



# NCD Data Science

RTI empowers global partners and country leaders to generate and analyze NCD data to promote innovative, low-cost, and replicable health solutions.

## The Global Impact

Member countries of the World Health Organization (WHO) are aiming to have a reliable system for generating cause-specific mortality data on noncommunicable diseases (NCDs) in every country by 2025. Many low- and middle-income countries (LMICs) are far from this target. RTI partners with governments to develop and enhance national health management information systems (HMISs). HMISs enable countries to produce strategic information for policy decision-making and improved health-service delivery.

RTI also helps LMICs improve their health data through population surveys, targeted data collection, and surveillance to fill critical gaps in NCD health information. RTI researchers develop, test, and use advanced data collection methods to provide fast, accurate, and cost-effective information about NCDs and their risk factors. Mobile technologies are providing a powerful way to collect important health data in a timely and cost-effective way.



## Country Partners and Projects

RTI works with policymakers, public health practitioners, global institutions, private industry, and other researchers. We collaborate with these partners to measure risks of NCDs and outcomes of programs and policies to prevent and manage NCD conditions. RTI has active partnerships and projects addressing NCDs in more than 19 countries across Asia; Africa; South, Central, and North America; the Caribbean; and South Pacific. The following examples illustrate, in part, RTI's versatility and diverse capabilities to address NCDs.

### Using Innovative Information and Communication Technologies to Collect Health Data

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#### Bloomberg Data for Health Initiative: Gathering NCD Risk Factor Information

RTI uses mobile phones to conduct low-cost, rapid data collection of NCD risk factors in 10 countries. We partner with Ministries of Health—among other organizations—and provide them with an easy-to-use, open-source survey tool and technical assistance for implementation. Ministries of Health are able to conduct low-cost, fast, accessible surveys of their population without assistance from international organizations. The survey results give robust, real-time data that can be used to inform national NCD policies.

#### CDC's Zimbabwe Health Information and Support Project (ZimHISP)

As part of the Centers for Disease Control and Prevention's (CDC's) ZimHISP, RTI strengthened the health information system (HIS) of Zimbabwe's Ministry of Health and Child Care, enabling it to produce strategic information for policy decision-making and health-service delivery to all of Zimbabwe's districts. RTI built information and communications technology infrastructure across the HIS and integrated routine practices into the HIS to improve data quality, dissemination, and use.

#### RTI's Personal Health Intervention Tool (PHIT)

PHIT is an innovative, versatile research tool. It serves as both a personal pocket-sized health laboratory and health aid. PHIT collects self-reported data through survey-style assessments or personal

diaries. The tool also gathers physiologic data through networked wireless sensors to track measurements such as heart rate or sleep disturbances. PHIT analyzes these data through a powerful logic engine to identify potential problems and delivers educational content, reminders, and self-help interventions via smartphones and tablets.

### Collecting Countrywide Data on Diseases and Risk Factors

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#### Global Tobacco Surveillance System (GTSS)

RTI provides training and technical assistance to the CDC for the design and implementation of the Global Adult Tobacco Survey (GATS) and the Global Youth Tobacco Survey (GYTS), two of the four GTSS surveys. GATS and GYTS paint a comprehensive picture of tobacco use for adults and adolescents—including frequency, type, and cessation plans. GTSS also surveys participants about their (1) exposure to secondhand smoke and (2) knowledge and perceptions of tobacco products and marketing for and against tobacco.

#### National Survey on Drug Use and Health (NSDUH)

NSDUH, sponsored by the Substance Abuse and Mental Health Services Administration, is the U.S. government's primary source of national- and state-level data on tobacco use, alcohol use, illicit drug use, nonmedical use of prescription drugs, and related mental health issues. NSDUH provides information that policymakers, program planners, and researchers use to design programs and target resources for drug treatment and prevention.



#### More Information

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