

DATA EXPLAINER – Explore our Data Model and Sources

Broadband Connectivity

As detailed in the chart below, fixed broadband data are drawn from the FCC’s Broadband Data Collection (BDC) program (as of June 2024), the FCC’s Section 706 Report appendix (2024), the FCC’s Form 477 data program (2022), Universal Service Administrative Company (USAC) Rural Health Care Commitments and Disbursements program (2019-2024), and the U.S. Census Bureau’s American Community Survey (2019-2023). We focus on four primary dimensions of connectivity: availability (access), subscription (adoption), digital device ownership, and funding (for rural health care facilities). The broadband variables displayed and visualized in the platform were chosen to provide insights into what can be enabled and delivered through the broadband health ecosystem of networks, devices, and applications and to identify exactly where opportunities and gaps exist. These data points include broadband access, rural broadband access, Internet adoption, digital device ownership, and rural health care funding.

BROADBAND CONNECTIVITY DATA			
Dimensions	Measures	Data Year	Release Year
Access	Access to Fixed Broadband Providers	2024	2025
	Fixed Broadband Access	2024	2025
	Fixed Broadband and Mobile Access	2024	2025
	Mobile Access	2024	2025
	Mobile Broadband Only	2024	2025
	Most Common Download Speed (All Fixed Wireless)	2024	2025
	Most Common Download Speed (Any Terrestrial)	2024	2025
	Most Common Upload Speed (All Fixed Wireless)	2024	2025
	Most Common Upload Speed (Any Terrestrial)	2024	2025
	Number of Mobile Broadband Providers	2024	2025
	Percentage Served	2024	2025
	Percentage Underserved	2024	2025
	Percentage Unserved	2024	2025
	Rural Fixed Broadband Access	2024	2025
	Rural Mobile Access	2024	2025
	Rural Fixed Broadband and Mobile Access	2024	2025
Adoption	Broadband Adoption	2022	2024
	Internet Adoption – Any Speed	2022	2022
	Internet Adoption – High Speed (Self-Report)	2019-2023	2024
Device Ownership	Households – Smartphone Only	2019-2023	2024
	Households – No Device	2019-2023	2024
	Households – Desktop or Laptop Only	2019-2023	2024
Funding	All Eligible Entities (Total)	2019-2024	2025
	Community Health Centers	2019-2024	2025
	Community Mental Health Centers	2019-2024	2025
	Consortia	2019-2024	2025
	Dedicated Emergency Rooms	2019-2024	2025

	Educational Institutions	2019-2024	2025
	Local Health Departments	2019-2024	2025
	Not-For-Profit Hospitals	2019-2024	2025
	Rural Health Clinics	2019-2024	2025
	Skilled Nursing Facilities	2019-2024	2025
	Other Entities	2019-2024	2025

Access

Access to Fixed Broadband Providers

Percentage of the population with access to three or fewer fixed broadband providers within their BSL. BDC data are collected at the broadband serviceable location level. [Learn more.](#)

- Data Source: FCC Broadband Data Collection (BDC) Fixed Broadband Availability Data and FCC Staff Block Estimates (<https://broadbandmap.fcc.gov/data-download/nationwide-data>)
- Data Year: 2024
- Variable Label in Data: fixed_provider_access_pct

Fixed Broadband Access

Percentage of population with access to fixed terrestrial broadband services at 100/20 Mbps or higher advertised speeds. 100/20 Mbps is the Commission's current benchmark for fixed broadband service. BDC data are collected at the broadband serviceable location level. [Learn more.](#)

- Data Source: FCC Broadband Data Collection (BDC) Fixed Broadband Availability Data and FCC Staff Block Estimates (<https://broadbandmap.fcc.gov/data-download/nationwide-data>)
- Data Year: 2024
- Variable Label in Data: fixed_100_20_pct

Fixed Broadband and Mobile Access

Percentage of population with access to fixed terrestrial broadband services at 100/20 Mbps or higher advertised speeds and outdoor stationary mobile 5G-NR service at 35/3 Mbps or higher advertised speeds. 5G-NR service at 35/3 Mbps speeds or greater is the highest speed that the Commission collects for mobile data and is the threshold speed used by the Commission for analyzing mobiles service availability.

- Data Source: FCC Broadband Data Collection (BDC) Fixed Broadband Availability Data and Mobile Broadband Availability Data and FCC Staff Block Estimates (<https://broadbandmap.fcc.gov/data-download/nationwide-data>)
- Data Year: 2024
- Variable Label in Data: fixed_mobile_pct

Mobile Access

Percentage of population with access to outdoor stationary mobile 5G-NR service at 35/3 Mbps or higher advertised speeds.

- Data Source: FCC Broadband Data Collection (BDC) Mobile Broadband Availability Data and FCC Staff Block Estimates (<https://broadbandmap.fcc.gov/data-download/nationwide-data>)
- Data Year: 2024
- Variable Label in Data: mobile_pct

Mobile Broadband Only

Percentage of county area with mobile-only broadband access of any speed (3G, 4G, 5G).

- Data Source: FCC Broadband Data Collection (BDC) Mobile Broadband Availability Data and FCC Staff Block Estimates (<https://broadbandmap.fcc.gov/data-download/nationwide-data>)
- Data Year: 2024
- Variable Label in Data: mobile_only_area_pct

Most Common Download Speed (All Fixed Wireless)

The most commonly advertised download speed by population via fixed wireless technology. Download speeds are categorized into five values: 1000+ Mbps, 1000–250 Mbps, 250–100 Mbps, 100–25 Mbps, or < 25 Mbps.

- Data Source: Data Source: FCC Broadband Data Collection (BDC) Fixed Broadband Availability Data and FCC Staff Block Estimates (<https://broadbandmap.fcc.gov/data-download/nationwide-data>)
- Data Year: 2024
- Variable Label in Data: most_common_download_fixed_wireless

Most Common Download Speed (Any Terrestrial)

The most commonly advertised download speed by population via any terrestrial technology. Download speeds are categorized into five values: 1000+ Mbps, 1000–250 Mbps, 250–100 Mbps, 100–25 Mbps, or < 25 Mbps.

- Data Source: Data Source: FCC Broadband Data Collection (BDC) Fixed Broadband Availability Data and FCC Staff Block Estimates (<https://broadbandmap.fcc.gov/data-download/nationwide-data>)
- Data Year: 2024
- Variable Label in Data: most_common_download_any_terrestrial

Most Common Upload Speed (All Fixed Wireless)

The most commonly advertised upload speed by population via fixed wireless technology. Upload speeds are categorized into five values: 100+ Mbps, 100–25 Mbps, 25–20 Mbps, 20–3 Mbps, or < 3 Mbps.

- Data Source: Data Source: FCC Broadband Data Collection (BDC) Fixed Broadband Availability Data and FCC Staff Block Estimates (<https://broadbandmap.fcc.gov/data-download/nationwide-data>)
- Data Year: 2024
- Variable Label in Data: most_common_upload_fixed_wireless

Most Common Upload Speed (Any Terrestrial)

The most commonly advertised upload speed by population via any terrestrial technology. Upload speeds are categorized into five values: 100+ Mbps, 100–25 Mbps, 25–20 Mbps, 20–3 Mbps, or < 3 Mbps.

- Data Source: Data Source: FCC Broadband Data Collection (BDC) Fixed Broadband Availability Data and FCC Staff Block Estimates (<https://broadbandmap.fcc.gov/data-download/nationwide-data>)
- Data Year: 2024
- Variable Label in Data: most_common_upload_any_terrestrial

Number of Mobile Broadband Providers

Number of 5G mobile broadband providers offering any 5G speed.

- Data Source: FCC Broadband Data Collection (BDC) Mobile Broadband Availability Data and FCC Staff Block Estimates (<https://broadbandmap.fcc.gov/data-download/nationwide-data>)
- Data Year: 2024
- Variable Label in Data: total_5g_providers

Percentage Served

Using the BEAD allocation areas defined by statute ([47 U.S.C. § 1702 \(2021\)](#)), the percentage of the population that is served (low-latency broadband greater than or equal to 100/20 Mbps).

- Data Source: FCC Broadband Data Collection (BDC) Fixed Broadband Availability Data and FCC Staff Block Estimates (<https://broadbandmap.fcc.gov/data-download/nationwide-data>)
- Data Year: 2024
- Variable Label in Data: bead_served_pct

Percentage Underserved

Using the BEAD allocation areas defined by statute ([47 U.S.C. § 1702 \(2021\)](#)), the percentage of the population that is underserved (low-latency broadband less than 100/20 Mbps but greater than or equal to 25/3 Mbps).

- Data Source: FCC Broadband Data Collection (BDC) Fixed Broadband Availability Data and FCC Staff Block Estimates (<https://broadbandmap.fcc.gov/data-download/nationwide-data>)

- Data Year: 2024
- Variable Label in Data: bead_underserved_pct

Percentage Unserved

Using the BEAD allocation areas defined by statute ([47 U.S.C. § 1702 \(2021\)](#)), the percentage of the population that is unserved (low-latency or less than 25/3 Mbps).

- Data Source: FCC Broadband Data Collection (BDC) Fixed Broadband Availability Data and FCC Staff Block Estimates (<https://broadbandmap.fcc.gov/data-download/nationwide-data>)
- Data Year: 2024
- Variable Label in Data: bead_unserved_pct

Rural Fixed Broadband Access

Percentage of population living in rural census blocks with access to fixed terrestrial broadband service at 100/20 Mbps or higher advertised speeds.

- Data Source: FCC Broadband Data Collection (BDC) Fixed Broadband Availability Data and FCC Staff Block Estimates (<https://broadbandmap.fcc.gov/data-download/nationwide-data>)
- Data Year: 2024
- Variable Label in Data: rural_fixed_100_20_pct

Rural Fixed Broadband and Mobile Access

Percentage of population living in rural census blocks with access to both fixed terrestrial broadband services at 100/20 Mbps or higher advertised speeds and outdoor stationary mobile 5G-NR service at 35/3 Mbps or higher advertised speeds.

- Data Source: FCC Broadband Data Collection (BDC) Fixed Broadband Availability Data and Mobile Broadband Availability Data and FCC Staff Block Estimates (<https://broadbandmap.fcc.gov/data-download/nationwide-data>)
- Data Year: 2024
- Variable Label in Data: rural_fixed_mobile_pct

Rural Mobile Access

Percentage of population living in rural census blocks with access to outdoor stationary mobile 5G-NR service at 35/3 Mbps or higher advertised speeds.

- Data Source: FCC Broadband Data Collection (BDC) Mobile Broadband Availability Data and FCC Staff Block Estimates (<https://broadbandmap.fcc.gov/data-download/nationwide-data>)
- Data Year: 2024
- Variable Label in Data: rural_mobile_pct

Adoption

Broadband Adoption

The number of fixed terrestrial connections at 100/20 Mbps or higher divided by the number of households in which fixed terrestrial services are available at 100/20 Mbps or higher advertised speeds (the Commission's current benchmark for fixed broadband service). Data for this variable are currently only available at the state level.

- Data Source: FCC – 2024 Section 706 Report (Appendix B-13) (<https://docs.fcc.gov/public/attachments/FCC-24-27A1.pdf>)
- Data Year: 2022
- Variable Label in Data: adoption_fixed_100_20_ratio

Internet Adoption – Any Speed

The number of residential (consumer) connections over 200 Kbps per 100 households. This ratio reflects the number of fixed connections over 200 Kbps in one direction. Connections over 200 Kbps is the equivalent of 0.2 Mbps. Therefore, Internet adoption captures all residential locations with a fixed broadband connection.

- Data Source: Form 477 County-Level Connection Data
- Data Year: 2022
- Variable Label in Data: subscription_ratio

Internet Adoption – High Speed (Self-Report)

Self-reported percentage of households with a high-speed Internet connection through subscription including cable, DSL, fiber-optic. Data collected by American Community Survey questionnaire asking whether any member of respondent's household has access to the Internet by paying an Internet service provider and using a high-speed Internet service such as cable, fiber optic, or DSL service installed in the household. [Learn more.](#)

- Data Source: Census - American Community Survey (ACS) 5-year estimates
- Data Year: 2019-2023
- Variable Label in Data: broadband_access_acs_pct

Device Ownership

Households - Smartphone Only

Percentage of households with a smartphone only. These households do not have any other type of computing device, such as a desktop or laptop, tablet or other portable wireless computer, or other type of computer. Data collected by American Community Survey questionnaire asking whether any member of respondent's household owns or uses any computers, including desktop, laptop, smartphone, tablet or other portable wireless computer. [Learn more.](#)

- Data Source: Census - American Community Survey (ACS) 5-year estimates
- Data Year: 2019-2023
- Variable Label in Data: smartphone_only_pct

Households - No Device

Percentage of households without a computing device (e.g., smartphone, desktop or laptop, tablet or other portable wireless computer, or other type of computer). Data collected by American Community Survey questionnaire asking whether any member of respondent's household owns or uses any computers, including desktop, laptop, smartphone, tablet or other portable wireless computer. [Learn more.](#)

- Data Source: Census - American Community Survey (ACS) 5-year estimates
- Data Year: 2019-2023
- Variable Label in Data: no_computing_devices_pct

Households - Desktop or Laptop Only

Percentage of households with a desktop or laptop only. These households do not have any other type of computing device, such as a smartphone, tablet or other portable wireless computer, or other type of computer. Data collected by American Community Survey questionnaire asking whether any member of respondent's household owns or uses any computers, including desktop, laptop, smartphone, tablet or other portable wireless computer. [Learn more.](#)

- Data Source: Census - American Community Survey (ACS) 5-year estimates
- Data Year: 2019-2023
- Variable Label in Data: desktop_laptop_only_pct

Funding

All Eligible Entities (Total)

The FCC's Rural Health Care Program provides funding to eligible healthcare providers for telecommunications and broadband services necessary for the provision of health care. The variable represents the total committed funds provided by the Universal Service Administration to the FCC's Rural Health Care Funding Program to support eligible, participating entities to provide telecommunications and broadband services necessary to provide healthcare (2019-2024).

- Data Source: [Universal Service Administrative Company \(USAC\) Rural Health Care Commitments and Disbursements \(FCC Form 462/466/466A\)](#)
- Data Year: June 1, 2019 – July 30, 2025 (Note: The data years cover the funding years of 2019-2024, but each funding year begins on June 1 and ends on July 30 of the next year. Thus, the actual data year range is 2019-2025 as indicated.)
- Variable Label in Data: rhc_total_funds

Community Health Centers

The FCC's Rural Health Care Program provides funding to eligible healthcare providers for telecommunications and broadband services necessary for the provision of health care. The variable includes committed funding provided by the Universal Service Administration

to the FCC's Rural Health Care Funding Program to support eligible, participating community health centers providing health care to migrants (2019-2024).

- Data Source: [Universal Service Administrative Company \(USAC\) Rural Health Care Commitments and Disbursements \(FCC Form 462/466/466A\)](#)
- Data Year: June 1, 2019 – July 30, 2025 (Note: The data years cover the funding years of 2019-2024, but each funding year begins on June 1 and ends on July 30 of the next year. Thus, the actual data year range is 2019-2025 as indicated.)
- Variable Label in Data: rhc_community_health_center_funds

Community Mental Health Centers

The FCC's Rural Health Care Program provides funding to eligible healthcare providers for telecommunications and broadband services necessary for the provision of health care. The variable includes committed funding provided by the Universal Service Administration to the FCC's Rural Health Care Funding Program to support eligible, participating community mental health centers (2019-2024).

- Data Source: [Universal Service Administrative Company \(USAC\) Rural Health Care Commitments and Disbursements \(FCC Form 462/466/466A\)](#)
- Data Year: June 1, 2019 – July 30, 2025 (Note: The data years cover the funding years of 2019-2024, but each funding year begins on June 1 and ends on July 30 of the next year. Thus, the actual data year range is 2019-2025 as indicated.)
- Variable Label in Data: rhc_community_mental_health_center_funds

Consortia

The FCC's Rural Health Care Program provides funding to eligible healthcare providers for telecommunications and broadband services necessary for the provision of health care. The variable includes committed funding provided by the Universal Service Administration to the FCC's Rural Health Care Funding Program to support eligible, participating consortia of not-for-profit hospitals and rural health clinics (2019-2024).

- Data Source: [Universal Service Administrative Company \(USAC\) Rural Health Care Commitments and Disbursements \(FCC Form 462/466/466A\)](#)
- Data Year: June 1, 2019 – July 30, 2025 (Note: The data years cover the funding years of 2019-2024, but each funding year begins on June 1 and ends on July 30 of the next year. Thus, the actual data year range is 2019-2025 as indicated.)
- Variable Label in Data: rhc_consortium_funds

Dedicated Emergency Rooms

The FCC's Rural Health Care Program provides funding to eligible healthcare providers for telecommunications and broadband services necessary for the provision of health care. The variable includes committed funding provided by the Universal Service Administration to the FCC's Rural Health Care Funding Program to support eligible, participating dedicated emergency rooms of rural for-profit hospitals (2019-2024).

- Data Source: [Universal Service Administrative Company \(USAC\) Rural Health Care Commitments and Disbursements \(FCC Form 462/466/466A\)](#)
- Data Year: June 1, 2019 – July 30, 2025 (Note: The data years cover the funding years of 2019-2024, but each funding year begins on June 1 and ends on July 30 of the next year. Thus, the actual data year range is 2019-2025 as indicated.)
- Variable Label in Data: rhc_dedicated_er_funds

Educational Institutions

The FCC's Rural Health Care Program provides funding to eligible healthcare providers for telecommunications and broadband services necessary for the provision of health care. The variable includes committed funding provided by the Universal Service Administration to the FCC's Rural Health Care Funding Program to support eligible, participating post-secondary educational institutions offering healthcare instruction (2019-2024).

- Data Source: [Universal Service Administrative Company \(USAC\) Rural Health Care Commitments and Disbursements \(FCC Form 462/466/466A\)](#)
- Data Year: June 1, 2019 – July 30, 2025 (Note: The data years cover the funding years of 2019-2024, but each funding year begins on June 1 and ends on July 30 of the next year. Thus, the actual data year range is 2019-2025 as indicated.)
- Variable Label in Data: rhc_educational_institution_funds

Local Health Departments

The FCC's Rural Health Care Program provides funding to eligible healthcare providers for telecommunications and broadband services necessary for the provision of health care. The variable includes committed funding provided by the Universal Service Administration to the FCC's Rural Health Care Funding Program to support eligible, participating local health departments (2019-2024).

- Data Source: [Universal Service Administrative Company \(USAC\) Rural Health Care Commitments and Disbursements \(FCC Form 462/466/466A\)](#)
- Data Year: June 1, 2019 – July 30, 2025 (Note: The data years cover the funding years of 2019-2024, but each funding year begins on June 1 and ends on July 30 of the next year. Thus, the actual data year range is 2019-2025 as indicated.)
- Variable Label in Data: rhc_local_health_dept_funds

Not-For-Profit Hospitals

The FCC's Rural Health Care Program provides funding to eligible healthcare providers for telecommunications and broadband services necessary for the provision of health care. The variable includes committed funding provided by the Universal Service Administration to the FCC's Rural Health Care Funding Program to support eligible, participating not-for-profit hospitals (2019-2024).

- Data Source: [Universal Service Administrative Company \(USAC\) Rural Health Care Commitments and Disbursements \(FCC Form 462/466/466A\)](#)

- Data Year: June 1, 2019 – July 30, 2025 (Note: The data years cover the funding years of 2019-2024, but each funding year begins on June 1 and ends on July 30 of the next year. Thus, the actual data year range is 2019-2025 as indicated.)
- Variable Label in Data: rhc_not_for_profit_hospital_funds

Rural Health Clinics

The FCC's Rural Health Care Program provides funding to eligible healthcare providers for telecommunications and broadband services necessary for the provision of health care. The variable includes committed funding provided by the Universal Service Administration to the FCC's Rural Health Care Funding Program to support eligible, participating rural health clinics (2019-2024).

- Data Source: [Universal Service Administrative Company \(USAC\) Rural Health Care Commitments and Disbursements \(FCC Form 462/466/466A\)](#)
- Data Year: June 1, 2019 – July 30, 2025 (Note: The data years cover the funding years of 2019-2024, but each funding year begins on June 1 and ends on July 30 of the next year. Thus, the actual data year range is 2019-2025 as indicated.)
- Variable Label in Data: rhc_rural_health_clinic_funds

Skilled Nursing Facilities

The FCC's Rural Health Care Program provides funding to eligible healthcare providers for telecommunications and broadband services necessary for the provision of health care. The variable includes committed funding provided by the Universal Service Administration to the FCC's Rural Health Care Funding Program to support eligible, participating skilled nursing facilities (2019-2024).

- Data Source: [Universal Service Administrative Company \(USAC\) Rural Health Care Commitments and Disbursements \(FCC Form 462/466/466A\)](#)
- Data Year: June 1, 2019 – July 30, 2025 (Note: The data years cover the funding years of 2019-2024, but each funding year begins on June 1 and ends on July 30 of the next year. Thus, the actual data year range is 2019-2025 as indicated.)
- Variable Label in Data: rhc_nursing_facility_funds

Other Entities

The FCC's Rural Health Care Program provides funding to eligible healthcare providers for telecommunications and broadband services necessary for the provision of health care. The variable includes committed funding provided by the Universal Service Administration to the FCC's Rural Health Care Funding Program to support eligible, participating off-site data centers and off-site administrative offices that help eligible Health Care Providers to function (2019-2024).

- Data Source: [Universal Service Administrative Company \(USAC\) Rural Health Care Commitments and Disbursements \(FCC Form 462/466/466A\)](#)

- Data Year: June 1, 2019 – July 30, 2025 (Note: The data years cover the funding years of 2019-2024, but each funding year begins on June 1 and ends on July 30 of the next year. Thus, the actual data year range is 2019-2025 as indicated.)
- Variable Label in Data: rhc_other_funds

Chronic Disease and Health Behaviors

Health data are drawn in part from the 2025 release of the County Health Rankings & Roadmaps program, a collaboration between the Robert Wood Johnson Foundation and University of Wisconsin Population Health Initiative. This dataset reflects the most recent data on the metrics of interest from the Centers for Disease Control and Prevention, Health Resources and Services Administration, and Centers for Medicare and Medicaid Services. Other data sources include U.S. Cancer Statistics Data, CDC PLACES, and HRSA Area Health Resource Files. As detailed in the chart below, the metrics reflect four dimensions of health—health outcomes, access to care, quality of care, and risk factors—where broadband connectivity may be used to enable effective and cost-saving interventions. We also include statistics on selected community factors of interest.

CHRONIC DISEASE DATA			
Health Dimensions and Factors	Health Measures	Data Year	Release Year
Outcomes	All Cancer Incidence	2017-2021	2024
	All Cancer Mortality	2018-2022	2024
	Breast Cancer Incidence	2017-2021	2024
	Breast Cancer Mortality	2018-2022	2024
	Cerebrovascular Disease Mortality Rate	2020-2022	2024
	Colon Cancer Incidence	2017-2021	2024
	Colon Cancer Mortality	2018-2022	2024
	Diabetes	2022	2025
	Heart Failure Mortality Rate	2020-2022	2024
	High Blood Pressure Prevalence	2021	2024
	High Cholesterol Prevalence	2021	2024
	Ischemic Heart Disease Mortality Rate	2020-2022	2024
	Ischemic Heart Disease Prevalence	2022	2024
	Lung Cancer Incidence	2017-2021	2024
	Lung Cancer Mortality	2018-2022	2024
	Obesity	2022	2025
	Other Cardiovascular Disease Mortality Rate	2020-2022	2024
	Poor/Fair Health	2022	2025
	Premature Death	2020-2022	2025
	Prostate Cancer Incidence	2017-2021	2024
	Prostate Cancer Mortality	2018-2022	2024
	Sick Days	2022	2025
	Stroke Prevalence	2022	2024
Access to Care	Cardiovascular Disease Provider Rate	2021	2023
	Dental Providers	2022	2025

	Number of Hospitals with Chemotherapy	2021	2023
	Number of Hospitals with Mammography	2021	2023
	Number of Hospitals with Oncology Services	2021	2023
	Outpatient Oncology Providers	2023	2024
	Physician Access	2021	2025
Quality of Care	Preventable Hospitalization	2022	2025
Risk Factors	Colorectal Cancer Screening Prevalence	2022	2024
	Excessive Drinking	2022	2025
	Mammography Screening Prevalence	2022	2024
	Mental Health Provider Shortage	2020-2024	2024
	Physical Inactivity	2022	2025
	Smoking	2022	2025

Outcomes

All Cancer Incidence

Age-adjusted incidence rate of the total number of all new cancer cases diagnosed in 2017-2021 for all ages, all races and ethnicities, and all male and female, divided by the at-risk population for that category and multiplied by 100,000.

- Data Source: U.S. Cancer Statistics (USCS) Data
- Data Year: 2017-2021
- Variable Label in Data: cancer_incidence_all

All Cancer Mortality

Age-adjusted death rate of the total number of all cancer deaths during 2018-2022 for all ages, all races and ethnicities, and all male and female, divided by the at-risk population for that category and multiplied by 100,000.

- Data Source: U.S. Cancer Statistics (USCS) Data
- Data Year: 2018-2022
- Variable Label in Data: cancer_mortality_all

Breast Cancer Incidence

Age-adjusted incidence rate of the total number of new breast cancer cases diagnosed in 2017-2021 for all ages, all races and ethnicities, in females, divided by the at-risk population for that category and multiplied by 100,000.

- Data Source: U.S. Cancer Statistics (USCS) Data
- Data Year: 2017-2021
- Variable Label in Data: cancer_incidence_breast

Breast Cancer Mortality

Age-adjusted death rate of the total number of breast cancer deaths during 2018-2022 for all ages, all races and ethnicities, and all male and female, divided by the at-risk population for that category and multiplied by 100,000.

- Data Source: U.S. Cancer Statistics (USCS) Data
- Data Year: 2018-2022
- Variable Label in Data: cancer_mortality_breast

Cerebrovascular Disease Mortality Rate

Crude rate of deaths by underlying cause per 100,000 population for ICD-10 codes I60-I69 (Cerebrovascular Disease). 3-year span.

- Data Source: Centers for Disease Control and Prevention (CDC) WONDER (Underlying Cause of Death)
- Data Year: 2020-2022
- Variable Label in Data: cerebrovascular_disease_mortality_rate

Colon Cancer Incidence

Age-adjusted incidence rate of the total number of new colon and rectum cancer cases diagnosed in 2017-2021 for all ages, all races and ethnicities, and all male and female, divided by the at-risk population for that category and multiplied by 100,000.

- Data Source: U.S. Cancer Statistics (USCS) Data
- Data Year: 2017-2021
- Variable Label in Data: cancer_incidence_colon

Colon Cancer Mortality

Age-adjusted death rate of the total number of colon and rectum cancer deaths during 2018-2022 for all ages, all races and ethnicities, and all male and female, divided by the at-risk population for that category and multiplied by 100,000.

- Data Source: U.S. Cancer Statistics (USCS) Data
- Data Year: 2018-2022
- Variable Label in Data: cancer_mortality_colon

Diabetes

Percentage of adults (aged 18 and older) with diagnosed diabetes (age-adjusted). Includes Type 1 & Type 2 diabetes (and excludes gestational diabetes). Data collected via landline and cellphone survey. [Learn more.](#)

- Data Source: County Health Rankings & Roadmaps
- Data Year: 2022
- Variable Label in Data: diabetes_pct

Heart Failure Mortality Rate

Crude rate of deaths by underlying cause per 100,000 population for ICD-10 code I50 (Heart Failure). 3-year span.

- Data Source: Centers for Disease Control and Prevention (CDC) WONDER (Underlying Cause of Death)
- Data Year: 2020-2022
- Variable Label in Data: heart_failure_mortality_rate

High Blood Pressure Prevalence

Model-based estimate of age-adjusted prevalence (%) of high blood pressure among adults aged ≥ 18 years. [Learn more.](#)

- Data Source: Centers for Disease Control and Prevention (CDC) PLACES
- Data Year: 2021
- Variable Label in Data: high_blood_pressure_pct

High Cholesterol Prevalence

Model-based estimate of age-adjusted prevalence (%) of high cholesterol among adults aged ≥ 18 years who have ever been screened. [Learn more.](#)

- Data Source: Centers for Disease Control and Prevention (CDC) PLACES
- Data Year: 2021
- Variable Label in Data: high_cholesterol_pct

Ischemic Heart Disease Mortality Rate

Crude rate of deaths by underlying cause per 100,000 population for ICD-10 codes I20-I25 (Ischemic Heart Disease). 3-year span.

- Data Source: Centers for Disease Control and Prevention (CDC) WONDER (Underlying Cause of Death) and Centers for Disease Control and Prevention (CDC) WONDER (Natality)
- Data Year: 2020-2022
- Variable Label in Data: ischemic_heart_disease_mortality_rate

Ischemic Heart Disease Prevalence

Model-based estimate of age-adjusted prevalence (%) of coronary heart disease among adults aged ≥ 18 years. [Learn more.](#)

- Data Source: Centers for Disease Control and Prevention (CDC) PLACES
- Data Year: 2022
- Variable Label in Data: ischemic_heart_disease_pct

Lung Cancer Incidence

Age-adjusted incidence rate of the total number of new lung and bronchus cancer cases diagnosed in 2017-2021 for all ages, all races and ethnicities, and all male and female, divided by the at-risk population for that category and multiplied by 100,000.

- Data Source: U.S. Cancer Statistics (USCS) Data
- Data Year: 2017-2021
- Variable Label in Data: cancer_incidence_lung

Lung Cancer Mortality

Age-adjusted death rate of the total number of lung and bronchus cancer deaths during 2018-2022 for all ages, all races and ethnicities, and all male and female, divided by the at-risk population for that category and multiplied by 100,000.

- Data Source: U.S. Cancer Statistics (USCS) Data
- Data Year: 2018-2022
- Variable Label in Data: cancer_mortality_lung

Obesity

Percentage of adults (aged 18 and older) that report a body mass index (BMI) greater than or equal to 30 kg/m² (age-adjusted). Participants self-report height and weight, and BMI is calculated for reported values. Data collected via landline and cellphone survey. [Learn more.](#)

- Data Source: County Health Rankings & Roadmaps
- Data Year: 2022
- Variable Label in Data: adult_obesity_pct

Other Cardiovascular Disease Mortality Rate

Crude rate of deaths by underlying cause per 100,000 population for ICD-10 codes I00-I02 (Acute Rheumatic Fever), I05-I09 (Chronic Rheumatic Heart Diseases), I10-I15 (Hypertensive Disease), I26-I28 (Pulmonary Heart Disease and Diseases of Pulmonary Circulation), I30-I51 (Other Forms of Heart Disease), or I70-I78 (Diseases of Arteries, Arterioles and Capillaries). 3-year span.

- Data Source: Centers for Disease Control and Prevention (CDC) WONDER (Underlying Cause of Death)
- Data Year: 2020-2022
- Variable Label in Data: other_heart_disease_mortality_rate

Poor/Fair Health

Percentage of adults reporting fair or poor health (age-adjusted). Data collected via landline and cellphone survey asking respondents to self-report health as “excellent,” “very good,” “good,” “fair,” or “poor.” [Learn more.](#)

- Data Source: County Health Rankings & Roadmaps

- Data Year: 2022
- Variable Label in Data: poor_fair_health_pct

Premature Death

Years of potential life lost before age 75 per 100,000 persons (age-adjusted). Calculated by adding all the years of potential life lost during a three-year period and dividing by total population during that same period. Years of potential life lost is the age of the individual at the time of death subtracted from 75. [Learn more.](#)

- Data Source: County Health Rankings & Roadmaps
- Data Year: 2020-2022
- Variable Label in Data: years_lost_rate

Prostate Cancer Incidence

Age-adjusted incidence rate of the total number of new prostate cancer cases diagnosed in 2017-2021 for all ages, all races and ethnicities, and all male and female, divided by the at-risk population for that category and multiplied by 100,000.

- Data Source: U.S. Cancer Statistics (USCS) Data
- Data Year: 2017-2021
- Variable Label in Data: cancer_incidence_prostate

Prostate Cancer Mortality

Age-adjusted death rate of the total number of prostate cancer deaths during 2018-2022 for all ages, all races and ethnicities, and all male and female, divided by the at-risk population for that category and multiplied by 100,000.

- Data Source: U.S. Cancer Statistics (USCS) Data
- Data Year: 2018-2022
- Variable Label in Data: cancer_mortality_prostate

Sick Days

Average number of physically unhealthy days reported in the past 30 days (age-adjusted). Data collected via telephone survey asking respondents to self-report the number of days that their “physical health” was “not good.” [Learn more.](#)

- Data Source: County Health Rankings & Roadmaps
- Data Year: 2022
- Variable Label in Data: poor_physical_health_days_cnt

Stroke Prevalence

Model-based estimate of age-adjusted prevalence (%) of stroke among adults aged ≥ 18 years. [Learn more.](#)

- Data Source: Centers for Disease Control and Prevention (CDC) PLACES
- Data Year: 2022

- Variable Label in Data: stroke_pct

Access to Care

Cardiovascular Disease Provider Rate

Crude rate of cardiovascular disease providers per 100,000 population.

- Data Source: Health Resources and Service Administration (HRSA) Area Health Resource File (AHRF)
- Data Year: 2021
- Variable Label in Data: cardio_provider_rate

Dental Providers

Number of dentists. [Learn more.](#)

- Data Source: County Health Rankings & Roadmaps
- Data Year: 2022
- Variable Label in Data: dentist_cnt

Hospitals – Mammography Services

Number of hospitals with breast cancer screening/mammography services.

- Data Source: Health Resources and Service Administration (HRSA) Area Health Resource File (AHRF)
- Data Year: 2021
- Variable: hospitals_breast_cancer_screening

Number of Hospitals with Chemotherapy

Number of hospitals with chemotherapy services.

- Data Source: Health Resources and Service Administration (HRSA) Area Health Resource File (AHRF)
- Data Year: 2021
- Variable Label in Data: hospitals_chemotherapy

Number of Hospitals with Mammography

Number of hospitals with breast cancer screening/mammography.

- Data Source: Health Resources and Service Administration (HRSA) Area Health Resource File (AHRF)
- Data Year: 2021
- Variable Label in Data: hospitals_mammography

Number of Hospitals with Oncology Services

Number of hospitals with oncology services.

- Data Source: Health Resources and Service Administration (HRSA) Area Health Resource File (AHRF)
- Data Year: 2021
- Variable Label in Data: hospitals_oncology

Physician Access

Ratio of population to primary care physicians. Primary care physicians include practicing non-federal physicians (M.D.s and D.O.s) under age 75 specializing in general practice medicine, family medicine, internal medicine, and pediatrics. [Learn more.](#)

- Data Source: County Health Rankings & Roadmaps
- Data Year: 2021
- Variable Label in Data: pcp_rate

Outpatient Oncology Providers

Number of outpatient oncology providers.

- Data Source: Agency for Healthcare Research and Quality's (AHRQ) Compendium of U.S. Health Systems
- Data Year: 2023
- Variable Label in Data: facilities_oncology_providers

Quality of Care

Preventable Hospitalization

Rate of hospital stays for ambulatory-care sensitive conditions per 100,000 Medicare enrollees (age-adjusted). The rate is calculated by dividing the number of discharges for Medicare beneficiaries aged 18 years or older continuously enrolled in Medicare fee-for-service Part A and hospitalized for ambulatory-care reasons by the number of Medicare beneficiaries aged 18 years or older. Ambulatory-care sensitive conditions are diagnoses that are usually treatable in an outpatient setting, but hospitalization for these conditions suggests that quality of care in the outpatient setting was less than ideal. [Learn more.](#)

- Data Source: County Health Rankings & Roadmaps
- Data Year: 2022
- Variable Label in Data: preventable_hospital_stays_rate

Risk Factors

Colorectal Cancer Screening Prevalence

Model-based estimate for crude prevalence of colorectal cancer screening among adults aged 45–75 years, including a fecal occult blood test (FOBT) within the previous year, a fecal immunochemical test (FIT)-DNA test within the previous 3 years, a sigmoidoscopy within the previous 5 years, a sigmoidoscopy within the previous 10 years with a FIT in the past year, a colonoscopy within the previous 10 years, or a CT colonography (virtual colonoscopy) within the previous 5 years. [Learn more.](#)

- Data Source: Centers for Disease Control and Prevention (CDC) PLACES

- Data Year: 2022
- Variable Label in Data: colon_screening_pct

Excessive Drinking

Percentage of adults reporting binge or heavy drinking during the last 30 days (age-adjusted). Binge drinking is defined as a woman consuming more than four alcoholic drinks during a single occasion or a man consuming more than five. Heavy drinking is defined as a woman drinking more than one drink on average per day or a man drinking more than two.

Data collected via landline and cellphone survey. [Learn more.](#)

- Data Source: County Health Rankings & Roadmaps
- Data Year: 2022
- Variable Label in Data: drinking_pct

Mammography Screening Prevalence

Model-based estimate for crude prevalence of mammography use in the previous two years among women aged 50–74 years. [Learn more.](#)

- Data Source: Centers for Disease Control and Prevention (CDC) PLACES
- Data Year: 2022
- Variable Label in Data: mammography_screening_pct

Mental Health Provider Shortage

Population-weighted average score of Mental Health Professional Shortage Areas in a county. Higher scores indicate greater need or shortage. Mental Health HPSAs are scored from 0-25, with a higher number indicating a greater need or shortage of mental health providers. Counties with a score of zero do not have a designated geographic or high-needs geographic shortage area. Scores are based on multiple factors like the population-to-provider ratio, proportion of the population living below the federal poverty level, alcohol and substance abuse prevalence, and travel time to nearest source of care, among other criteria.

- Data Source: Health Resources and Services Administration (HRSA) Health Provider Shortage Areas (HPSAs)
- Data Year: 2020-2024
- Variable Label in Data: mental_hpsa_score

Physical Inactivity

Percentage of adults (aged 18 and over) reporting no leisure-time physical activity (age-adjusted). Data collected via landline and cellphone survey wherein respondents were asked if during the past month they had participated “in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise.” [Learn more.](#)

- Data Source: County Health Rankings & Roadmaps
- Data Year: 2022

- Variable Label in Data: physical_inactivity_pct

Smoking

Percentage of adults who are current smokers (age-adjusted). Current smokers are those who self-report smoking every day or most days and have smoked at least 100 cigarettes in their lifetime. Data collected via landline and cellphone survey. [Learn more.](#)

- Data Source: County Health Rankings & Roadmaps
- Data Year: 2022
- Variable Label in Data: smoking_pct

Maternal Health

Maternal mortality and death rate data come from the Centers for Disease Control and Prevention, National Vital Statistics System, Mortality files, which were accessed via the CDC WONDER Online Database. Severe maternal morbidity data come from the Agency for Healthcare Research and Quality, Healthcare Cost and Utilization Project (HCUP). Data on infant health and maternal health risk factors come from the Health Resources and Services Administration (HRSA), Maternal and Child Health Bureau's Maternal and Infant Health Mapping Tool. Maternal care desert data come from March of Dimes.

MATERNAL HEALTH DATA			
Health Dimensions and Factors	Health Measures	Data Year	Release Year
Outcomes	Infant Mortality Rate	2020-2022	2024
	Late Maternal Death Rate	2018-2022	2024
	Maternal Deaths	2018-2022	2024
	Maternal Mortality Rate	2018-2022	2024
	Severe Maternal Morbidity Rate	2021	2024
Risk Factors	Breastfeeding Initiation	2020-2022	2024
	Low Birth Weight	2020-2022	2024
	Maternal Diabetes	2020-2022	2024
	Maternal Hypertension	2020-2022	2024
	Pre-Pregnancy Obesity	2020-2022	2024
	Preterm Births	2020-2022	2024
	Smoking During Pregnancy	2020-2022	2024
Access to Care	Maternity Care Deserts	2024	2024
	Prenatal Care (First Trimester)	2020-2020	2024
Demographics	Maternal Age	2023	2024
	Race/Ethnicity (Maternal Health)	2021	2024

Outcomes

Infant Mortality Rate

Estimated infant mortality rate per 1,000 live births. Data are based on death certificates linked to corresponding birth certificates for deaths of children under one year of age.

[Learn more.](#)

- Data Source: Health Resources and Service Administration (HRSA) Maternal and Infant Health Mapping Tool
- Data Year: 2020-2022
- Variable Label in Data: infant_mortality_rate

Late Maternal Death Rate

Number of maternal deaths (from birth up to 1 year postpartum) per 100,000 live births. Includes ICD Codes: O96-O97. Data are based on the underlying cause of death listed on death certificates for U.S. residents. [Learn more.](#) Data representing one to nine deaths are

suppressed; data where the death count is less than 20 are marked as “unreliable.” [See more.](#)

- Data Source: Centers for Disease Control and Prevention (CDC) WONDER (Underlying Cause of Death) and Centers for Disease Control and Prevention (CDC) WONDER (Nativity)
- Data Year: 2018-2022
- Variable Label in Data: late_maternal_mortality_rate

Maternal Deaths

Counties reporting maternal deaths (up to 42 days postpartum) or no maternal deaths. Data are based on the underlying cause of death listed on death certificates for U.S. residents. Includes International Classification of Diseases, Tenth Revision (ICD-10-CM) Codes: A34 (Obstetrical tetanus), O00–O95, and O98–O99. [Learn more.](#) Data representing one to nine deaths are suppressed; data where the death count is less than 20 are marked as “unreliable.” [See more.](#)

- Data Source: Centers for Disease Control and Prevention (CDC) WONDER (Underlying Cause of Death)
- Data Year: 2018-2022
- Variable Label in Data: maternal_deaths

Maternal Mortality Rate

Number of maternal deaths (up to 42 days postpartum) per 100,000 live births. Includes ICD Codes: A34 (Obstetrical tetanus), O00–O95, and O98–O99. Data are based on the underlying cause of death listed on death certificates for U.S. residents. [Learn more.](#) Data representing one to nine deaths are suppressed; data where the death count is less than 20 are marked as “unreliable.” [See more.](#)

- Data Source: Centers for Disease Control and Prevention (CDC) WONDER (Underlying Cause of Death) and Centers for Disease Control and Prevention (CDC) WONDER (Nativity)
- Data Year: 2018-2022
- Variable Label in Data: maternal_mortality_rate

Severe Maternal Morbidity Rate

Number of women experiencing unexpected outcomes of labor and delivery (20 indicators) per 10,000 in-hospital deliveries. Data are for in-hospital deliveries where the discharge record includes ICD codes for severe maternal morbidity indicators (such as sepsis, infection, eclampsia, hemorrhage, and other complications). Blood transfusion codes are not included. [Learn more.](#) Data are currently only available at the state level.

- Data Source: Healthcare Cost and Utilization Project (HCUP) Fast Stats
- Data Year: 2021
- Variable Label in Data: severe_maternal_morbidity_rate

Risk Factors

Breastfeeding Initiation

Estimated percentage of breastfeeding initiation among live births who were not transferred to another facility within 24 hours of delivery and were alive at the time of birth certificate completion. Estimates are derived from the National Center for Health Statistics' Birth Files as compiled from data provided through the Vital Statistics Cooperative Program.

- Data Source: Health Resources and Service Administration (HRSA) Maternal and Infant Health Mapping Tool
- Data Year: 2020-2022
- Variable Label in Data: breastfeeding_initiation_pct

Maternal Diabetes

Estimated percentage of live births to women with any diabetes diagnosis (pre-pregnancy or gestational). Diabetes is a glucose intolerance requiring treatment. Pre-pregnancy diabetes is a diagnosis of diabetes before pregnancy, and gestational diabetes is diabetes first diagnosed during pregnancy. Estimates are derived from the National Center for Health Statistics' Birth Files as compiled from data provided through the Vital Statistics Cooperative Program.

- Data Source: Health Resources and Service Administration (HRSA) Maternal and Infant Health Mapping Tool
- Data Year: 2020-2022
- Variable Label in Data: diabetes_maternal_pct

Maternal Hypertension

Estimated percentage of live births to women with any hypertension diagnosis (pre-pregnancy or gestational). Hypertension is the elevation of blood pressure above normal for age, sex, and physiological condition. Pre-pregnancy hypertension is a diagnosis of hypertension before pregnancy, and gestational hypertension (pregnancy-induced hypertension or preeclampsia) is hypertension first diagnosed during pregnancy. Estimates are derived from the National Center for Health Statistics' Birth Files as compiled from data provided through the Vital Statistics Cooperative Program.

- Data Source: Health Resources and Service Administration (HRSA) Maternal and Infant Health Mapping Tool
- Data Year: 2020-2022
- Variable Label in Data: hypertension_maternal_pct

Low Birth Weight

Estimated percentage of live births that are low birth weight (less than 2,500 grams). Estimates are derived from the National Center for Health Statistics' Birth Files as compiled from data provided through the Vital Statistics Cooperative Program.

- Data Source: Health Resources and Service Administration (HRSA) Maternal and Infant Health Mapping Tool
- Data Year: 2020-2022
- Variable Label in Data: low_birth_weight_pct

Pre-Pregnancy Obesity

Estimated percentage of live births to women with pre-pregnancy body mass index (BMI) greater than or equal to 30 kg/m². Estimates are derived from the National Center for Health Statistics' Birth Files as compiled from data provided through the Vital Statistics Cooperative Program.

- Data Source: Health Resources and Service Administration (HRSA) Maternal and Infant Health Mapping Tool
- Data Year: 2020-2022
- Variable Label in Data: obesity_maternal_pct

Preterm Births

Estimated percentage of live births that are preterm (before 37 weeks). Estimates are derived from the National Center for Health Statistics' Birth Files as compiled from data provided through the Vital Statistics Cooperative Program.

- Data Source: Health Resources and Service Administration (HRSA) Maternal and Infant Health Mapping Tool
- Data Year: 2020-2022
- Variable Label in Data: pre_term_birth_pct

Smoking During Pregnancy

Estimated percentage of live births where cigarette smoking was reported during any trimester of pregnancy. Estimates are derived from the National Center for Health Statistics' Birth Files as compiled from data provided through the Vital Statistics Cooperative Program.

- Data Source: Health Resources and Service Administration (HRSA) Maternal and Infant Health Mapping Tool
- Data Year: 2020-2022
- Variable Label in Data: smoking_during_pregnancy_pct

Access to Care

Maternity Care Deserts

Access to obstetric care in a given county from none (desert) to full. Maternity care deserts are counties without a hospital, birth center, or provider offering obstetric care. Counties were classified as having low access to maternity care services if there was one or fewer hospital offering OB service and fewer than 60 OB providers per 10,000 births, and the proportion of women without health insurance was 10 percent or greater. Counties were

classified as having moderate access to maternity care services if there was one or fewer hospital offering OB service and fewer than 60 OB providers per 10,000 births, and the proportion of women without health insurance was less than 10 percent. Counties with full access had either two or more hospitals offering OB services or 60 or more OB providers per 10,000 births. [Learn more.](#)

- Data Source: March of Dimes, Maternity Care Desert Report
- Data Year: 2024
- Variable Label in Data: maternity_care_deserts

Prenatal Care (First Trimester)

Estimated percentage of live births to women who received first trimester prenatal care. Estimates are derived from the National Center for Health Statistics' Birth Files as compiled from data provided through the Vital Statistics Cooperative Program.

- Data Source: Health Resources and Service Administration (HRSA) Maternal and Infant Health Mapping Tool
- Data Year: 2020-2022
- Variable Label in Data: prenatal_care_pct

Demographics

Maternal Age

Average age of mothers. Maternal age is based on birth certificate data from the National Center for Health Statistics. Data is not shown for counties with less than 100,000 population.

- Data Source: Centers for Disease Control and Prevention (CDC) WONDER (Nativity)
- Data Year: 2023
- Variable Label in Data: maternal_age_average

Race/Ethnicity (Maternal Health)

Number of women of maternal age (15-44 years) identifying as American Indian or Alaska Native, Asian, Black or African American, More than one race, Native Hawaiian or Pacific Islander, or White. Number of women 15-44 years of age identifying as Hispanic or Latina, or Not Hispanic or Latina.

- Data Source: Health Resources and Service Administration (HRSA) Maternal and Infant Health Mapping Tool
- Data Year: 2021
- Variable Label in Data: ethnicity_hl_maternal_cnt, ethnicity_nonhl_maternal_cnt, race_aian_maternal_cnt, race_as_maternal_cnt, race_blk_maternal_cnt, race_mto_maternal_cnt, race_nhpi_maternal_cnt, race_wh_maternal_cnt

Opioid Outcomes and Prescription Rates

Opioid-related death rates, opioid prescriptions rates, and trends in death and prescription rates data come from the Centers for Disease Control and Prevention. All-drug and opioid-related mortality data are based on death certificates for U.S. residents and reflect average mortality and population data over a five-year period (2018-2022). To help assess trends over time, we also calculate a percent change in mortality rate by comparing two consecutive five-year periods (2015-2019 and 2010-2014). Data on opioid prescriptions reflect estimates of the total number of opioid prescriptions filled in the United States from retail pharmacies. Percent change in prescription rate reflects data from 2023 compared to the previous year (2022). Data on opioid use disorder prevalence were obtained from the Centers for Medicare and Medicaid Services (CMS), Mapping Medicare Disparities Tool. Additional details are provided in the chart and descriptions below. Data on HIV prevalence were obtained from County Health Rankings & Roadmaps.

OPIOID OVERDOSE DATA			
Dimensions	Measure	Data Year(s)	Release Year
Outcomes	All Drugs – Death Rate	2018-2022	2024
	All Drugs – Death Rate Trends	2010-2019	2021
	All Opioids – Death Rate	2018-2022	2024
	All Opioids – Death Rate Trends	2010-2019	2021
	Heroin – Death Rate	2018-2022	2024
	Heroin – Death Rate Trends	2010-2019	2021
	Opioid Use Disorder	2023	2024
	Prescription Opioids – Death Rate	2018-2022	2024
	Prescription Opioids – Death Rate Trends	2010-2019	2021
	Synthetic Opioids – Death Rate	2018-2022	2024
	Synthetic Opioids – Death Rate Trends	2010-2019	2021
Risk Factors	HIV Prevalence	2022	2025
	Opioids Prescription Rate	2023	2024
	Opioids Prescription Trends	2022-2023	2024

Outcomes

All Drugs – Death Rate

Mortality rate for all drug-related overdose, represented as deaths per 100,000 persons. The rates are five-year, aged-adjusted averages (2015-2019). “All drug-related overdose” mortality is classified using the International Classification of Diseases, Tenth Revision (ICD-10) and identified using the underlying cause of death codes for Drug poisonings (overdose) that are Unintentional (X40-X44), Suicide (X60-X64), Homicide (X85), and Undetermined (Y10-Y14).

- Data Source: Centers for Disease Control and Prevention (CDC) WONDER (Multiple Cause of Death)
- Data Year: 2018-2022
- Variable Label in Data: all_drugs_mortality_rate

All Drugs – Death Rate Trends

Percent change in mortality rate (deaths per 100,000 persons) for all drug-related overdose. Percent change is average mortality rate over the current five-year period (2015-2019) compared to average mortality rate over the previous five-year period (2010-2014).

- Data Source: Centers for Disease Control and Prevention (CDC) WONDER (Multiple Cause of Death)
- Data Year: 2010-2019
- Variable Label in Data: alldrugs_age_adj_mortality_rate_pct_change

All Opioids – Death Rate

Mortality rate for all opioid-related overdose, represented as deaths per 100,000 persons. The rates are five-year, aged-adjusted averages (2018-2022). “All opioids” mortality is classified using the International Classification of Diseases, Tenth Revision (ICD-10) and identified using the underlying cause of death codes for Drug poisonings (overdose) that are Unintentional (X40-X44), Suicide (X60-X64), Homicide (X85), and Undetermined (Y10-Y14) and involve opium (T40.0), heroin (T40.1), natural and semi-synthetic opioids (T40.2), methadone (T40.3), synthetic opioids other than methadone (T40.4), and other and unspecified narcotics (T40.6).

- Data Source: Centers for Disease Control and Prevention (CDC) WONDER (Multiple Cause of Death)
- Data Year: 2018-2022
- Variable Label in Data: any_opioids_mortality_rate

All Opioids – Death Rate Trends

Percent change in mortality rate (deaths per 100,000 persons) for all opioid-related overdose. Percent change is average mortality rate over the current five-year period (2015-2019) compared to average mortality rate over the previous five-year period (2010-2014).

- Data Source: Centers for Disease Control and Prevention (CDC) WONDER (Multiple Cause of Death)
- Data Year: 2010-2019
- Variable Label in Data: anyopioids_age_adj_mortality_rate_pct_change

Heroin – Death Rate

Mortality rate for all heroin overdose, represented as deaths per 100,000 persons. The rates are five-year, aged-adjusted averages (2018-2022). “Heroin” mortality is classified using the International Classification of Diseases, Tenth Revision (ICD-10) and identified using the underlying cause of death codes for Drug poisonings (overdose) that are Unintentional (X40-X44), Suicide (X60-X64), Homicide (X85), and Undetermined (Y10-Y14) and involve the multiple cause of death code for heroin (T40.1).

- Data Source: Centers for Disease Control and Prevention (CDC) WONDER (Multiple Cause of Death)

- Data Year: 2018-2022
- Variable Label in Data: heroin_mortality_rate

Heroin – Death Rate Trends

Percent change in mortality rate (deaths per 100,000 persons) for all heroin overdose. Percent change is average mortality rate over the current five-year period (2015-2019) compared to average mortality rate over the previous five-year period (2010-2014).

- Data Source: Centers for Disease Control and Prevention (CDC) WONDER (Multiple Cause of Death)
- Data Year: 2010-2019
- Variable Label in Data: heroin_age_adj_mortality_rate_pct_change

Opioid Use Disorder

Prevalence of overarching Opioid Use Disorder (OUD) among Medicare (dual and non-dual) beneficiaries. Data are based on Centers for Medicare & Medicaid Services (CMS) administrative enrollment and claims data for Medicare Part A and Part B beneficiaries enrolled in the fee-for-service program. The data identify OUD based on procedure and diagnosis codes, hospitalization and emergency department visits due to opioid-related overdoses and poisoning events, and/or the utilization of FDA approved drugs for the treatment of OUD. [Learn more.](#)

- Data Source: Centers for Medicare and Medicaid Services (CMS), Mapping Medicare Disparities Tool
- Data Year: 2023
- Variable Label in Data: opioid_use_disorder

Prescription Opioids – Death Rate

Mortality rate for all prescription opioid overdose, represented as deaths per 100,000 persons. The rates are five-year, aged-adjusted averages (2015-2019). “Prescription opioids” is classified using the International Classification of Diseases, Tenth Revision (ICD-10) and identified using the underlying cause of death codes for Drug poisonings (overdose) that are Unintentional (X40-X44), Suicide (X60-X64), Homicide (X85), and Undetermined (Y10-Y14) and involve natural and semi-synthetic opioids (T40.2) and methadone (T40.3).

- Data Source: Centers for Disease Control and Prevention (CDC) WONDER (Multiple Cause of Death)
- Data Year: 2018-2022
- Variable Label in Data: prescription_mortality_rate

Prescription Opioids – Death Rate Trends

Percent change in mortality rate (deaths per 100,000 persons) for all prescription opioid overdose. Percent change is average mortality rate over the current five-year period (2015-2019) compared to average mortality rate over the previous five-year period (2010-2014).

- Data Source: Centers for Disease Control and Prevention (CDC) WONDER (Multiple Cause of Death)
- Data Year: 2010-2019
- Variable Label in Data: prescriptionopioids_aa_mortality_rate_pct_change

Synthetic Opioids – Death Rate

Mortality rate for all synthetic opioid overdose, represented as deaths per 100,000 persons. The rates are five-year, aged-adjusted averages (2018-2022). “Synthetic opioids” mortality is classified using the International Classification of Diseases, Tenth Revision (ICD-10) and identified using the underlying cause of death codes for Drug poisonings (overdose) that are Unintentional (X40-X44), Suicide (X60-X64), Homicide (X85), and Undetermined (Y10-Y14) and involve synthetic opioids other than methadone (T40.4).

- Data Source: Centers for Disease Control and Prevention (CDC) WONDER (Multiple Cause of Death)
- Data Year: 2018-2022
- Variable Label in Data: synthetic_mortality_rate

Synthetic Opioids – Death Rate Trends

Percent change in mortality rate (deaths per 100,000 persons) for all synthetic opioid overdose. Percent change is average mortality rate over the current five-year period (2015-2019) compared to average mortality rate over the previous five-year period (2010-2014).

- Data Source: Centers for Disease Control and Prevention (CDC) WONDER (Multiple Cause of Death)
- Data Year: 2010-2019
- Variable Label in Data: syntheticopioids_age_adj_mortality_rate_pct_change

Risk Factors

HIV Prevalence

Number of people aged 13 years and older living with a diagnosis of human immunodeficiency virus (HIV) infection per 100,000 persons. [Learn more.](#)

- Data Source: County Health Rankings & Roadmaps
- Data Year: 2022
- Variable Label in Data: hiv_prevalence_rate

Opioids Prescription Rate

Rate of retail opioid prescriptions dispensed per 100 persons. Prescriptions include any initial or refill prescription dispensed at a retail pharmacy in the sample and paid for by commercial insurance, Medicare, Medicaid, cash or its equivalent. Opioids include, but are not limited to, buprenorphine, codeine, fentanyl, hydrocodone, hydromorphone, methadone, morphine, oxycodone, oxymorphone, propoxyphene, tapentadol, and tramadol.

- Data Source: Centers for Disease Control and Prevention (CDC) Opioid Dispensing Rate Maps
- Data Year: 2023
- Variable Label in Data: opioid_prescribing_rate

Opioids Prescription Trends

Percent change in opioid prescription rate (retail opioid prescriptions dispensed per 100 persons) in the current year (2023) compared to the previous year (2022). Prescriptions include any initial or refill prescription dispensed at a retail pharmacy in the sample and paid for by commercial insurance, Medicare, Medicaid, cash or its equivalent. Opioids include, but are not limited to, buprenorphine, codeine, fentanyl, hydrocodone, hydromorphone, methadone, morphine, oxycodone, oxymorphone, propoxyphene, tapentadol, and tramadol.

- Data Source: Centers for Disease Control and Prevention (CDC) Opioid Dispensing Rate Maps
- Data Year: 2022-2023
- Variable Label in Data: opioid_prescribing_rate_pct_change

Demographics, Socioeconomic, and Community Health Factors

The demographic, socioeconomic, and community health data include information that may help to contextualize the intersection between broadband and health data in a geographical area. Social determinants of health are the conditions in the places where people live, learn, work, worship, age, and play that affect a wide range of health, functioning, and quality of life outcomes and risks. Based on studies and data analytics, the Connect2Health^{FCC} Task Force has concluded that broadband itself is a social determinant of health—if not a “super” determinant of health, impacting and influencing the traditionally recognized SDOH domains.

These data are drawn from several sources, including the United States Census Bureau’s American Community Survey (ACS) 5-year estimates, Small Area Income and Poverty Estimates (SAIPE), Census Small Area Health Insurance Estimates (SAHIE), and Demographic and Housing Characteristics File; Agency for Healthcare Research and Quality’s (AHRQ) Social Determinants of Health Database (SDOH); County Health Rankings & Roadmaps; and Centers for Disease Control and Prevention/Agency for Toxic Substances and Disease Registry (CDC/ATSDR) Social Vulnerability Index (SVI).

DEMOGRAPHICS, SOCIOECONOMIC, AND COMMUNITY HEALTH DATA			
Dimensions	Measures	Data Year	Release Year
Population	Age (Over 65 Years)	2023	2025
	Density	2020	2020
	Female	2023	2025
	Race/Ethnicity (All)	2019-2023	2024
	Rurality – Min/Max	2020	2020
	Rurality – Quintiles	2020	2020
	Population	2020	2020
	Veteran Status	2019-2023	2024
Community Factors	Distance to ER	2020	2020
	Education	2019-2023	2025
	Food Insecurity	2022	2025
	Households – No Vehicle	20169-2023	2024
	Injury Deaths	2018-2022	2025
	Median Household Income	2019-2023	2025
	Poor Mental Health Days	2022	2025
	Poverty	2022	2024
	Severe Housing	2017-2021	2025
	Social Vulnerability Index	2022	2024
	Unemployment	2023	2025
Insurance	Medicaid	2019-2023	2024
	Medicare	2019-2023	2024
	Percent Uninsured	2022	2024
	Private Insurance	2019-2023	2024

Population

Age (Over 65 Years)

Percentage of the population aged 65 and older. [Learn more.](#)

- Data Source: County Health Rankings & Roadmaps
- Data Year: 2023
- Variable Label in Data: age_over_65_pct

Density

Population per square mile. Density is calculated by taking the total population residing in the census block group and dividing it by the square miles of land in the census block group.

- Data Source: Census - Demographic and Housing Characteristics File (2020) and Census Geography Information dataset (GEOINFO)
- Data Year: 2020
- Variable Label in Data: pop_density

Female

The number of females expressed as a percent of the total population. [Learn more.](#)

- Data Source: County Health Rankings & Roadmaps
- Data Year: 2023
- Variable Label in Data: female_pct

Population

Estimate of the resident population including all people currently residing in the United States. The population estimate is calculated using the population base (the last decennial census or previous point in the time series), adding births, subtracting deaths, and adding net migration.

- Data Source: Census - Demographic and Housing Characteristics File (2020)
- Data Year: 2020
- Variable Label in Data: population

Race/Ethnicity (All)

Percentage of population identifying as American Indian or Alaska Native, Asian, Black or African American, Hispanic, more than one race, Native Hawaiian or Other Pacific Islander, or White. Data collected by American Community Survey questionnaire asking respondent to identify race. Percent of population self-identifying as Hispanic or Latino, or Not Hispanic or Latino. Data collected by American Community Survey questionnaire asking respondent to identify if they are of Hispanic, Latino, or Spanish origin. [Learn more.](#)

- Data Source: County Health Rankings & Roadmaps; Census - American Community Survey (ACS) 5-year estimates (multiple races)
- Data Year: 2019-2025

- Variable Label in Data: race_aian_pct, race_asian_pct, race_black_pct, ethnicity_hispanic_pct, race_multiple_pct, race_nhp_pct, race_white_pct

Rurality – Min/Max

Population residing in an urban area (as designated by the U.S. Census Bureau). Urban areas include all census tracts and/or blocks that are designated as urban for the U.S. Census Bureau 2020 Census. Urban includes all census blocks/tracts that meet minimum population density requirements, as well as adjacent territory containing non-residential urban land uses and with low population density included to link outlying densely settled territory with the densely settled core. [Learn more.](#)

- Data Source: Census - Demographic and Housing Characteristics File (2020)
- Data Year: 2020
- Variable Label in Data: rural_pct

Rurality – Quintiles

Population residing in a rural area (as designated by the U.S. Census Bureau). Rural areas include all census tracts and/or blocks that are designated as rural for the U.S. Census Bureau 2020 Census. Rural includes all census blocks/tracts not included within an urban area. [Learn more.](#)

- Data Source: Census - Demographic and Housing Characteristics File (2020)
- Data Year: 2020
- Variable Label in Data: rural_pct

Veteran Status

Percentage of civilian population (ages 18 and over) consisting of Veterans. Data collected by American Community Survey questionnaire asking whether respondent ever served on active duty in the United States Armed Forces, Reserves, or National Guard. [Learn more.](#)

- Data Source: Census - American Community Survey (ACS) 5-year estimates
- Data Year: 2019-2023
- Variable Label in Data: veteran_pct

Community Factors

Distance to ER

Median distance in miles to the nearest emergency department, calculated using population weighted tract centroids in the county. [Learn more.](#)

- Data Source: Agency for Healthcare Research and Quality (AHRQ) Social Determinants of Health Database (SDOH)
- Data Year: 2020
- Variable Label in Data: distance_to_er_miles

Education

Percentage of adults (aged 25-44) with some post-secondary education (i.e., some college). Some post-secondary education includes all individuals who pursued education following high school (including vocational/technical schools, junior colleges, or four-year colleges), whether they received a degree or not. [Learn more.](#)

- Data Source: County Health Rankings & Roadmaps
- Data Year: 2019-2023
- Variable: some_college_pct

Food Insecurity

Estimated percentage of population who lack adequate access to food. Estimates are based on determinants of food insecurity, such as unemployment, poverty, disability, homeownership, and median income, as well as the percentage of the population that is Black and the percentage of the population that is Hispanic. Data Values were originally reported as decimals and were multiplied by 100 to create percentages.

- Data Source: County Health Rankings & Roadmaps
- Data Year: 2022
- Variable Label in Data: food_insecurity_pct

Households - No Vehicle

Percent of housing units with no vehicle available. Data collected by American Community Survey questionnaire asking respondent to identify how many automobiles, vans, and trucks are kept at the home for use by members of the household. [Learn more.](#)

- Data Source: Census - American Community Survey (ACS) 5-year estimates
- Data Year: 2019-2023
- Variable Label in Data: no_vehicle_pct

Injury Deaths

Number of deaths due to injury per 100,000 persons. Injuries include both planned and unplanned incidents regardless of cause and intent. Calculated by taking number of injury deaths during a five-year period divided by the aggregate annual population during the same period. [Learn more.](#)

- Data Source: County Health Rankings & Roadmaps
- Data Year: 2018-2022
- Variable Label in Data: injury_deaths_rate

Median Household Income

Median household income is the income level at which half of households earn more, and half of households earn less. Income includes, but is not limited to, wage or salary income; net self-employment income; interest, dividends, or net rental or royalty income or income from estates and trusts; Social Security or Railroad Retirement income; Supplemental

Security Income; public assistance or welfare payments; retirement, survivor, or disability pensions; and all other income. [Learn more.](#)

- Data Source: County Health Rankings & Roadmaps
- Data Year: 2019-2023
- Variable Label in Data: medianhhinc

Poor Mental Health Days

Average number of mentally unhealthy days reported in past 30 days (age-adjusted). Data collected via landline and cellphone survey asking respondents to self-report how many days during the past 30 days their mental health was “not good.” [Learn more.](#)

- Data Source: County Health Rankings & Roadmaps
- Data Year: 2022
- Variable Label in Data: poor_mental_health_days_cnt

Poverty

Estimated percentage of families or individuals whose total income is below the corresponding official poverty threshold. Total income includes all money income before taxes, except capital gains or noncash benefits. Income thresholds used to determine poverty status vary by the size of family and age of members and do not vary geographically. [Learn more.](#)

- Data Source: Census Small Area Income and Poverty Estimates (SAIPE)
- Data Year: 2022
- Variable Label in Data: poverty_pct

Severe Housing

Percentage of households with at least 1 of 4 housing problems: overcrowding, high housing costs, lack of kitchen facilities, or lack of plumbing facilities. Overcrowding is measured as more than one person per room; high housing cost is measured as monthly housing costs that exceed 50% of monthly income; lack of kitchen facilities includes lack of a sink with running water, stove/range, or refrigerator; lack of plumbing facilities includes lack of hot/cold piped water, flush toilet, or bathtub/shower. [Learn more.](#)

- Data Source: County Health Rankings & Roadmaps
- Data Year: 2017-2021
- Variable Label in Data: severe_housing_problems_pct

Social Vulnerability Index

A composite measure of social vulnerability based on 16 demographic factors collected in the American Community Survey, including poverty, unemployment, housing cost burden, education, health insurance, age, disability status, single-parent households, English language proficiency, racial and ethnic minority status, housing type and transportation. Higher scores indicate higher social vulnerability. [Learn more.](#)

- Data Source: Centers for Disease Control and Prevention/Agency for Toxic Substances and Disease Registry (CDC/ATSDR) Social Vulnerability Index (SVI)
- Data Year: 2022
- Variable Label in Data: overall_svi_pct_rank

Unemployment

Percentage of the civilian labor force (aged 16 and older) who are unemployed but seeking work. Unemployed population includes individuals who had no employment during the survey week, were available for work, and had made specific efforts to find employment during the preceding four weeks. The county civilian labor force is all unemployed and employed individuals (aged 16 and older), excluding military personnel, federal government employees, retirees, handicapped workers, and agricultural workers. [Learn more.](#)

- Data Source: County Health Rankings & Roadmaps
- Data Year: 2023
- Variable Label in Data: unemployment_pct

Insurance

Medicaid

Percentage of population with any Medicaid/means-tested public health insurance coverage. Data collected by American Community Survey questionnaire asking respondent to identify whether they are currently covered by various types of health insurance or health coverage plans, including private coverage, Medicare, or Medicaid. [Learn more.](#)

- Data Source: Census - American Community Survey (ACS) 5-year estimates
- Data Year: 2019-2023
- Variable Label in Data: insurance_medicaid_pct

Medicare

Percentage of population with Medicare health insurance coverage only. Data collected by American Community Survey questionnaire asking respondent to identify whether they are currently covered by various types of health insurance or health coverage plans, including private coverage, Medicare, or Medicaid. [Learn more.](#)

- Data Source: Census - American Community Survey (ACS) 5-year estimates
- Data Year: 2019-2023
- Variable Label in Data: insurance_medicare_pct

Private Insurance

Percentage of the population with private health insurance coverage. Data collected by American Community Survey questionnaire asking respondent to identify whether they are currently covered by various types of health insurance or health coverage plans, including private coverage, Medicare, or Medicaid. [Learn more.](#)

- Data Source: Census - American Community Survey (ACS) 5-year estimates

- Data Year: 2019-2023
- Variable Label in Data: insurance_private_pct

Percent Uninsured

Percentage of persons under 65 without any medical insurance.

- Data Source: Census Small Area Health Insurance Estimates (SAHIE)
- Data Year: 2022
- Variable Label in Data: uninsured_pct