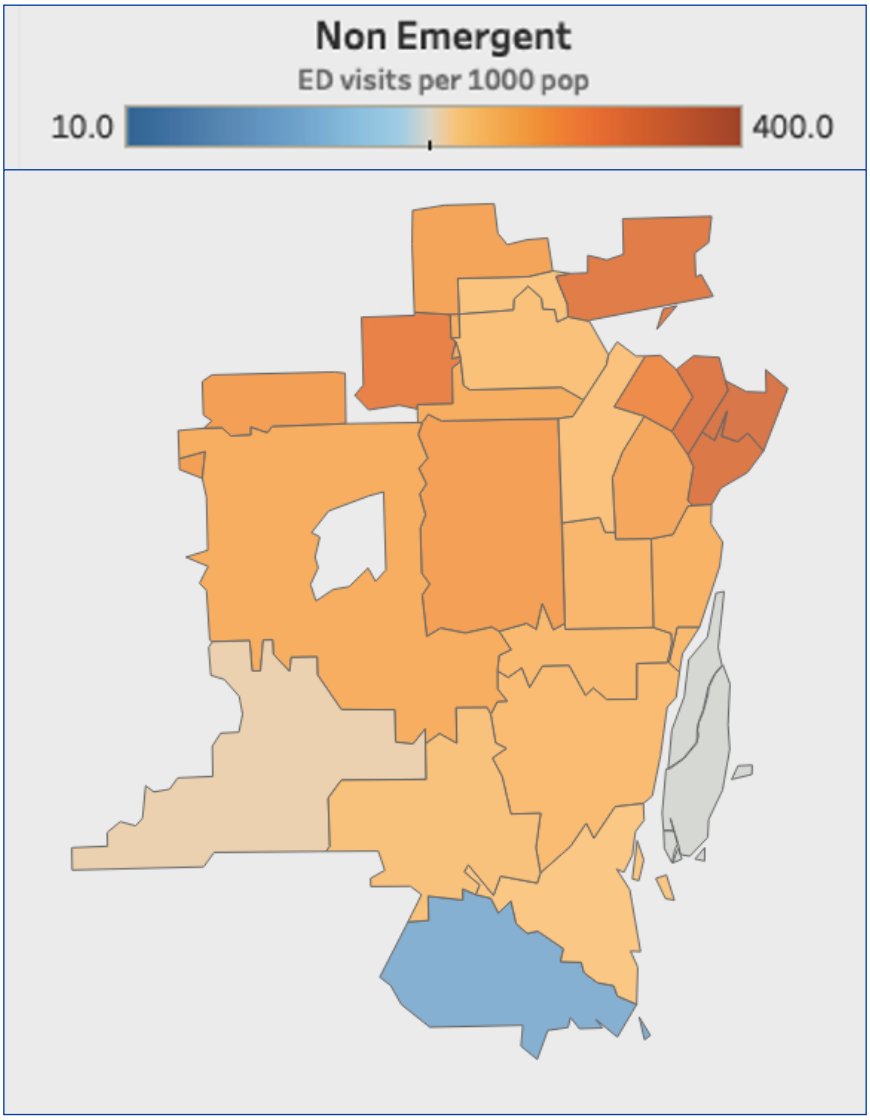


ZIP map color shows total Emergency Department visits per 1,000 population. Orange colors are higher than the state benchmark, blue colors are less than the state benchmark and gray colors are similar.

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

Source: IBM Watson Health, 2018

Non-emergent estimated 2018 Emergency Department visits by ZIP code



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.

Source:
IBM Watson Health, 2018

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.

Beaumont, Taylor • 2019 CHNA implementation strategy

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, grocery store tours and food demonstrations to equip families with knowledge and skills to prepare healthy meals. • Continue multi-sector Healthy Taylor community 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 the Living Well education series, community events and Beaumont Speakers Bureau.
COMMITTED RESOURCES	Beaumont, Taylor 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 Taylor coalition • City of Taylor • Taylor Farmer's Market, Inc. • Taylor School District
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 programs such as neighborhood walking groups and community walk events to increase physical activity and social interaction across the community. • Explore development of a Wellness Park, inclusive of environmental improvements and programming, to create an outdoor experience to increase activity options for residents. • Implement the program A Matter of Balance: Managing Concerns About Falls to support physical activity among older adults.
COMMITTED RESOURCES	Beaumont, Taylor will commit both financial and in-kind resources, including staff time, charitable contributions and employee volunteerism.
PARTNERS	• Healthy Taylor coalition • City of Taylor Parks and Recreation • Downriver Family YMCA • City of Taylor
EVALUATION	• Participant surveys • Participation rates • Walking log metrics • Up and Go Test • Park usage

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. • Increase knowledge and awareness of self-monitoring practices. • Decrease in cardiovascular disease risk factors.
STRATEGIES AND TACTICS	• Implement Blood Pressure Self-Monitoring Program in churches and community organizations. • Provide support programs including education on cardiovascular disease and stroke prevention. • Mentor and assist schools in attaining the state Heart Safe School designation and provide AED equipment as needed.
COMMITTED RESOURCES	Beaumont, Taylor 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 deaths from sudden cardiac arrest. • Decrease in cardiovascular disease risk factors.
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, Taylor 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 new incidences of diabetes.
STRATEGIES AND TACTICS	• Provide the Diabetes PATH chronic disease self-management program. Explore implementation of online version. • Provide support groups for those with diabetes and their caregivers. • Implement the National Diabetes Prevention Program for adults with pre-diabetes or at high risk for diabetes.
COMMITTED RESOURCES	Beaumont, Taylor will commit both financial and in-kind resources, including staff time, charitable contributions and employee volunteerism.
PARTNERS	• National Kidney Foundation of Michigan • The Senior Alliance • 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. • Improve access and coordination of services for opioid use disorder through creation of multidisciplinary care team. • Pilot telehealth psychiatric assessment and care model via telecommunications technology in Emergency Department and primary care settings. • Pilot telehealth counseling assessment and care model via telecommunications technology with teens in school linked to Child and Adolescent Health Center.
COMMITTED RESOURCES	Beaumont, Taylor will commit both financial and in-kind resources, including staff time, charitable contributions and employee volunteerism.
PARTNERS	• CARE of Southeast Michigan • Community mental health agencies • Universal Health Services
EVALUATION	• Patients connected to community resources • Number of assessments and visits • Partnership agreements • Medical charting quality goals
Objective #2: Provide education program and services.	
OUTCOME MEASURES	• Increase knowledge and awareness of mental health.
STRATEGIES AND TACTICS	• Implement depression and anxiety prevention TRAILS program within the Child and Adolescent Health Center. • Provide education on mental health through community events and Beaumont Speakers Bureau. • Support awareness, resources and anti-drug knowledge and attitudes through the Child and Adolescent Health Center prevention peer education groups, substance abuse task force coalitions and Healthy Taylor coalition. • Explore opportunities to expand education on mental health prevention within local middle schools.
COMMITTED RESOURCES	Beaumont, Taylor will commit both financial and in-kind resources, including staff time, charitable contributions and employee volunteerism.
PARTNERS	• Community and Youth Advisory Councils • Detroit Wayne Mental Health Authority • Cities of Taylor, Lincoln Park and Ecorse • Taylor School District
EVALUATION	• Participation rates • Pre/post participant surveys