



# Global Nutrition and NCDs

» The numbers of obese and overweight people have nearly tripled since 1975. Globally, 39% of adults aged 18 years and older were overweight, and approximately 13% of the world's adult population was obese in 2016.<sup>2</sup>

## The Global Nutrition Landscape and NCDs

Sweeping changes in people's behavior and environments—along with poor multisectoral coordination policies in health, agriculture, and education—have changed dietary and physical activity patterns. Global obesity prevalence has tripled since 1975; the 2018 Global Burden of Disease projections predict a continued rise of high body mass index (BMI) through 2040.<sup>1,2</sup> Overweight and obesity are major risk factors for some of the most prevalent noncommunicable diseases (NCDs), including cardiovascular disease, diabetes, and cancer.<sup>2</sup> People in low- and middle-income countries, particularly in urban settings, often face the burden of undernutrition as well as obesity and overweight, along with the associated risk factors.<sup>2</sup>

Changes in dietary patterns and levels of physical inactivity have also resulted in sharp increases in childhood obesity while undernutrition issues remain unsolved. The number of overweight or obese children aged 5 years or younger has increased 78% from 1990 through 2016.<sup>3</sup> More than 340 million children and adolescents aged 5–19 were overweight or obese in 2016.<sup>3</sup> Simultaneously in 2016, 23% of children around the world were stunted, and nearly 8% of children were wasted.<sup>4</sup>

## RTI International's Solutions

RTI International understands that societal and individual behavior change requires supportive, evidence-based policy environments. We create and promote tools and interventions to assist with making healthy choices related to nutrition and physical activity. We leverage extensive expertise in food systems and policy, NCD risk factors and diseases, health behavior change, data collection and analysis, and economics to foster sustainable solutions.



## Country Partners and Projects

RTI engages policymakers, public health practitioners, food industry leaders, and community members to address the global risk of overweight and obesity and the growing epidemic of life-threatening NCDs. 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 RTI's versatility and diverse capabilities in meeting the challenges presented by nutritional risks and NCDs.

### Research to Inform and Improve Nutrition Programs

#### Economic Analysis of Adolescent NCD Risk Factors

RTI, with support from Plan International UK, prepared a global economic evaluation for NCD risk factors in adolescents. We focused on policy interventions to reduce tobacco use, obesity, and excessive alcohol use. The results advocate for investing in adolescent risk factor reduction as an efficient way to prevent NCDs later in life. For each risk factor, we developed youth-specific intervention packages, including cost-effectiveness and benefit-cost ratios. We demonstrated that countries can achieve benefits by investing more in obesity prevention among adolescents. RTI also estimated these effects in individual country contexts in India and Kenya.

#### The Dual Burden of Malnutrition | Developing Strategies for Improved Health in Rwandan Children

Rwandan children are increasingly at risk for both undernutrition and overweight. RTI conducted formative, participatory research in Rwanda to develop messages that address the dual burden of undernutrition and overweight in Rwandan children under age 5. Health communications must promote culturally relevant health behaviors that are acceptable and appropriate for both under- and overweight Rwandan children. Understanding the behaviors to promote will inform interventions that reduce NCD risk in Rwanda.

### Tools for Studying and Improving Nutrition

#### RTI's Obesity Cost Calculator™

Obesity and related chronic disease within the workforce can create great costs for employers. Partnering with the U.S. Centers for Disease Control and Prevention (CDC) and the CDC Foundation, RTI developed the Obesity Cost Calculator—a tool that estimates medical and work-loss costs associated with obesity. The tool quantifies obesity-related costs for employers to inform and evaluate potential health interventions aimed at reducing these costs. The calculator also estimates the number of years to a break-even point from implementing obesity reduction programs in the workplace.

### Collection and Assessment of Nutrition Data

#### Nutrition Data Landscaping in Nigeria

RTI mapped the nutrition data landscape in Nigeria, enabling the country to track progress toward global nutrition targets, inclusive of major nutrition data-related initiatives and their objectives. This landscaping assessed child and adolescent nutrition, micronutrient status, food fortification, food security, and agriculture. RTI analyzed national health information, agricultural data, and private sector information, and conducted interviews with key stakeholders. Using these data, we assessed priorities for data system strengthening, issues around data ownership, in-country capacity across the data value chain, in-country capacity, and political will and support for collection and use of nutrition data.

1. Foreman, K. J., Marquez, N., Dolgert, A., Fukutaki, K., Fullman, N., Mcgaughey, M., ... Murray, C. J. (2018). Forecasting life expectancy, years of life lost, and all-cause and cause-specific mortality for 250 causes of death: Reference and alternative scenarios for 2016–40 for 195 countries and territories. *The Lancet*. doi:10.1016/s0140-6736(18)31694-5
2. World Health Organization (2018). Obesity & overweight fact sheet. Retrieved 27 February 2018 from: <http://www.who.int/mediacentre/factsheets/fs311/en/>
3. World Health Organization (2016). Commission on ending childhood obesity fact sheet. Retrieved 6 March 2018 from: <http://www.who.int/end-childhood-obesity/facts/en/>
4. World Health Organization (2016). Global Health Observatory (GHO) data, child malnutrition. Retrieved 6 March 2018 from: <http://www.who.int/gho/child-malnutrition/en/>



#### More Information

Rachel Nugent  
+1.206.268.3612  
rnugent@rti.org  
Follow on Twitter: @RachelNugent  
RTI International  
119 South Main Street, Suite 220  
Seattle, WA 98104 USA  
ncd@rti.org

RTI 12381 1118

RTI International is an independent, nonprofit research institute dedicated to improving the human condition. Clients rely on us to answer questions that demand an objective and multidisciplinary approach—one that integrates expertise across the social and laboratory sciences, engineering, and international development. We believe in the promise of science, and we are inspired every day to deliver on that promise for the good of people, communities, and businesses around the world. For more information, visit [www.rti.org](http://www.rti.org).

RTI International is a registered trademark and a trade name of Research Triangle Institute.  
The RTI logo is a registered trademark of Research Triangle Institute.