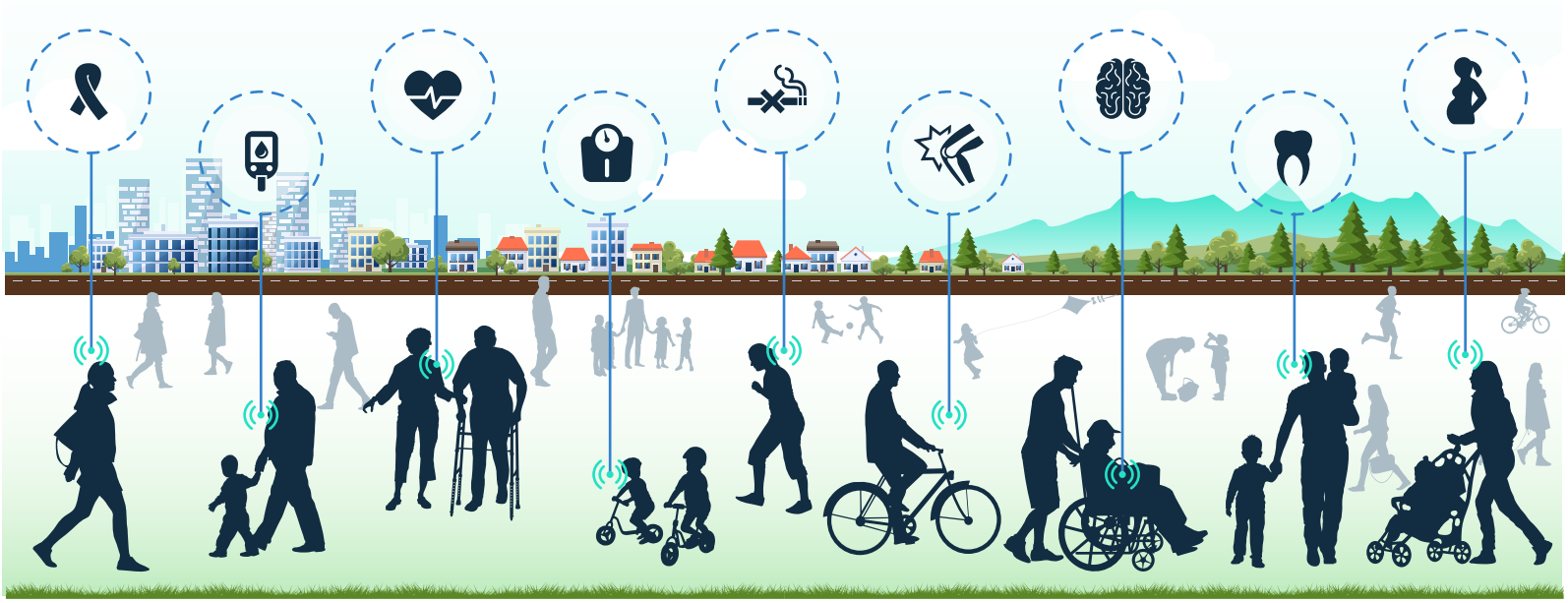
Using Surveillance Systems to Prevent and Control Chronic Diseases



CDC surveillance systems collect data on chronic diseases and their risk factors. These systems—often the only source of such data—are vital for understanding how chronic diseases affect Americans. Without them, our prevention and control efforts would be guesswork. Surveillance data guide us in putting our resources to the best use.

Cancer

To help Americans prevent cancer and catch it early, we need to know what cancers are being diagnosed, in what groups, and where. The National Program of Cancer Registries (NPCR) coordinates with other federal agencies to collect these data for all cancer cases in the United States.

NPCR data highlight:

Rural areas have higher rates of cancers related to smoking (like lung and laryngeal cancers) and cancers that can be prevented by screening (like colorectal and cervical cancers) compared to urban areas. These numbers tell us that we need to work with health care systems in rural areas to help people quit smoking, increase access to screening, and get more people vaccinated against infections that can cause cancer.

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Diabetes

To understand how many Americans have diabetes and prediabetes, what health issues they may have, the health care they receive, and whether they have complications from their disease, we use data from the United States Diabetes Surveillance System (USDSS) and the *National Diabetes Statistics Report.*

USDSS and *Statistics Report* data highlight:

There are 30.3 million Americans of all ages (9.4%) with diabetes and an additional 84.1 million adults with prediabetes, which puts them at risk of developing type 2 diabetes. The CDC-recognized lifestyle change programs to prevent or delay type 2 diabetes, and the National Diabetes Education Program for people with diabetes, can help avoid life-changing complications like heart disease, blindness, and kidney failure.

Heart Disease and Stroke

To prevent disability and death from two of the nation's biggest killers, we focus on risk factors like high blood pressure. Data from the National Health and Nutrition Examination Survey (NHANES) tell us how many people have high blood pressure and if their condition is under control.

NHANES data highlight:

About 75 million American adults have high blood pressure, and almost half (46%) do not have their blood pressure under control. About 1 in 5 are not even aware they have high blood pressure. These numbers have led to successful work with health systems to find and effectively treat more people with high blood pressure.

Obesity

To help children and teens stay at the right weight so they can avoid chronic diseases like heart disease, diabetes, and cancer later in life, we use data from the National Health and Nutrition Examination Survey (NHANES), which measures overweight and obesity, what kids eat and drink, and how much time is spent watching television, watching videos, or playing video games.

NHANES data highlight:

A third (33%) of children are overweight or have obesity. This information is vital for understanding the current and future severity of our national overweight and obesity problem and the importance of programs in childcare settings, schools, and communities that reduce screen time and improve physical activity and nutrition.

Tobacco Use

We know that the best way to lower the smoking rate nationwide is to prevent youth from ever starting to smoke and get adult smokers to quit. The National Youth Tobacco Survey (NYTS) measures the use of cigarettes and other tobacco products by students in grades 6 through 12.

NYTS data highlight:

The number of middle and high school students who used any tobacco product dropped from 4.7 million in 2015 to 3.9 million in 2016. This 17% drop adds to the evidence that, when used together, tobacco control efforts like raising the minimum age for tobacco sales, increasing the price of tobacco, and requiring smoke-free public spaces are working.

Arthritis

Arthritis is one of our nation's leading causes of work disability. We measure how many US adults have arthritis and how many are limited by it with the National Health Interview Survey (NHIS).

NHIS data highlight:

More than 54 million US adults have arthritis. About 24 million adults are limited in their activities from arthritis, and more than 1 in 4 adults with arthritis report severe joint pain. These findings show that people with arthritis urgently need to know that there are steps they can take to keep their symptoms under control, like being active, taking part in self-management education and physical activity programs, and staying at a healthy weight.

Alzheimer's and Other Dementias

We do not know how to prevent Alzheimer's disease yet, but we can help people get diagnosed early and remain independent for as long as possible. The Behavioral Risk Factor Surveillance System (BRFSS) asks adults aged 45 and older if they have noticed increased confusion or memory loss during the past 12 months, also known as subjective cognitive decline.

BRFSS data highlight:

Data from 51 states and territories show that 11.2% of Americans aged 45 and older report subjective cognitive decline. States use this information to develop state plans, increase awareness about the needs of older Americans, and guide elder justice and emergency preparedness efforts for older adults.

Tooth Decay

We know that pain from tooth decay can cause children to have problems chewing, miss school, and have a hard time concentrating. Applying dental sealants to the chewing surfaces of the back teeth is one way to prevent tooth decay. The National Health and Nutrition Examination Survey (NHANES) measures how many children aged 6 to 11 have cavities and dental sealants.

NHANES data highlight:

Only 4 in 10 children get dental sealants. Low-income children are 20% less likely to have them and twice as likely to have untreated cavities as higher-income children. This information shows the importance of school sealant programs, especially in schools that serve low-income areas.

Maternal Deaths

About 700 women die of pregnancy-related causes each year in the United States. We need a systematic way of collecting data about these deaths so we know where to focus our prevention efforts. The Pregnancy Mortality Surveillance System (PMSS) monitors pregnancy-related deaths and their causes.

PMSS data highlight:

The rate of maternal deaths is more than 3 times higher for black women than white women. Cardiovascular disease, infections, and hemorrhage are leading causes of maternal deaths. By better understanding what causes maternal deaths and how to prevent them, we can save lives.