

Appendix A

Table 5: PCNA Data Sources and Key Measures Description

| Key Measure | Description | Year (s) | Source |
|---|--|-----------|---|
| HEALTH STATUS | | | |
| Morbidity | | | |
| Invasive Cancer Incidence Rate | New cases of All sites Invasive Cancer per 100,000 population, age-adjusted rates. | 2012-2016 | Michigan Cancer Surveillance Program: https://www.cancer-rates.info/mi/ . CDC U.S. Cancer Statistics: https://www.cdc.gov/cancer/uscs/ |
| Female Breast Cancer Incidence Rate | New cases of Female Breast Invasive Cancer per 100,000 population, age-adjusted rates. | 2012-2016 | Michigan Cancer Surveillance Program: https://www.cancer-rates.info/mi/ . CDC U.S. Cancer Statistics: https://www.cdc.gov/cancer/uscs/ |
| Prostate Gland Cancer Incidence Rate | New cases of Prostate Gland Invasive Cancer per 100,000 population, age-adjusted rates. | 2012-2016 | Michigan Cancer Surveillance Program: https://www.cancer-rates.info/mi/ . CDC U.S. Cancer Statistics: https://www.cdc.gov/cancer/uscs/ |
| Lung and Bronchus Cancer Incidence Rate | New Cases of Lung and Bronchus Invasive Cancer per 100,000 population, age-adjusted rates. | 2012-2016 | Michigan Cancer Surveillance Program: https://www.cancer-rates.info/mi/ . CDC U.S. Cancer Statistics: https://www.cdc.gov/cancer/uscs/ |
| Colon Rectum Cancer Incidence Rate | New Cases of Colon Rectum Invasive Cancer per 100,000 population, age-adjusted rates. | 2012-2016 | Michigan Cancer Surveillance Program: https://www.cancer-rates.info/mi/ . CDC U.S. Cancer Statistics: https://www.cdc.gov/cancer/uscs/ |
| Diabetes Prevalence (%) | Percent of adults with diagnosed diabetes, age adjusted. USDSS restricted county estimates to adults aged 20 years or older to be, while MI and U.S. data are among adults aged 18 years or older. | 2016 | U.S. Diabetes Surveillance System (USDSS); CDC Division of Diabetes Translation. www.cdc.gov/diabetes/data |
| HIV Prevalence Rate | Total number of people currently living with HIV (PLWH) per 100,000 population. | 2018 | Michigan Statewide HIV Surveillance Report, New Diagnoses and Prevalence Tables – July 2019 CDC NCHHSTP AtlasPlus. Updated 2019. https://www.cdc.gov/nchhstp/atlas/index.htm |
| Chlamydia Rate | Reported diagnosed cases of Chlamydia per 100,000 population. | 2018 | MDHHS Disease Surveillance System. CDC NCHHSTP AtlasPlus: https://www.cdc.gov/nchhstp/atlas/index.htm , https://www.cdc.gov/std/stats18/tables/1.htm |
| Gonorrhea Rate | Reported diagnosed cases of Gonorrhea per 100,000 population. | 2018 | MDHHS Disease Surveillance System. CDC NCHHSTP AtlasPlus: https://www.cdc.gov/nchhstp/atlas/index.htm , https://www.cdc.gov/std/stats18/tables/1.htm |
| Primary & Secondary Syphilis Rates | Reported diagnosed cases of Primary & Secondary (P & S) Syphilis per 100,000 population. | 2018 | MDHHS Disease Surveillance System. CDC NCHHSTP AtlasPlus: https://www.cdc.gov/nchhstp/atlas/index.htm , https://www.cdc.gov/std/stats18/tables/1.htm |
| Acute Hepatitis C Rate | Reported diagnosed cases of acute Hepatitis C (HCV) per 100,000 population. | 2018 | MDHHS Viral Hepatitis Surveillance and Prevention Unit. Hepatitis B and C Annual Surveillance Report . CDC Surveillance for Viral Hepatitis – U.S., 2017: https://www.cdc.gov/hepatitis/statistics/2017surveillance/index.htm |
| Maternal-Infant Health | | | |
| Preterm Live Births (%) | Infants born prior to 37 completed weeks of gestation per 100 live births, 5-year average. | 2014-2018 | Geocoded Michigan Birth Certificate Registry, MDHHS Division for Vital Records & Health Statistics CDC Natality Files Natality public-use data 2007-2018, on CDC WONDER Online Database, September 2019. http://wonder.cdc.gov/natality-current.html |
| Low Birthweight (%) | Live births weighing less than 2,500 grams per 100 live births. 5-year average. | 2014-2018 | Geocoded Michigan Birth Certificate Registry, MDHHS Division for Vital Records & Health Statistics CDC Natality Files Natality public-use data 2007-2018, on CDC WONDER Online Database, September 2019. http://wonder.cdc.gov/natality-current.html |
| Infant Mortality Rate | Number of deaths per 1,000 live births of children under one year of age, 5-year average. | 2014-2018 | MDHHS Division for Vital Records & Health Statistics . CDC WONDER On-line Database. Linked Birth / Infant Death Records 2007-2017. http://wonder.cdc.gov/lbd-current.html |

| Key Measure | Description | Year (s) | Source |
|---|--|-----------|--|
| Neonatal Abstinence Syndrome (NAS) Rate | Infants discharged from Hospitals for Treated Drug Withdrawal Syndrome per 100,000 births. | 2017 | MDHHS Division for Vital Records & Health Statistics. HCUP Fast Stats - Map of Neonatal Abstinence Syndrome (NAS) Among Newborn Hospitalizations. Retrieved from https://www.hcup-us.ahrq.gov/faststats/NASMap |
| Mortality | | | |
| Total Mortality Rate (All Causes) | All causes of death per 100,000 population, age-adjusted rates. | 2018 | MDHHS Division for Vital Records & Health Statistics. Geocoded Michigan Death Certificate Registry Mortality in the U.S., 2018. NCHS Data Brief, no 355. https://www.cdc.gov/nchs/data/databriefs/db355-h.pdf |
| Heart Disease Mortality Rate | Heart Disease deaths per 100,000 population, age-adjusted rates. | 2018 | MDHHS Division for Vital Records & Health Statistics. Geocoded Michigan Death Certificate Registry Mortality in the U.S., 2018. NCHS Data Brief, no 355. https://www.cdc.gov/nchs/data/databriefs/db355-h.pdf |
| Cancer Mortality Rate | Cancer (malignant neoplasms) deaths per 100,000 population, age-adjusted rates. | 2018 | MDHHS Division for Vital Records & Health Statistics. Geocoded Michigan Death Certificate Registry Mortality in the U.S., 2018. NCHS Data Brief, no 355. https://www.cdc.gov/nchs/data/databriefs/db355-h.pdf |
| Chronic Lower Respiratory Diseases Mortality Rate | Chronic Lower Respiratory Disease deaths per 100,000 population, age-adjusted rates. | 2018 | MDHHS Division for Vital Records & Health Statistics. Geocoded Michigan Death Certificate Registry Mortality in the U.S., 2018. NCHS Data Brief, no 355. https://www.cdc.gov/nchs/data/databriefs/db355-h.pdf |
| Stroke Mortality Rate | Stroke deaths per 100,000 population, age-adjusted rates. | 2018 | MDHHS Division for Vital Records & Health Statistics. Geocoded Michigan Death Certificate Registry Mortality in the U.S., 2018. NCHS Data Brief, no 355. https://www.cdc.gov/nchs/data/databriefs/db355-h.pdf |
| Alzheimer's Disease Mortality Rate | Alzheimer's Disease deaths per 100,000 population, age-adjusted rates. | 2018 | MDHHS Division for Vital Records & Health Statistics. Geocoded Michigan Death Certificate Registry Mortality in the U.S., 2018. NCHS Data Brief, no 355. https://www.cdc.gov/nchs/data/databriefs/db355-h.pdf |
| Diabetes Mellitus Mortality Rate | Diabetes Mellitus deaths per 100,000 population, age-adjusted rates. | 2018 | MDHHS Division for Vital Records & Health Statistics. Geocoded Michigan Death Certificate Registry Mortality in the U.S., 2018. NCHS Data Brief, no 355. https://www.cdc.gov/nchs/data/databriefs/db355-h.pdf |
| Kidney Disease Mortality Rate | Kidney Disease deaths per 100,000 population, age-adjusted rates. | 2018 | MDHHS Division for Vital Records & Health Statistics. Geocoded Michigan Death Certificate Registry Mortality in the U.S., 2018. NCHS Data Brief, no 355. https://www.cdc.gov/nchs/data/databriefs/db355-h.pdf |
| Pneumonia/ Influenza Mortality Rate | Pneumonia/ Influenza deaths per 100,000 population, age-adjusted rates. | 2018 | MDHHS Division for Vital Records & Health Statistics. Geocoded Michigan Death Certificate Registry Mortality in the U.S., 2018. NCHS Data Brief, no 355. https://www.cdc.gov/nchs/data/databriefs/db355-h.pdf |
| Intentional Self-harm (Suicide) Mortality Rate | Intentional Self-harm deaths per 100,000 population, age-adjusted rates. | 2018 | MDHHS Division for Vital Records & Health Statistics. Geocoded Michigan Death Certificate Registry Mortality in the U.S., 2018. NCHS Data Brief, no 355. https://www.cdc.gov/nchs/data/databriefs/db355-h.pdf |
| Drug-Induced Mortality Rate | All drug-induced deaths per 100,000 population, age-adjusted rates. | 2018 | MDHHS Division for Vital Records & Health Statistics CDC WONDER Online Database. Data are from the Multiple Cause of Death Files, 1999-2018: http://wonder.cdc.gov/ucd-icd10.html |
| Opioid Overdose Mortality Rate | Opioid poisoning deaths per 100,000 population, age-adjusted rates. | 2018 | MDHHS Division for Vital Records & Health Statistics |
| Alcohol-Induced Mortality Rate | Alcohol-induced deaths per 100,000 population, age-adjusted rates | 2018 | MDHHS Division for Vital Records & Health Statistics CDC WONDER Online Database. Data are from the Multiple Cause of Death Files, 1999-2018: http://wonder.cdc.gov/ucd-icd10.html |
| SOCIO DETERMINANTS OF HEALTH | | | |
| Demographics and Socio-Economic Factors | | | |
| Population under 5 y/o (%) | Percent of children under 5 years old. | 2014-2018 | U.S. Census Bureau, 2018 ACS 5-year Estimates. Table S0101 |
| Population 65 years and over (%) | Percent of people 65 years of age and older. | 2014-2018 | U.S. Census Bureau, 2018 ACS 5-year Estimates. Table S0101 |

| Key Measure | Description | Year (s) | Source |
|---|--|-----------|--|
| Population with a disability (%) | Percent of people who exhibit difficulty with specific functions: hearing, vision, cognitive, ambulatory, self-care, or independent living difficulty. | 2014-2018 | U.S. Census Bureau, 2018 ACS 5-year Estimates. Table S1810 |
| Population with no high school diploma (%) | Percent of adults (people 25 years old and over) who have not completed high school. | 2014-2018 | U.S. Census Bureau, 2018 ACS 5-year Estimates. Table S1501. |
| Unemployment Rate (%) | Number of unemployed people as a percentage of the civilian labor force (16 years and over). Annual averages. | 2018 | U.S. Bureau of Labor Statistics (BLS), Local Area Unemployment Statistics (LAUS). https://www.bls.gov/lau/#tables |
| Annual Median Household (\$) | Income of the householder and all other individuals 15 years old and over in the household for the past 12 months. | 2014-2018 | U.S. Census Bureau, 2018 ACS 5-year Estimates. Table S1903. |
| Percent of population below 100% FPL | Percent of people below 100% poverty level. | 2014-2018 | U.S. Census Bureau, 2018 ACS 5-year Estimates. Table S1701 |
| Percent of population below 200% FPL | Percent of people below 200% poverty level. | 2014-2018 | U.S. Census Bureau, 2018 ACS 5-year Estimates. Table S1701 |
| Food Insecurity Rate (%) | Percent of population (overall) who lack adequate access to food. | 2017 | Feeding America – Map the Meal Gap (overall and child data available): https://map.feedingamerica.org/ |
| Eviction Rate (%) | Number of evictions per 100 renter homes. | 2016 | The Eviction Lab at Princeton University: https://evictionlab.org/ |
| Health Risk Factors and Behaviors | | | |
| Obesity Prevalence (%) | The percentage of adults with self-reported diabetes who were obese (BMI >=30), age adjusted. | 2016 | U.S. Diabetes Surveillance System; Division of Diabetes Translation – CDC. www.cdc.gov/diabetes/data 2017 CDC Data Briefs https://www.cdc.gov/nchs/data/databriefs/db288.pdf |
| Physical Inactivity (%) | The percentage of adults with self-reported diabetes who also reported doing no physical activity in the past 30 days. | 2016 | U.S. Diabetes Surveillance System; Division of Diabetes Translation – CDC. www.cdc.gov/diabetes/data |
| Late or No Prenatal Care, PNC (%) | Percent of mothers who did not begin prenatal care in first trimester. | 2018 | MDHHS Division for Vital Records & Health Statistics. CDC Natality Files on CDC WONDER Online Database https://wonder.cdc.gov/nativity.html |
| Maternal Tobacco Use (%) | Percent of women who used tobacco during pregnancy. | 2018 | Geocoded Michigan Birth Certificate Registry, MDHHS Division for Vital Records & Health Statistics CDC Natality Files Natality public-use data 2007-2018, on CDC WONDER Online Database. http://wonder.cdc.gov/nativity-current.html |
| Teen Births (%) | Number of births per 1,000 female population ages 15-19. | 2018 | Geocoded Michigan Birth Certificate Registry, MDHHS Division for Vital Records & Health Statistics CDC Natality Files Natality public-use data 2007-2018, on CDC WONDER Online Database. http://wonder.cdc.gov/nativity-current.html |
| Blood Lead Levels in Children (%) | Percent of children with elevated blood lead level (EBLL). | 2017 | MDHHS Division of Environmental Health. Childhood Lead Poisoning Prevention Program (CLPPP) 2017 Annual Report. |
| Health Care Access and Preventive Services | | | |
| Population uninsured (%) (under 65 y/o) | Percent of persons under age 65 uninsured. | 2017 | U.S. Census Bureau, Small Area Health Insurance Estimates (SAHIE) Program. https://www.census.gov/programs-surveys/sahie.html |
| Preventable Hospitalizations Rate (%) | Percent of all hospitalizations that were categorized as ambulatory care sensitive hospitalizations. | 2017 | Michigan Resident Inpatient Files created by the MDHHS Division for Vital Records and Health Statistics https://www.mdch.state.mi.us/pha/osr/CHI/HOSP/FRAME.HTML National HCUP Statistical Brief #99. Potentially Preventable Hospitalizations for Acute and Chronic Conditions (2008): http://www.hcup-us.ahrq.gov/reports/statbriefs/sb99.pdf |
| Hospital Stays Related to Mental and/or Substance Use Disorders | Age/sex adjusted rate of discharges (stays) due to Alcohol and Other Drugs per 100,000 population. | 2016 | Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUPnet): https://hcupnet.ahrq.gov/#setup |

| Key Measure | Description | Year (s) | Source |
|--|---|----------|---|
| Annual Medical Exams | Percentage of fee-for-service (FFS) Medicare enrollees that had an annual wellness visit, age-adjusted. | 2017 | CMS Office of Minority Health's Mapping Medicare Disparities (MMD) Tool: https://data.cms.gov/mapping-medicare-disparities |
| Annual Flu Shot (%) | Percentage of fee-for-service (FFS) Medicare enrollees that had an annual flu vaccination, age-adjusted. | 2017 | CMS Office of Minority Health's Mapping Medicare Disparities (MMD) Tool: https://data.cms.gov/mapping-medicare-disparities Other Source (State/National Level): CDC National Center for Immunization and Respiratory Diseases (NCIRD): https://www.cdc.gov/flu/fluview/interactive.htm |
| Access to Fluoridated Water (%) | Percent of total population with access to optimally fluoridated water. Fluoridated water includes adjusted and optimal natural systems. | 2018 | Michigan Water Fluoridation Reporting System, 2018. Numerator: Michigan residents accessing optimally fluoridated water. Denominator: Total Michigan residents in the county. National Water Fluoridation Statistics (2016). CDC Division of Oral Health. https://www.cdc.gov/fluoridation/statistics/2016stats.htm |
| Population to One PCP FTE Ratio | Population to one Primary Care Physician (PCP) full time equivalent (FTE) Ratio. PCP include MDs and DOs in General or Family Practice, Internal Medicine, Obstetrics and Gynecology, and Pediatrics. Ratio based on total estimated direct patient care provider hours/ FTE and total county population. | 2020 | Provider data come from the Michigan Shortage Designation Management System (SDMS), as of 02/2020. Population estimates are from the 2018 American Community Survey 5-year estimates. U.S. Census Bureau. |
| Population to One OBGYN FTE Ratio | Women of reproductive age (aged 15-44 years) to one OBGYN Physician full time equivalent (FTE) Ratio. Ratio based on total estimated direct patient care provider hours/ FTE and total county population. | 2020 | Provider data come from the Michigan Shortage Designation Management System (SDMS), as of 02/2020. Population estimates are from the 2018 American Community Survey 5-year estimates. U.S. Census Bureau. |
| Population to One Psychiatrist FTE Ratio | Population to one Psychiatrist full time equivalent (FTE) Ratio. Ratio based on total estimated direct patient care provider hours/ FTE and total county population. | 2020 | Provider data come from the Michigan Shortage Designation Management System (SDMS), as of 02/2020. Population estimates are from the 2018 American Community Survey 5-year estimates. U.S. Census Bureau. |
| Population to One Dentist FTE | Population to one Dentist full time equivalent (FTE) Ratio. Ratio based on total estimated direct patient care provider hours/ FTE and total county population. | 2020 | Provider data come from the Michigan Shortage Designation Management System (SDMS), as of 02/2020. Population estimates are from the 2018 American Community Survey 5-year estimates. U.S. Census Bureau. |