2019 COMMUNITY HEALTH NEEDS ASSESSMENT

IMPLEMENTATION STRATEGY

Building Healthier Lives and Communities

WAYNE

Beaumont, Wayne

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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.

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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:

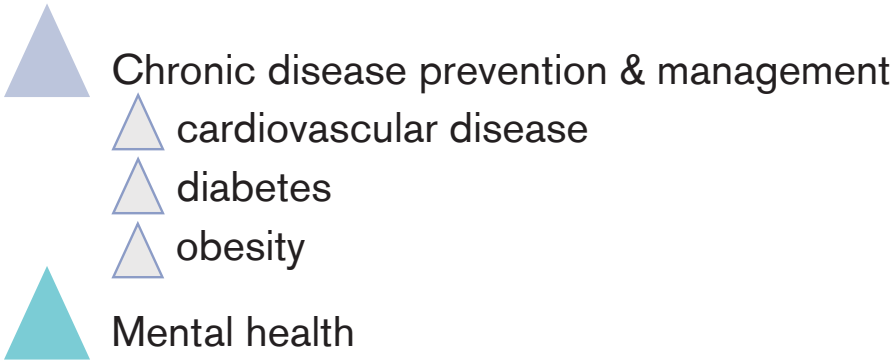
- Chronic disease prevention and management (cardiovascular disease, diabetes, obesity)
- Mental health

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:



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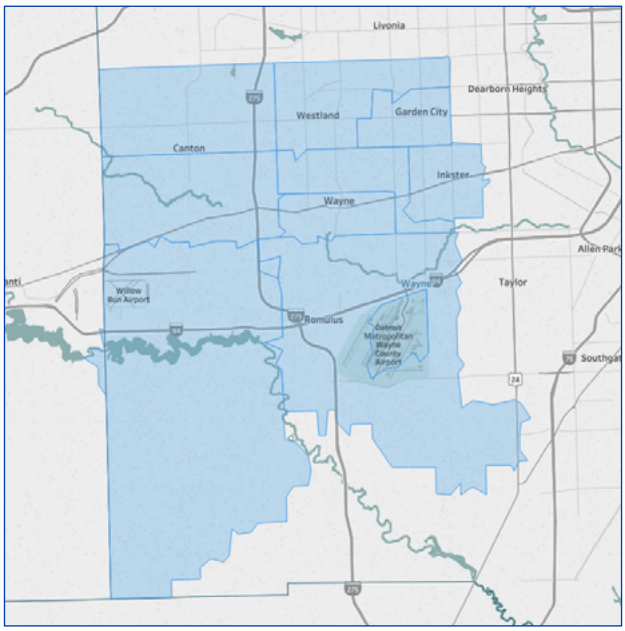
Beaumont, Wayne

Beaumont, Wayne opened its doors to western Wayne communities in 1957. This full-service hospital is the only hospital in the Wayne, Westland, Garden City, Canton, Inkster and Romulus area as a Level III designated trauma center. The hospital has a longstanding partnership with Detroit Metropolitan Airport and the Centers for Disease Control and Prevention to handle a wide variety of health and communicable disease concerns including mass trauma and emergency patients.

Community served

The Beaumont, Wayne 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, Wayne: Map of community served



Source: Beaumont Health, 2019

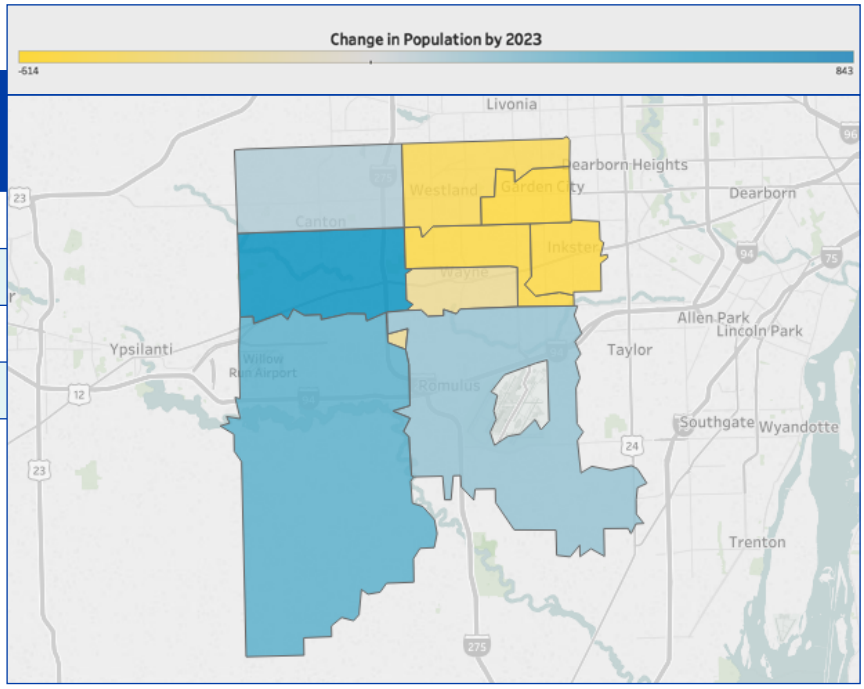
Demographic and socioeconomic summary

The population of the community served is expected to decrease 0.3% by 2023, a drop of almost 900 people. The community's population decline contrasts with Michigan's slow projected growth rate (0.6%) and higher national projected growth rate (3.5%). Only four of the nine community ZIP codes are expected to experience growth in the next five years:

Zip Codes	Growth in five years (# of people)
48188 Canton	**843**
48111 Belleville	**491**
48174 Romulus	**249**
48187 Canton	**152**

Source: IBM Watson Health / Claritas, 2018

2018 - 2023 Total population projected change by ZIP code



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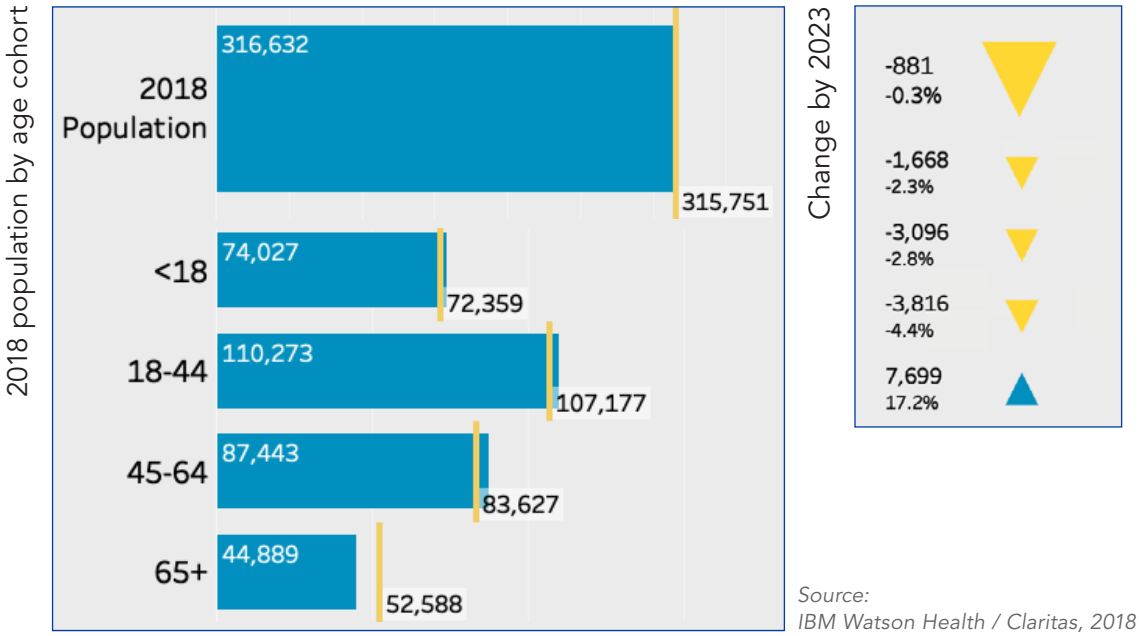
The community's population skews younger with 34.8% of the population ages 18-44 and 23.4% under age 18. The largest cohort (18-44) is expected to decrease by 3,096 people by 2023 and the age 65-plus cohort (14.2% of the population) is the only age group expected to grow (17.2% increase) over the next five years, adding 7,699 seniors to the community. Growth in the senior population will likely contribute to increased utilization of services as the population continues to age.

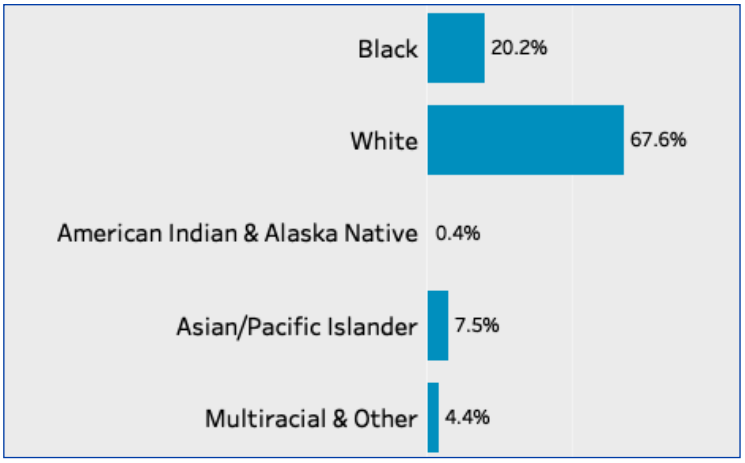


Population distribution by age

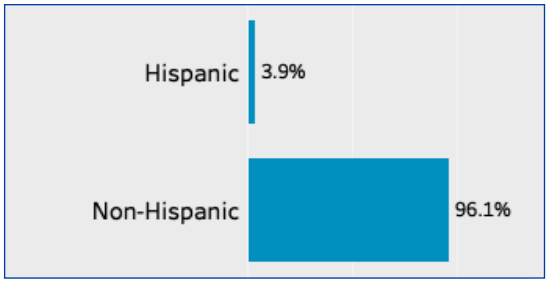
Source:
IBM Watson Health / Claritas, 2018

Population statistics are analyzed by race and by Hispanic ethnicity. The largest racial groups in the community are white (67.6%) and black (20.2%), but both populations are expected to decline over the next five years. The Asian/Pacific Islander and multi-racial populations are projected to grow significantly by 2023 (17% and 9% respectively). The Hispanic population (all races) is expected to grow by 9.9% or 1,200 people by 2023, while the non-Hispanic population (all races) is expected to decline by more than 2,100 people (-0.7%) by 2023.

2018 Population by race

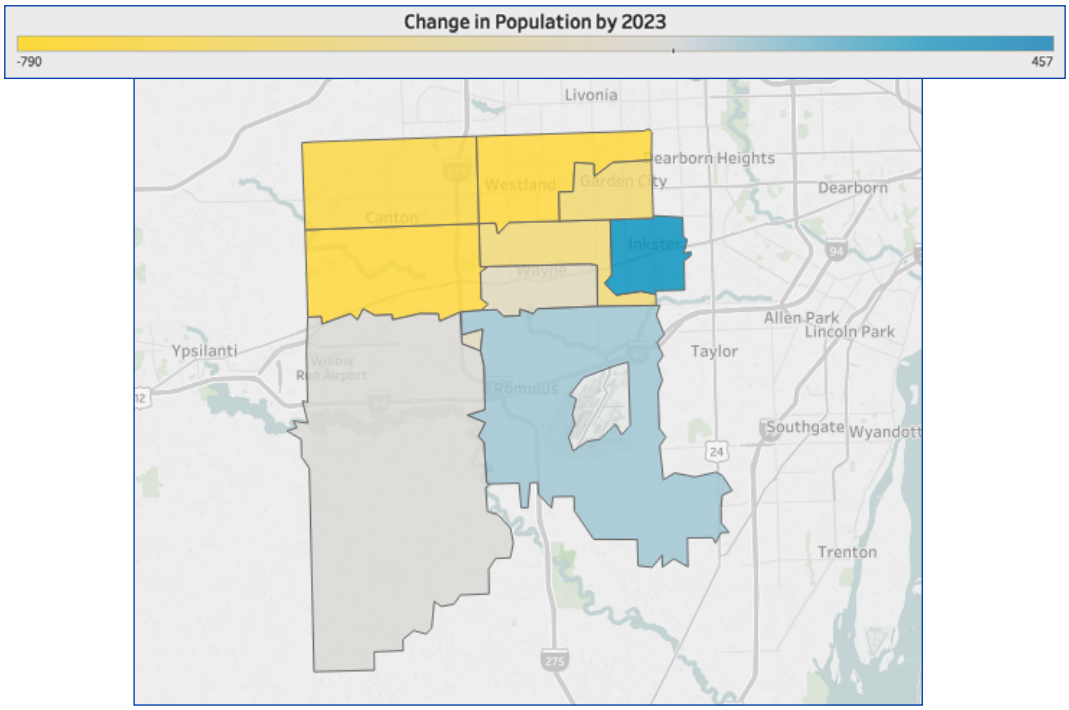


2018 Population by ethnicity



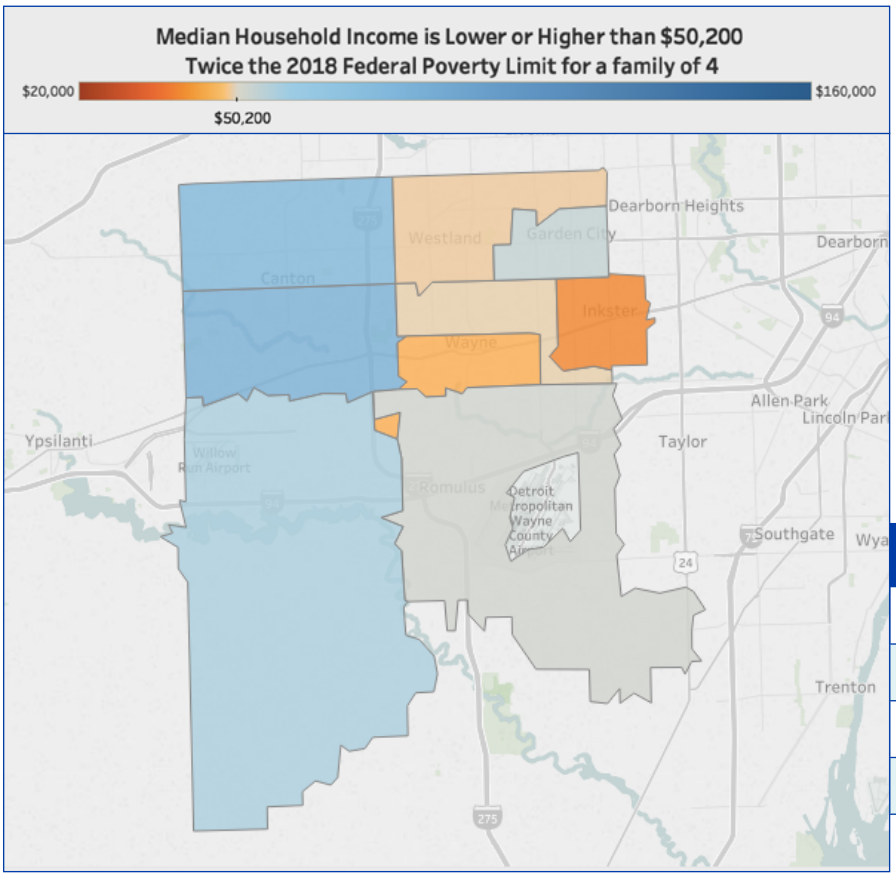
Source: IBM Watson Health / Claritas, 2018

2018 - 2023 White race population projected change by ZIP code



Source: IBM Watson Health / Claritas, 2018

2018 Median household income by ZIP code



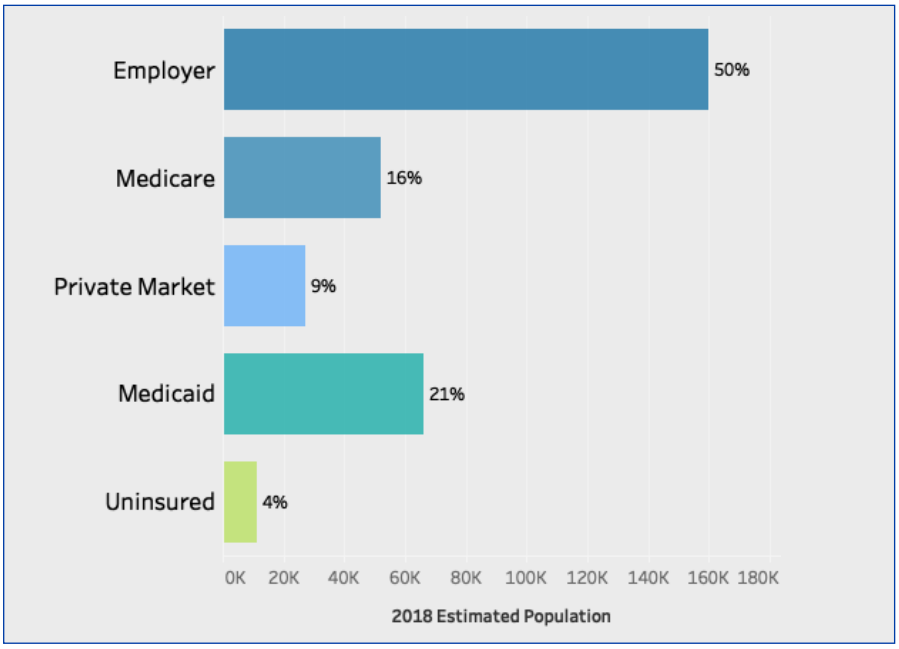
The 2018 median household income for the United States was $62,175 and $55,727 for the state of Michigan. The median household income for the ZIP codes within this community ranged from $34,676 for ZIP code 48141 - Inkster to $97,986 for ZIP code 48188 - Canton. There were four (4) ZIP codes with median household incomes less than $50,200, twice the 2018 federal poverty limit for a family of four:

Zip Codes	Income
48141 Inkster	**$34,676**
48184 Wayne	**$42,368**
48185 Westland	**$48,313**
48186 Westland	**$48,938**

Source: IBM Watson Health / Claritas, 2018

Half of the population (50%) was insured through employer sponsored health coverage followed by those with Medicaid (21%) and Medicare (16%). The remainder of the population was divided between 4% uninsured and 9% private market (the purchasers of coverage directly or through the health insurance marketplace).

2018 Estimated distribution of covered lives by insurance category



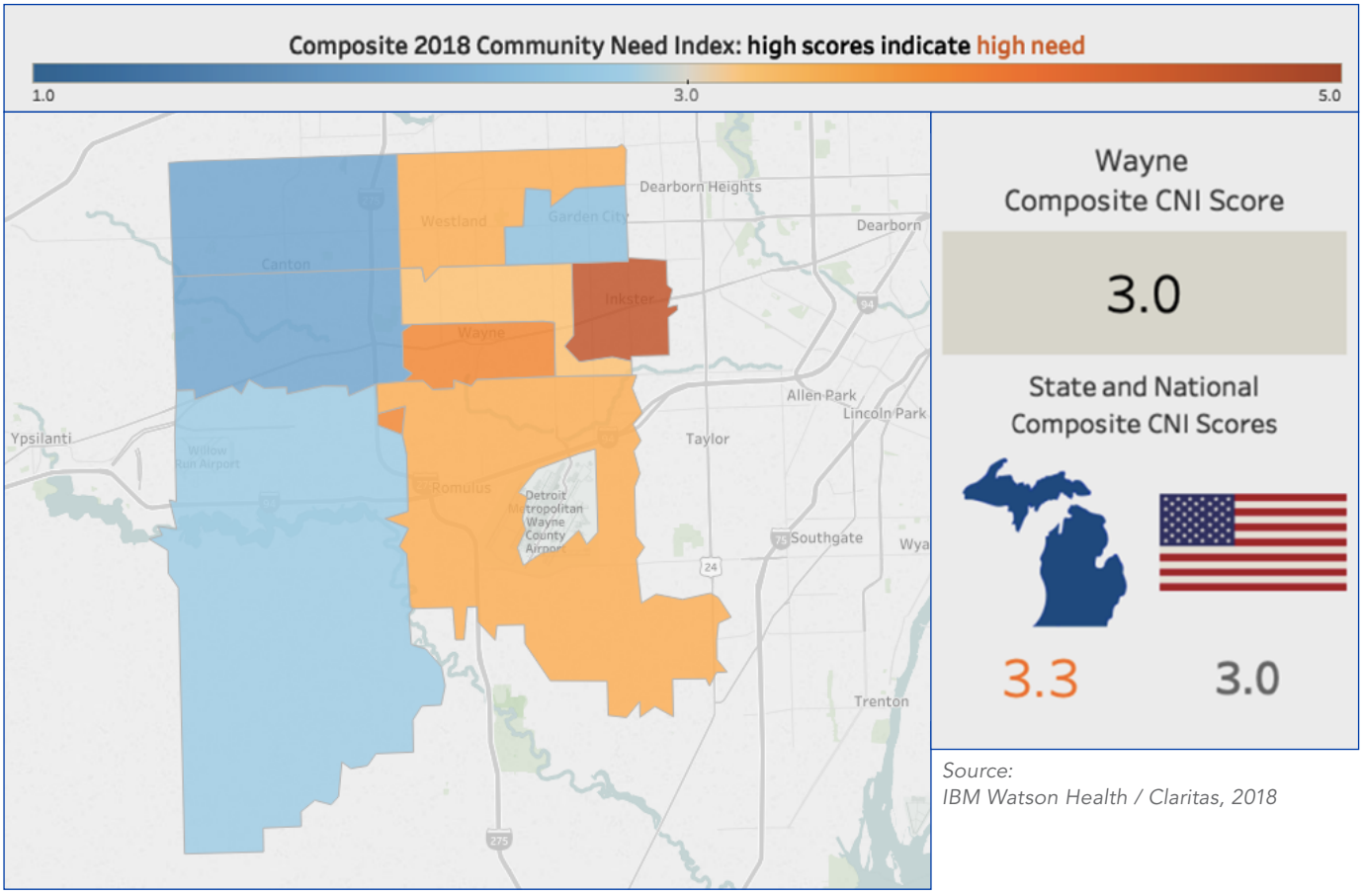
Source: IBM Watson Health / Claritas, 2018

Beaumont, Wayne

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 composite CNI score for the community served was 3.0, the same as the CNI national average and lower than the state average of 3.3. The 48141 ZIP code of Inkster was the only ZIP code with a CNI score greater than 4.5, pointing to potentially higher health needs among the population.

2018 Community need index by ZIP code



Source:
IBM Watson Health / Claritas, 2018

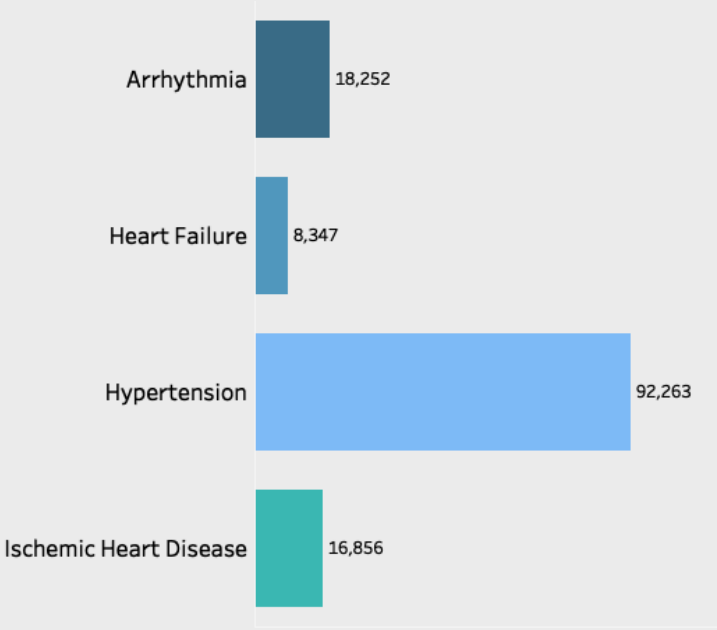
ZIP Map where color shows the community need index on a scale of 0 to 5. Orange color indicates high need areas (CNI = 4 or 5); blue color indicates low need (CNI = 1 or 2). Gray colors have needs at the national average (CNI = 3).

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 diagnosis; there were over 92,000 estimated cases in the community overall. The 48185 ZIP code of Westland had the most estimated cases of each heart disease type and the highest estimated prevalence rates for arrhythmia (65 cases per 1,000 population), heart failure (30 cases per 1,000 population) and ischemic heart disease (60 cases per 1,000 population). The 48135 ZIP code of Garden City had the highest estimated prevalence rates for hypertension (310 cases per 1,000 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

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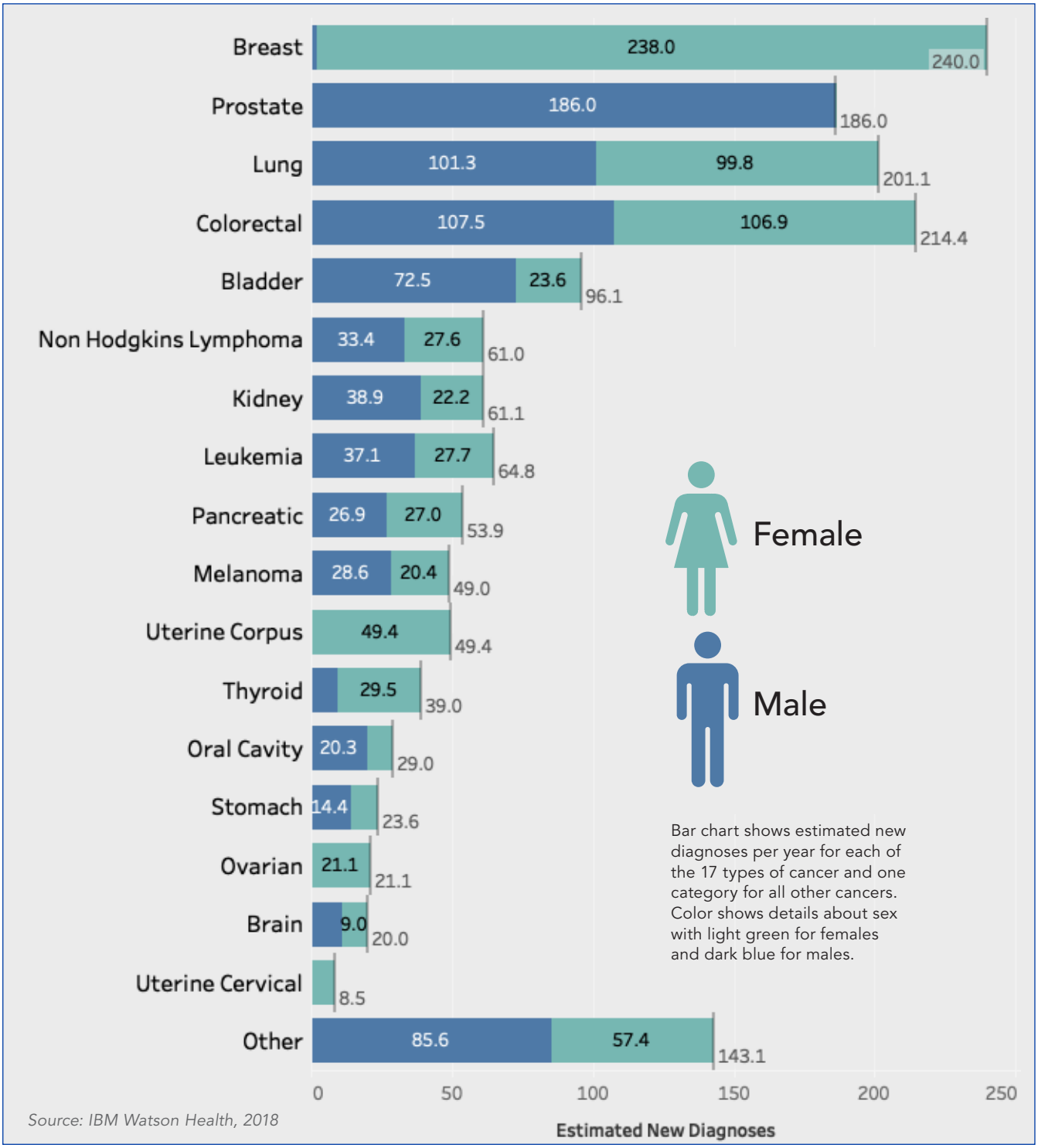
For this community, IBM Watson Health's 2018 cancer estimates revealed the cancers projected to have the greatest rate of growth in the next five years are pancreatic, bladder and melanoma, based on both population changes and disease rates. The cancers estimated to have the greatest number of new cases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

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	96	107	11.3%
Brain	20	21	3.7%
Breast	240	253	5.3%
Colorectal	214	202	-5.6%
Kidney	61	66	7.9%
Leukemia	65	70	8.2%
Lung	201	214	6.4%
Melanoma	49	54	10.2%
Non-Hodgkin's lymphoma	61	66	8.0%
Oral cavity	29	31	7.6%
Ovarian	21	22	4.2%
Pancreatic	54	60	11.4%
Prostate	186	184	-0.9%
Stomach	24	25	5.2%
Thyroid	39	43	9.1%
Uterine - cervical	8	8	-3.4%
Uterine - corpus	49	53	7.4%
Other	143	154	7.9%
Grand total	**1,561**	**1,633**	**4.6%**

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

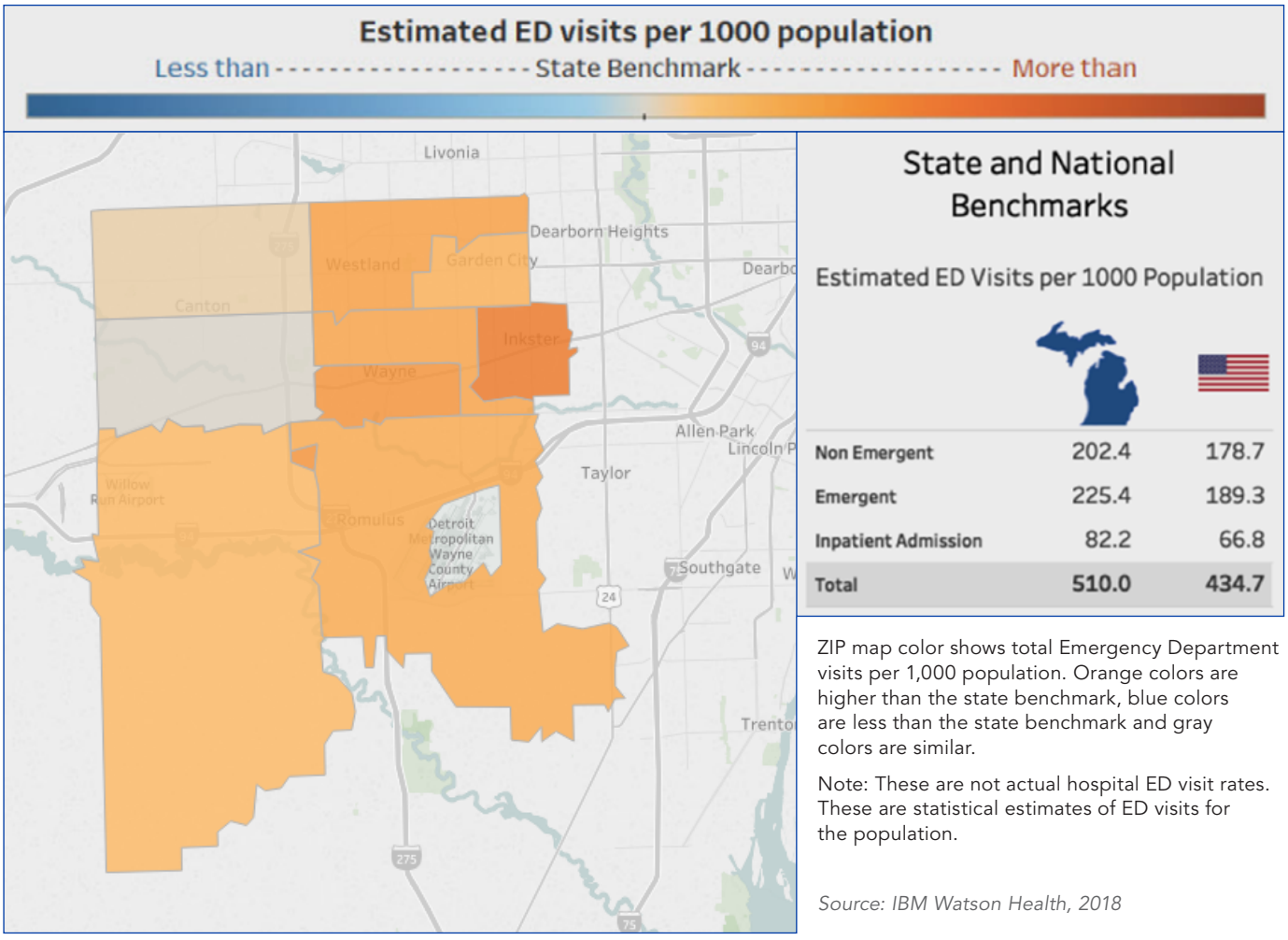
Beaumont, Wayne

Based on population characteristics and regional utilization rates, IBM Watson Health projected all Emergency Department visits in this community will increase by 0.4% over the next five years. The highest estimated ED use rate was in the 48141 ZIP code of Inkster; 735 ED visits per 1,000 residents compared to the Michigan state benchmark of 510 visits and the U.S. benchmark of 435 visits per 1,000.

These 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 ED visits can 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 will decrease by an average of 3.2% 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

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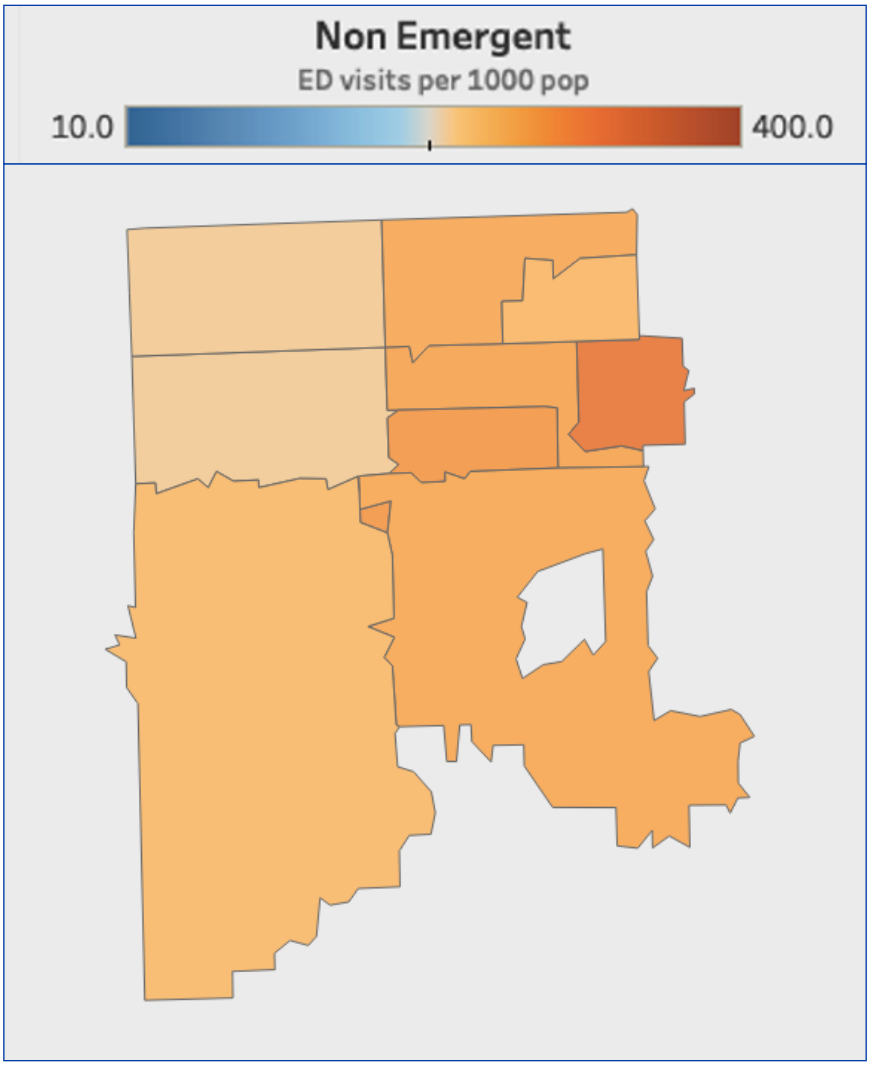
Non-emergent estimated 2018 Emergency Department visits by ZIP code



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.

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 for children, grocery store tours and food demonstrations to equip families with knowledge and skills to prepare healthy meals. • Continue multi-sector Healthy Wayne and Healthy Westland coalitions 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.
COMMITTED RESOURCES	Beaumont, Wayne 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 Wayne and Healthy Westland coalitions • Cities of Wayne and Westland • Wayne-Westland Community Schools • Michigan State University Extension
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 Wayne and Healthy Westland coalitions to improve walkability and bikeability across the community.
COMMITTED RESOURCES	Beaumont, Wayne will commit both financial and in-kind resources, including staff time, charitable contributions and employee volunteerism.
PARTNERS	• Cities of Wayne and Westland • Wayne-Westland Community Schools • Healthy Wayne and Healthy Westland Coalitions • City of Westland Pubic Library • HYPE Recreation Center • Lifetime Fitness Center of Canton • The Dance Academy
EVALUATION	• Participant surveys • Participation rates

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, Wayne 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 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, Wayne 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 the National Diabetes Prevention Program for adults with pre-diabetes or at high risk for diabetes.
COMMITTED RESOURCES	Beaumont, Wayne 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. • Pilot telehealth counseling assessment and care model via telecommunications technology with teens in schools linked to Child and Adolescent Health Centers.
COMMITTED RESOURCES	Beaumont, Wayne will commit both financial and in-kind resources, including staff time, charitable contributions and employee volunteerism.
PARTNERS	• Community mental health agencies • Universal Health Services • Romulus School District • Westwood School District
EVALUATION	• Patients connected to community resources • Partnership agreements
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 substance abuse task force coalitions and Healthy Wayne and Healthy Westland coalitions. • Explore opportunities to expand education on mental health prevention within local schools linked to Child and Adolescent Health Centers.
COMMITTED RESOURCES	Beaumont, Wayne will commit both financial and in-kind resources, including staff time, charitable contributions and employee volunteerism.
PARTNERS	• Westwood School District • Wayne-Westland School District • Healthy Wayne and Healthy Westland coalitions • City of Romulus • Lifetime Fitness Center of Canton • Detroit Wayne Mental Health Authority
EVALUATION	• Participation rates • Pre/post participant surveys • Unique page views