OVERVIEW
Global HIV and tuberculosis (TB) are dynamic diseases that require high-quality, high-volume data, delivered and analyzed with speed to inform real-time change in policies and practices within and across countries. As a key implementing partner of the U.S. President’s Emergency Plan for AIDS Relief (PEPFAR), the U.S. Centers for Disease Control and Prevention (CDC) invests in and makes use of multiple and complementary sources of data to ensure accountability, efficiency, and impact. CDC is home to world-class public health experts in science, data analysis and use, epidemiology, surveillance, health information systems, and health economics who lead CDC’s data-informed decision making.

ROUTINE SURVEILLANCE REVEALS NEWER AND EXISTING INFECTIONS
Epidemiologic data, which describe disease occurrence and patterns in the population, are vital to the implementation of evidence-based control measures to protect the public’s health and safety.\(^1\) CDC works closely with partner governments to establish surveillance systems to measure existing and new HIV and TB infections. These data are used in real-time to tailor program responses based on needs, to target HIV prevention interventions where burden or risk is highest in order to avert new infections, and to reduce HIV- and TB-related mortality.

POPULATION-BASED BIOMARKER SURVEYS DESCRIBE PROGRESS AND GAPS
Since 2016, CDC has implemented more than 15 Population-based HIV Impact Assessments, commonly referred to as the PHIAs, which measure the progress of HIV programs and identify the remaining gaps towards achieving global HIV epidemic control targets. These surveys established the international standard for HIV measurement and estimation and gather data in visits to households in the general population and measure national HIV incidence, prevalence, treatment, and viral suppression, as well as a range of HIV-associated behavioral risk factors. They also identify where resources need to focus for the greatest impact. CDC experts also co-wrote the guidelines for and provide technical assistance to countries conducting population-based surveys among key populations at highest risk of HIV, such as female sex workers, men who have sex with men, transgender persons, and persons who inject drugs. PEPFAR survey data inform HIV program planning and target setting and are used to make rapid improvements to programs in real-time.

ECONOMIC ANALYSIS PROMOTES VALUE, ACCOUNTABILITY AND EFFICIENCY
CDC has more economists dedicated to global HIV and TB than any other institution. CDC health economists support PEPFAR in the collection and use of financial and other economic data to inform the efficiency, value, and sustainability of global HIV and TB programs. CDC economists are thought leaders in data collection, analysis, and use for resource tracking to ensure accountability and guide investment choices for greatest impact. They conduct economic evaluations on the implementation and effectiveness of HIV interventions and help CDC to maximize the value of its investments through a deep understanding of the cost and impact of programs.

CREATIVE DATA VISUALIZATION ENSURES WIDESPREAD DATA USE FOR PROGRAM IMPROVEMENT
In today’s information age, a key challenge is how best to identify the most relevant data. It is also important to synthesize and visualize these data for comprehension and use by stakeholders and decision-makers. CDC experts make PEPFAR data come alive in ways that tell stories, relay urgencies, demonstrate progress, and make the case for necessary improvements.
HIV and TB programs must continue and deepen their reliance on data to target and improve prevention and treatment services. Innovative, responsive, resilient, and efficient service delivery models are required to achieve and sustain global HIV and TB epidemic control. Systems for data collection and analysis, which require sustained investments, can suffer in quality and utility if they are not properly maintained, staffed, and upgraded. CDC plays a critical role in ensuring the wide adoption and use of high-quality information systems that can be sustained by partner governments into the future. Beyond HIV and TB, information and laboratory systems are critical infrastructure that can be rapidly repurposed or deployed to respond to emerging health threats like Ebola and COVID-19. Continued investments will ensure the collection and use of high-quality data in support of high-impact programs.

1CDC. The CDC Field Epidemiology Manual. Collecting Data | Epidemic Intelligence Service | CDC