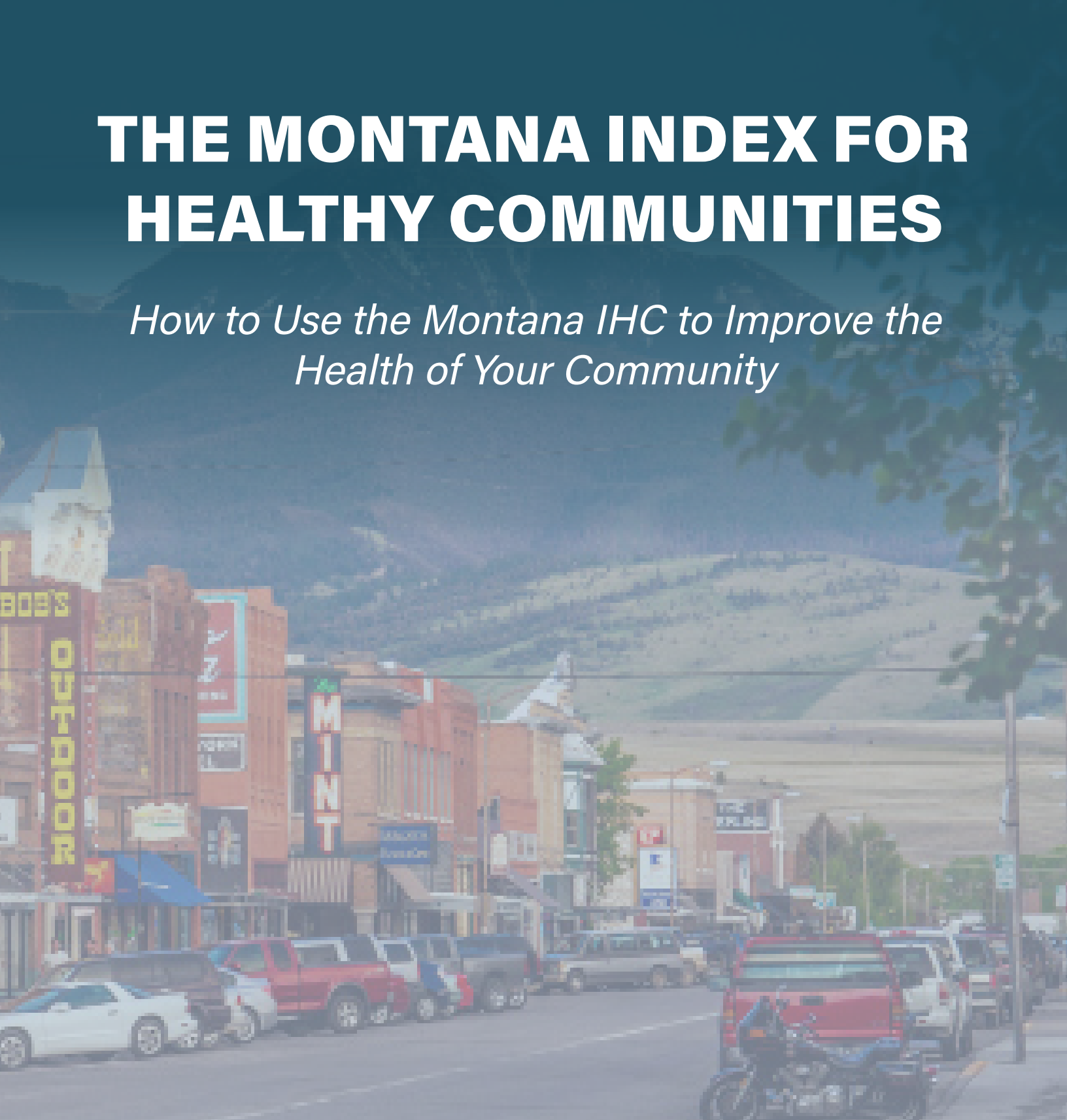
# THE MONTANA INDEX FOR HEALTHY COMMUNITIES

*How to Use the Montana IHC to Improve the Health of Your Community*




CONVERGENCE HEALTH CONSULTING

Montana Index for Healthy Communitites

# GUIDING EFFORTS TO IMPROVE HEALTH

The Montana Index for Healthy Communities (IHC) is a health and social needs index that quantifies social, economic, and health care-related factors that influence the health of Montanans. Many health outcomes are associated with non-clinical factors, such as access to housing or healthy food. A social needs index like the IHC can identify opportunities to improve health through investing both within and beyond the health care delivery system.

The IHC shows the health care and socio-economic domains (such as provider supply or housing & transportation) with the most need, as well as the geographic areas that could benefit most from investments in these social drivers of health (SDOH). With insights from the index, hospitals and their partners can imagine new ways to collaborate and support the communities with the greatest need.

**SOCIAL & HEALTH** needs are *intertwined*

**YOUR ONLY GROCERY STORE → MORE OBESITY → MORE DIABETES → WORSE HEALTH OUTCOMES**

## START THE CONVERSATION:

**"What investments or interventions to address social drivers of health could have the greatest impact on your community?"**

**Hospital leaders might wonder "What's our role? We've never addressed these things before."**

Taking action to address social drivers of health will require all partners to reimagine the ways in which they interact with and invest in their community. Instead of thinking "that's not our role," the IHC prompts us to brainstorm new ways to reconfigure our relationships and roles to address persistent social and economic needs.

1. Read more about the social determinants of health on the Healthy People 2030 website: https://health.gov/healthypeople/priority-areas/social-determinants-health

# A DIAGNOSTIC TOOL

The IHC helps to identify the factors that contribute most to health outcomes, and it guides us to diagnose the most pressing challenges within our communities. High scores overall or in any of the individual domains are not a negative depiction of the community. Rather, the scores are a way to highlight the greatest opportunities to improve health. With this information in hand, we can analyze additional data, talk with other community members, and brainstorm ideas to proactively address the areas with greatest need.

### DOMAIN SPOTLIGHT: HISTORICALLY MARGINALIZED POPULATIONS

This domain includes self-reported data from the American Community Survey for populations who are at higher risk for poor health outcomes, due to a number of factors:

- over 80 years old
- disabled
- veterans
- publicly insured
- American Indian or Alaska Native
- Hispanic
- non-white

A higher score in this domain is not a negative depiction of the community, but rather a way to highlight the need to prioritize programs that are designed in partnership with those community members. Hospitals and communities should engage these groups in the design and implementation of programs to ensure they are culturally appropriate and address the most pressing needs.

The IHC includes scores for 6 health-related domains and 8 socio-economic domains, which roll up into an overall score. See Appendix A for definitions of each domain and a list of the variables included:

### HEALTH-RELATED DOMAINS

- Disease prevalence
- Disease prevention
- Health insurance
- Provider supply
- Treated prevalence
- Health behaviors

### SOCIO-ECONOMIC DOMAINS

- Housing & transportation
- Employment
- Education
- Connectivity
- Household structure
- Income & poverty
- Food access
- Historically marginalized populations

The IHC includes the most recent data available for each metric as of June 2022. Data sources include:

- Centers for Disease Control and Prevention Population Level Analysis and Community Estimates, 2019
- Health Resources and Services Administration Area Health Resource File, 2019
- Montana Hospital Association encounter data, 2017-2021
- American Community Survey, 2019

# WHAT DOES THE INDEX SHOW?

The IHC includes:

- **Montana-specific data and domains.** Other indices[2] do not account for factors that may influence health in rural and frontier communities, such as lack of access to internet connectivity and provider shortage areas. The IHC includes additional data sources to fill these gaps.
- **Socio-economic and health care factors.** Other social indices do not include measures of health care access, such as provider availability and health insurance coverage. The IHC includes both socio-economic and health care domains to demonstrate where and how the availability of health care services may compound other non-clinical factors.
- **Hospital service areas.** The IHC defines hospital service areas, which are determined by patients' zip codes. These service areas help hospitals understand at a granular level where their patients live. Hospitals can analyze the proportion of patients that come from each zip code, as well as the relative levels of need within each zip code, to understand where interventions might have the most impact.
- **Drill down by geography and domain.** IHC scores are relative to other hospital service areas in Montana, which gives users a sense of how their community compares to others in the state. The IHC includes an overall score for each hospital service area as well as domain-specific scores. Users can also drill down to see scores at the zip code level, which provides insight into the geographic areas where interventions may have the most impact.

The IHC is **NOT:**

- **A performance measure,** but rather a description of needs in your community.
- **A set of clear answers.** The IHC may change how you think about prioritizing investments or interventions to maximize impact; however, it does not provide clear cut solutions.
- **Meant to be used without additional context and insight from community partners.** The IHC is a starting point for conversations with partners, who will bring a deeper understanding of both needs and potential solutions.
- **An exhaustive description of all needs or vulnerabilities in community.** The index shows trends based on a prioritized set of metrics but may not capture all of the challenges your patients face.

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2 Similar indices include the Center for Disease Control's Social Vulnerability Index and the University of Wisconsin's Area Deprivation Index.

# HOW TO USE THE INDEX

The IHC helps partners – including hospitals, health systems, community-based organizations, tribal nations, policymakers, and state or federal agencies – who want to improve health outcomes by addressing SDOH, or the non-clinical factors that affect health. Below is a step-by-step example of how you might use the IHC to prioritize investments in your community. The data in the examples below are fictional and meant only to illustrate how a hospital might go about analyzing and using the IHC.

***Step 1. Assess overall and domain-specific scores.*** Each hospital has an overall IHC score; overall scores for the health and socioeconomic contexts; and scores for each of the 14 domains. Scores show the relative ranking in the state, compared to other hospital service areas. This example includes IHC score for three hospitals. Higher scores, which indicate higher levels of need, are highlighted in orange.

Table 1. Example MT IHC Scores

| | IHC | | | HEALTH CONTEXT | | | | | | SES CONTEXT | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Hospital Type** | Overall IHC Score | Health IHC | Socio-Economic IHC | Disease Prevalence | Disease Prevention | Health Behaviors | Provider Supply | Treated Prevalence | Health Insurance | Connectivity | Education | Employment | Food Access | Household Strcuture | Housing/Transportation | Income/Poverty | Historically Marganalized |
| **#1 Critical access hospital (CAH)** | 55 | 58 | 54 | 45 | 70 | 56 | 40 | 55 | 33 | 70 | 65 | 50 | 21 | 35 | 58 | 50 | 30 |
| **#2 Large community hospital** | 68 | 65 | 71 | 67 | 54 | 66 | 53 | 65 | 67 | 63 | 65 | 71 | 37 | 65 | 66 | 70 | 70 |
| **#3 CAH near a reservation** | 85 | 85 | 84 | 87 | 74 | 74 | 35 | 70 | 90 | 78 | 85 | 56 | 55 | 70 | 63 | 90 | 90 |

**Closer to ZERO = Low Needs** **Closer to 100 = High Needs**

As you begin to review data, consider whether the scores seem accurate based on your lived experience. Also consider who else would need to be at the table to talk about whether or not they are accurate and what they mean. For example, would others in your community have different perspectives or experiences?

For more ideas, reference the Montana Department of Public Health and Human Services Community Health Data Resource Guide, which includes questions to guide data analysis and interpretation.

***Step 2. Dig deeper to understand how needs vary by zip code.*** Use your hospital's Geographic Drilldown Report to get a more detailed understanding of the specific zip codes that could most benefit from new programs or resources.

First, assess which zip codes account for the greatest percentage of encounters in your facility (column F). You can also see where your facility treats a high percent of the overall population in a given zip code (column G). In the example below, most of the patients who visit "Your Hospital" come from Community A and Community B. Visits from patients in Communities D, E and F are a small percentage of Your Hospital's overall encounters; however, those visits account for between 20 and 30 percent of the overall number of visits in those zip codes. This means your facility has a relatively large potential for influence in those communities, despite the small number of encounters.

Table 2. Example Geographic Drilldown Report

| NAME | CITY | DISCHARGE 2017-21 | BEDS | | |
|---|---|---|---|---|---|
| YOUR HOSPITAL | YOUR CITY | 467 | 28 | F | G |
| **NAME** | **ZIP CODE** | **POST OFFICE NAME** | **IP & OP ENCOUNTERS** | **IP & OP ENCOUNTER PCT** | **ZIP CODE SHARE PCT.** |
| **YOUR HOSPITAL** | **TOTAL** | **TOTAL** | **56,845** | **100%** | **NA** |
| YOUR HOSPITAL | 59XXA | Community A | 36,541 | 64% | 58% |
| YOUR HOSPITAL | 59XXB | Community B | 14,294 | 25% | 29% |
| YOUR HOSPITAL | 59XXC | Community C | 1,432 | 3% | 2% |
| YOUR HOSPITAL | 59XXD | Community D | 1,001 | 2% | 18% |
| YOUR HOSPITAL | 59XXE | Community E | 890 | 2% | 33% |
| YOUR HOSPITAL | 59XXF | Community F | 729 | 1% | 18% |

Next, consider which domain you want to work on, based on the domain-specific scores. Then, analyze which zip codes show the greatest need for that domain. You might determine the greatest level of need to be based on a combination of both the overall score and the size of the population that is potentially impacted, among other factors.

In table 3, Your Hospital is planning a program to address internet connectivity. You may consider targeting the zip code titled "Community B", given that this zip code accounts for a fairly large portion of overall discharges to your facility and has a very high internet connectivity score.

Table 3. Example Domain Drilldown: Internet Connectivity

| ZIP CODE | POST OFFICE NAME | IP & OP ENCOUN-TERS | IP & OP ENCOUNTER PCT | ZIP CODE SHARE PCT. | CONNECTIVITY DOMAIN SCORE |
|---|---|---|---|---|---|
| **TOTAL** | **TOTAL** | **56,845** | **100%** | **NA** | **78** |
| 59XXA | Community A | 36,541 | 64% | 58% | 70 |
| 59XXB | Community B | 14,294 | 25% | 29% | 97 |
| 59XXC | Community C | 1,432 | 3% | 2% | 73 |
| 59XXD | Community D | 1,001 | 2% | 18% | 89 |
| 59XXE | Community E | 890 | 2% | 33% | 94 |
| 59XXF | Community F | 729 | 1% | 18% | 94 |
| 59XXG | Community G | 602 | 1% | 5% | 89 |

***Step 3. Consider partners for your work.*** Use the Share Drilldown Report to understand the other facilities that treat patients in the zip codes you serve. These other organizations are similarly motivated to improve the health of those communities and may therefore be interested in partnering to invest in addressing SDOH. With pooled resources or coordinated efforts you may be able to make a greater impact.

In table 4, Your Hospital may consider partnering with Facility B, given that they treat the largest number of patients in Community B. Together, you treat over 60 percent of the patients in that community.

Table 4. Example Share Drilldown Report

| POST OFFICE NAME | IP & OP EN-COUN-TERS | IP & OP EN-COUN-TER PCT | ZIP CODE SHARE PCT. | HOSPITAL NAME | SHARE_1 | HOSPITAL NAME | SHARE_2 | HOSPITAL NAME | SHARE_3 |
|---|---|---|---|---|---|---|---|---|---|
| **TOTAL** | **56,845** | **100%** | **NA** | | | | | | |
| Community A | 36,541 | 64% | 58% | Your hospital | 58 | Facility B | 22 | Facility C | 4 |
| Community B | 14,294 | 25% | 29% | Facility B | 35 | Your hospital | 29 | Facility D | 15 |
| Community C | 1,432 | 3% | 2% | Facility C | 68 | Facility B | 24 | Your hos-pital | 2 |
| Community D | 1,001 | 2% | 18% | Facility B | 44 | Your hospital | 18 | Facility F | 13 |
| Community E | 890 | 2% | 33% | Your hospital | 33 | Facility B | 27 | Facility C | 17 |
| Community F | 729 | 1% | 18% | Facility D | 34 | Your hospital | 18 | Facility G | 14 |
| Community G | 602 | 1% | 5% | Facility B | 40 | Facility E | 28 | Facility C | 9 |

***Step 4. Use other data sources to understand needs.*** The IHC will guide you to select a domain and general geographic area to focus on. To deepen your understanding of both the needs and assests within a given community, investigate local or more granular data sources. Host conversations with community members, organizations, or others who have a deeper understanding of the specific challenges you're seeking to address, or who might have ideas for improvement.

**Domain Spotlight: Household Structure**
This domain includes the percent of households with only one parent, which is negatively correlated with life expectancy at birth. This domain is not meant to reflect negatively on the experiences or efforts of single parents. Instead, this domain acknowledges that households with a single parent may face different or greater challenges in maintaining their health, and therefore may require different supports to achieve their greatest potential for health. It is an opportunity to think differently about how hospitals and community-based organizations support these families.

***Step 5. Design an intervention.*** Once you understand your community's needs and select a focus area, craft a plan to test an intervention and assess impact. Consider the following questions to get started:

- **Do we have the right partners in the room?**
  - How can we ensure the voices of community members or others with lived experience are included in the design of our approach?
  - How can we include perspectives that have not previously been engaged in these conversations?
- **What are the roles and responsibilities of each of the team or coalition members?**
- **What actions could we take?**
  - What successful approaches have been explored and documented?
  - How can we think creatively to design new approaches that haven't yet been tested?
  - How do we expand our understanding of what's possible?
- **How could we amplify any existing efforts?**
  - What other resources are available to address this challenge?
- **How will we know if a change is an improvement?**
  - What metrics will we use to understand our progress and impact?

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## WATCH OUT! BEWARE OF THESE COMMON PITFALLS AS YOU WORK TO ADDRESS SDOH

- **What's our role? We've never addressed this before.** Taking action to address social drivers of health will require all partners to reimagine the ways in which they interact with and invest in their community. Instead of thinking "that's not our role," brainstorm new ways we could reconfigure our relationships and roles to address persistent social and economic needs. This could include sharing data, contributing financial resources, serving as a convener, or something else.
- **Letting perfect be the enemy of good.** We won't have all of the answers before we get started, but we'll only learn more if we try. By convening diverse partners in the planning and design and establishing metrics to track our progress, we'll be able to credibly assess if a change is making an improvement and, if not, adjust along the way.
- **Rushing the process.** Take time to explore the root causes of the challenges you are working to address. We can only design effective solutions when we understand the problem we are trying to solve. Interventions could include opportunities to prevent the challenge or to mitigate the effects. For example, to address internet connectivity, you might consider ways to equip community members with internet hot spots in the short term, while participating in state or federal advocacy efforts over the long term to drive investments in broadband infrastructure.
- **"Nothing about us without us."** Ensure that the communities and people you seek to support are engaged in and contributing to the program design and implementation.

## CONTRIBUTORS

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**Appendix A.** Domains, Measures, and Data Sources

*Domains are comprised of a set of select variables, chosen based on data availability, correlation with life expectancy at birth, and input from the advisory committee. The selected variables are not an exhaustive list of what is relevant to the domain, but rather is a starting point to characterize the overall level of need. Users should consider what other metrics may be applicable to track progress for any intervention.*

| Context | Domain Definition | Selected Variables | Data Source / Year |
|---|---|---|---|
| Health Care | **Disease prevalence** *An indicator of how common chronic diseases are in the community, as compared with others across the state. Includes measures of medical and dental conditions.* | Crude prevalence of current asthma among adults aged 18 years and older (%) | CDCP 2019 |
| | | Population 65+ with no teeth (%) | CDCP 2019 |
| | | Crude prevalence of adults aged 18 years and older who report ever having been told by a doctor, nurse, or other health professional that they had chronic obstructive pulmonary disease (COPD), emphysema, or chronic bronchitis (%) | CDCP 2019 |
| | **Disease prevention** *An indication of how frequently the health care system completes recommended prevention screenings.* | Crude prevalence of adults aged 50-75 years who have not had 1) a fecal occult blood test (FOBT) within the past year, 2) a sigmoidoscopy within the past 5 years and a FOBT within the past year, or 3) a colonoscopy within the past 10 years (%) | CDCP 2018 |
| | | Crude prevalence of adults ages 18 years and older who report not having their cholesterol checked within the previous 5 years (%) | CDCP 2018 |
| | | Crude prevalence of adults aged 18 and older who report not having been to the dentist or dental clinic in the previous year (%) | CDCP 2018 |
| | | Crude prevalence of females aged 21-65 years without a hysterectomy who report not having had a recommended cervical cancer screening test (%) | CDCP 2018 |
| | | Crude prevalence of population aged 65 years and older who are not up to date on a core set of clinical preventive services (%) | CDCP 2018 |

| | | | |
|---|---|---|---|
| | | Crude prevalence of adults aged 18 years and older who report not having been to a doctor for a routine checkup (e.g., a general physical exam, not an exam for a specific injury, illness, condition) in the previous year (%) | CDCP 2018 |
| | | Crude prevalence of adults aged 18 years and older with high blood pressure not taking medicine for high blood pressure control (%) | CDCP 2018 |
| | | Crude prevalence of females aged 50-74 years who report not having had a mammogram within the previous 2 years (%) | CDCP 2018 |
| | **Health behaviors** *Indicator of the percentage of the population who practices recommended behaviors (such as sleep and exercise) that promote health.* | Crude prevalence of adults aged 18 years and older who report usually getting less than 7 hours of sleep (%) | CDCP 2018 |
| | | Crude prevalence of adults aged 18 years and older who report not having participated in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise other than regular job (%) | CDCP 2018 |
| | **Provider supply** *Indicator of the number of clinicians serving the community.* | Primary care medical doctors and doctors of osteopathy per 100,000 population (county level indicator) | AHRF 2019 |
| | | Advanced practice registered nurses, nurse practitioners, and physician assistants per 100,000 population (county level indicator) | AHRF 2019 |
| | | Home health agencies per 100K population (county level indicator) | AHRF 2019 |
| | **Treated prevalence** *Measure of the conditions for which patients are seeking care, especially for conditions that may be undertreated due to lack of access to care, such as mental health or substance use disorders.* | Total inpatient discharge rate per 100,000 (population-shrinkage estimate) | MHA 2017-21 |
| | | Injury inpatient discharge rate per 1,000 (population-shrinkage estimate) | MHA 2017-21 |
| | | Mental health-substance use disorder inpatient discharge rate per 1,000 (population-shrinkage estimate) | MHA 2017-21 |
| | | Total ED visit rate per 1,000 (population-shrinkage estimate) | MHA 2017-21 |

| | | | |
|---|---|---|---|
| | | Injury ED visit rate per 1,000 (population-shrinkage estimate) | MHA 2017-21 |
| | | Mental health-substance use disorder ED visit rate per 1,000 (population-shrinkage estimate) | MHA 2017-21 |
| | **Health insurance** *Indicator of the type of health insurance most prevalent in the community, including both the proportion of uninsured and the proportion of individuals with public-only health insurance.* | Percentage of population with Medicare, Medicaid, TRICARE/military, US Department of Veterans Affairs (VA) coverage and other public-only health insurance combinations | ACS 2019 |
| | | Percentage of population with no health insurance coverage | ACS 2019 |
| Social & Economic | **Connectivity** *Indicator of access to internet within home.* | Percentage of households without a computing device | ACS 2019 |
| | | Percentage of households with no internet access | ACS 2019 |
| | **Education** *Indicator of educational opportunities within the community.* | Percentage of population not finishing high school or with only high school diploma (ages 25 and over) | ACS 2019 |
| | **Employment** *Indicator of employment status, with a focus on high-risk industries who may be at greater risk for adverse health outcomes.* | Percentage of civilian labor force that is unemployed (ages 16 and over) | ACS 2019 |
| | | Percentage of population who worked in place of residence (ages 16 and over) | ACS 2019 |
| | | Percentage of employed working in agriculture, forestry, fishing and hunting, and mining (ages 16 and over) | ACS 2019 |
| | **Food access** *Indicator of availability of healthy food options.* | Indicator for low income and low access tract measured at ½ mile for urban areas and 10 miles for rural areas | FARA 2019 |

| | | | |
|---|---|---|---|
| | **Household structure** *Indicator of increased risk for adverse health outcomes associated with family structure.* | Percentage of households with only 1 parent | MHA 2017-21 |
| | **Housing/ Transportation** *Indicator of quality, availability, and affordability of housing, as well as availability of transportation.* | Percentage of occupied housing units rented | MHA 2017-21 |
| | | Percentage of housing units with no vehicle present | ACS 2019 |
| | | Percentage of housing units built before 1979 | ACS 2019 |
| | **Income and poverty** *Indicator of overall levels of poverty within the community.* | Percentage of households with public assistance income or food stamps/ SNAP | ACS 2019 |
| | | Percentage of population with income to poverty ratio between 0.50 and 1.0 | ACS 2019 |
| | | Percentage of population with income to poverty ration under 0.50 | ACS 2019 |
| | **Historically marginalized populations** *Measure of the proportion of the community who identify as one or more historically marginalized population, which may be at greater risk for adverse health outcomes.* | Percentage of population reporting non-white race | ACS 2019 |
| | | Percentage of population reporting American Indian and Alaska Native alone or in combination with one or more races | ACS 2019 |
| | | Percentage of population who are covered by Medicare and Medicaid | ACS 2019 |
| | | Percentage of population reporting Hispanic ethnicity | ACS 2019 |
| | | Percentage of population ages 80 and over | ACS 2019 |
| | | Percentage of population with a disability | ACS 2019 |
| | | Percentage of population who are veterans | ACS 2019 |

**Abbreviations**

| | |
|---|---|
| CDCP | Centers for Disease Control and Prevention Population Level Analysis and Community Estimates: Local Data for Better Health |
| AHRF | Area Health Resource File |
| MHA | Montana Hospital Associaiton inpatient and outpatient hospital encounter data |
| ACS | American Community Survey 5-year summary tables |
| FARA | Food Access Resource Atlas |