RTI INTERNATIONAL

Annual Report 2014

Changing the world...
one project at a time

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Changing the world…
one project at a time

The essence of our mission at RTI—a mission we share with our clients—is to make the world a better place.

We take on this mission one project at a time, applying rigorous research methods and science-based solutions to complex challenges facing people and communities around the world.

With each project, we seek to drive positive change through new information—a deeper understanding of an emerging issue, a rigorous evaluation to identify which programs work and why, a novel approach to applied R&D, a technology-driven solution tailored for practical application.

No matter what our projects demand or where they take us, we bring a deep commitment to our clients and a strong sense of a mission shared.

President's Message

The challenges of addressing change are what an organization like RTI International thrives upon.

Governments, businesses, foundations, and global actors—organizations whose goals we support through research and program implementation—are in the midst of incredible changes in health, education, environmental management, economic development, social justice, and technology.

RTI is proud to be part of these changes, to have the opportunity to improve the lives of people and communities around the world in partnership with our many funders globally.

This year, our work took us to more than 80 countries—from Argentina to Zimbabwe—where we led efforts to eliminate infectious diseases and address gender-based violence, implement technology solutions to improve health care, institute environmental management systems, improve economic opportunities in impoverished communities, and reinvent the toilet for the 2.5 billion people worldwide without access to safe, affordable sanitation.

We achieved exciting research results in our offices and laboratories that will lead to major improvements in energy efficiency, environmental safety, mental health services, and educational programs across the United States and around the globe.

I invite you to join me in celebrating the accomplishments of our staff members and partners—people who come to work every day with a single goal in mind: to change the world, one project at a time.

E. Wayne Holden, PhD
President and Chief Executive Officer

Understanding Employer Opinion of MOOCs

While some employers may still be unfamiliar with massive open online courses, or MOOCs, this year a survey of North Carolina employers found that many generally viewed them positively for recruiting, hiring, and training employees.

The study, funded by the Bill & Melinda Gates Foundation and conducted with Duke University, is the first to evaluate employers' knowledge, experience, and attitudes toward MOOCs.

"These online courses have quickly grown in popularity in the past couple of years," said Alexandria Walton Radford, PhD, program director in postsecondary education at RTI.

"We found that there's still a ways to go before most employers know about the availability of these classes, but once they learn of them, they see their potential, especially for professional development purposes."

While only one organization had used MOOCs for recruitment at the time of the survey, 57 percent said they could see their organization using MOOCs for recruitment in the future.

In addition, almost three-quarters of employers surveyed indicated that applicants taking job-related MOOCs would be perceived positively or very positively in hiring decisions. Organizations working in business and communications as well as in education were especially likely to view MOOCs positively when selecting applicants.

"Whether in the United States or abroad, the success of MOOCs for workforce skill development will depend in large part on the receptivity of employers to hiring employees who have obtained some or all of their education online," said Laura Horn, director of postsecondary education research at RTI.

Looking ahead, RTI and Duke are seeking additional funding to conduct a national study on this topic, and RTI is exploring ways in which we might use MOOCs to augment our own professional development opportunities.

Preparing Students for the Labor Market

Success in the workforce requires more than academic and technical skills. It also demands a set of cross-cutting abilities often called "employability skills."

Employability skills are general skills necessary for success at all employment levels and in all sectors.

Under a contract for the U.S. Department of Education, RTI researchers addressed the need for a common list of employability skills and unique considerations for assessing them. We developed a website that provides educators, employers, and policymakers with a one-stop resource for information and tools to help teach and assess employability skills. The site's interactive Employability Skills Framework allows users to explore and compare employability skills identified by various standards and assessments.

The site also features an assessment comparison tool, which allows users to review criteria for selecting an employability skills assessment and create a customized worksheet to guide assessment selection, and profiles of employability skills instruction and assessment.

During FY2014, RTI enhanced the site to better enable users to apply the framework in both the classroom and the workplace.

"The hope is that the website helps educators, policymakers, and employers understand the connections between different sets of employability skills and assessments and will help them better integrate these skills into their educational and workplace training programs," said Laura Rasmussen Foster, program director of adult education studies at RTI.

Adult and career and technical education communities are using the framework to improve training programs, and assessment organizations are beginning to align their work readiness assessments to the Employability Skills Framework.

RTI will continue enhancing the site, conducting outreach to other key audiences, including businesses and K-12 teachers, and developing new resources to help them use the framework.

Laura Rasmussen Foster
Project Director

Creating Personalized Health Interventions by Combining Mobile Technology and Wearable Sensors

The PHIT for Duty application syncs data from sensors with data visualizations to help users learn techniques to manage stress.

Service members returning from deployment often suffer from mental health impacts but may not receive help because of the stigma associated with mental illness.

RTI designed a mobile health application that can help overcome this stigma. It gathers self-reported data and data from a wearable sensor, analyzes the information, and tailors feedback to the individual user based on the data inputs.

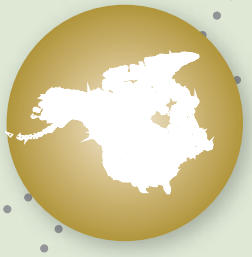
RTI is applying the underlying platform of this application—dubbed the Personal Health Intervention Toolkit, or PHIT—in developing additional, novel mobile health intervention applications.

"These applications can be used in the privacy of one's own home, thus reducing the stigma around various health concerns," said Randy Eckhoff, lead programmer.

"By measuring the impact of stress situations and delivering interventions on a mobile device, the technology can play a role in combating stress for sexual assault victims, soldiers, transportation workers—anyone dealing with the effects of psychological and post-traumatic stress."

In FY2014, RTI conducted usability studies and launched a pilot of the PHIT for Duty application that will include randomized controlled trials at Fort Bragg in North Carolina. We also performed a validation study with the Office of Naval Research and the U.S. Department of Veterans Affairs, and we won a grant to use the PHIT platform to address pain and mindfulness in the military. Our team also used this technology to develop an app to help flight attendants cope with stress.

While mental health issues have been the focal point of FY2014 work, the enabling technology has the potential to reach into a number of therapeutic areas. Looking ahead, RTI will explore opportunities to apply the PHIT platform to facilitate research or interventions in other health and developmental issues, including autism, diabetes, HIV, respiratory conditions, pediatric cardiovascular disease, and learning disabilities.



Developing and Implementing Quality Measures for Post-Acute Care Settings

Among the many initiatives set forth under the Patient Protection and Affordable Care Act of 2010 is the mandate to establish national quality reporting requirements for long-term care hospitals, inpatient rehabilitation facilities, and hospice programs.

RTI is working with the Centers for Medicare & Medicaid Services (CMS) to develop, maintain, reevaluate, and implement outcome and process measures to generate facility-level and national data about patient preferences, adverse events, and symptom management.

We conducted empirical data analyses using standardized assessment items across post-acute care provider settings, paying particular attention to risk adjustment using patient- and facility-level factors associated with different processes and outcomes of care. We also solicited and incorporated public and stakeholder feedback and synthesized scientific evidence. Our efforts culminated in detailed recommendations for CMS, supporting national efforts to successfully develop and implement quality reporting programs.

The project resulted in adoption of 12 quality measures for long-term care hospitals and seven each for inpatient rehabilitation facilities and hospice programs. These measures address a range of health care issues, such as influenza vaccination, unplanned and avoidable readmissions, hospital onset of certain infections, pressure ulcers, falls with major injury, functional status, and patient preferences.

CMS will use these measures to track and reduce avoidable hospitalizations and hospital-acquired infections and conditions, and to improve quality of care and patient outcomes.

Ultimately, these efforts will lead to more informed decision-making by patients, family members, caregivers, providers, policymakers, and other stakeholders.

With additional CMS funding awarded in September 2014, RTI is continuing to further inform CMS efforts to improve the care processes and outcomes in long-term care hospitals, inpatient rehabilitation facilities, hospice programs, and nursing homes and skilled nursing facilities across the United States.

Samruddhi Thaker, PhD
Project Director

Examining the Influence of E-Cigarette Ads on Youth

By combining our expertise in public health, tobacco control, mass media evaluation, health communication, and aerosol technology, RTI is working to better understand the effects of the widespread use of e-cigarettes.

In FY2014, we found that television advertising for e-cigarettes doubled for youth and tripled for young adults in the United States from 2011 to 2013. Published in *Pediatrics* and conducted with the Florida Department of Health, the study was the first to extensively analyze trends in youth and young adult exposure to e-cigarette TV ads.

"E-cigarette companies advertise to a broad TV audience that includes 24 million youth," said Jennifer Duke, PhD, senior public health analyst. "Given the potential harm of e-cigarettes to youth and their potential as a gateway to using cigarettes and other tobacco products, the FDA needs to regulate the positive images of e-cigarettes on television and other venues where youth view advertising and marketing, like they do for traditional cigarettes."

Our researchers found that youth exposure to electronic cigarette advertisements increased by 256 percent and young adult exposure jumped 321 percent from 2011 to 2013.

We also found that 75 percent of youth exposure to e-cigarette ads occurred on cable networks, including during the 100 programs most viewed by youth.

RTI researchers are continuing this work, examining the influence of advertising on intentions and behaviors through experimental and population-based studies. This work may inform the U.S. Food and Drug Administration's consideration of regulations on e-cigarettes and the advertising and marketing of them.

Developing and Applying Lifetime Testing Methods for LED Manufacturing

Led by Lynn Davis, PhD, RTI developed test models to assess the lifetime durability of solid-state lighting fixtures in only a few months.

LED and other solid-state lighting technologies are gaining in popularity due to their energy efficiency and potential long life, but as consumers, businesses, and municipalities weigh the cost differences of various technologies, many wonder if the products will last the 15 to 20 years projected by lighting companies.

RTI is working to answer that question.

Funded by the U.S. Department of Energy (DOE) and the State of North Carolina, we are developing lifetime models for solid-state lighting luminaires—or fixtures—based on accelerated tests that simulate 15 years of aging in just a few months.

We are studying the aging process for all components in solid-state lighting devices, including the LEDs, plastics, and electronics. Our models test the impact of aging on lighting system performance as measured by the amount of light produced, color consistency, and power consumption.

"Our work to date has demonstrated that solid-state lighting luminaires are highly reliable," said Lynn Davis, PhD, who directs RTI's solid-state lighting program.

Switching from incandescent lighting to more efficient and reliable solid-state lighting options can reduce global electricity consumption for lighting by more than 50 percent and reduce carbon dioxide emissions by 670 million tons each year.

"Our new testing methods are intended to be used globally and will help to guide the industry in producing products that operate 10 years or more without human intervention," Davis said. "The lifetime models that we are developing will speed up market adoption and ultimately reduce long-term environmental impacts."

RTI is collaborating with the lighting industry and North Carolina–based partners Cree and SAS Institute.

Based on the success of this three-year project, DOE funded RTI to continue the project for two more years. During that time, we will expand the model to include additional facets of lighting and how the devices change over time.

Helping Prevent the Spread of Noroviruses

To protect the public from foodborne illnesses, food safety professionals must fully understand the attribution, transmission, and prevention of foodborne diseases. During FY2014, our researchers set out to characterize food safety professionals' knowledge of noroviruses, the most common causes of foodborne disease in the United States.

RTI conducted a survey of food safety professionals with researchers from Clemson University and the Centers for Disease Control and Prevention. The research, published in the *Journal of Food Protection*, suggests that food safety professionals are not adequately informed about noroviruses and appropriate preventive measures.

We found that one-third of respondents did not identify noroviruses as one of the three most common causes of foodborne diseases in the United States. In addition, only 5.4 percent of respondents correctly identified the three most common settings for norovirus infections. About one-third of respondents did not know that the most common mode of transmission for noroviruses is person-to-person.

The survey results demonstrate that food safety professionals could greatly benefit from education regarding prevention and control of noroviruses, including recommended food safety handling practices.

"Food safety professionals play an important role in protecting the public from foodborne illness through their various duties," said Katherine Kosa, research analyst at RTI and the study's lead author. "It's important that they are trained properly to prevent the spread of noroviruses."

Our research was conducted as part of the Norovirus Collaborative for Outreach, Research, and Education (NoroCORE) project, which is led by North Carolina State University with funding from the National Institute of Food and Agriculture. Study findings will be used to develop web-based educational materials for food safety and public health professionals to improve efforts to prevent the spread of noroviruses in retail and institutional establishments.

Katherine Kosa
Research Analyst and Lead Author

Advancing Health IT and Electronic Health Information Exchange

As health IT transforms the way health care is received and managed, RTI is working to make the process of implementing electronic health records easier for more than 160,000 primary health care providers.

In FY2014, we completed the development of what is known as the Practice Transformation Toolkit, a comprehensive set of tools and resources to assist health care providers in adopting, implementing, and using electronic health records to improve patient care and transform their practices.

The Toolkit enables providers and staff members to select and purchase new or upgraded certified electronic health records to improve operations, finances, clinical quality, and patient and staff satisfaction at their practice.

The project was launched in partnership with the U.S. Office of the National Coordinator for Health IT and the Agency for Healthcare Research and Quality in support of the Health Information Technology Research Center and the Regional Exchange Centers program. RTI led and managed all tasks to develop the Toolkit, including designing a roadmap based on best practice methodologies to successfully transform the approach to implementing and evaluating electronic health records.

The Toolkit covers five phases of integrating electronic health records in a medical practice: assessment and readiness, planning, implementation, evaluation, and continuous quality improvement.

"We created the Toolkit to help health care providers avoid common mistakes while offering timelines and useful resources that facilitate the transformation process to improve the quality of patient care," said Carolyn Padovano, PhD, RN, director of health IT at RTI.

While the Toolkit is particularly useful when a practice begins its transition from paper to electronic records or when contemplating an update of a current system, it can be applied at any stage of electronic health records implementation and quality improvement.

Improving the Accuracy of Children's Health Studies

Long at the forefront of exposure research, RTI continues our efforts to develop a state-of-the-art device to improve the accuracy of health studies that focus on exposure to harmful particulate matter.

This year, we completed development of a smaller, lighter version of our MicroPEM™ device. The Enhanced Children's MicroPEM™, or ECM, is directly applicable to a wide range of children's health studies, with a primary focus on interventional research in the developing world.

Funded by the Bill & Melinda Gates Foundation, the ECM was developed specifically to provide accurate measurement of children's exposure to smoke from indoor cookstoves. Globally, nearly 3 billion people cook food and heat their homes with traditional cookstoves or open fires, and exposure to the smoke has been linked to increased rates and severity of pneumonia, particularly among children.

Designed to be small and light enough to be worn by children younger than five, the ECM uses accelerometry to record a child's activity level and estimated breathing rate to better characterize the respiratory deposition of harmful particulate matter.

"For the first time, our ECM monitor will allow the scientific community to confidently measure the cookstove-driven personal exposures for one of the most at-risk groups in the world," said Ryan Chartier, the project's co-principal investigator.

The ECM builds on our existing technology that simultaneously collects integrated and real-time particle data along with quality control metrics.

Available for use by universities and other research organizations, our MicroPEM device has been used worldwide in more than 30 studies, including research on cookstove smoke, roadway emissions, and secondhand cigarette smoke.

RTI is working to make the ECM similarly available. Ultimately, our aim is to enable the collection of data to support accurate exposure–health response models, which, in turn, could inform policy.

Our Enhanced Children's MicroPEM can support exposure studies related to asthma, pneumonia, and other conditions with environmental causes or contributors.

Raising the Bar for Child Protective Services: The National Survey of Child and Adolescent Well-Being

In 1997, when the Administration for Children and Families awarded RTI the contract to lead the National Survey of Child and Adolescent Well-Being, we started down an uncharted path to discover whether America was meeting the needs of children and families in the child welfare system who were involved in abuse and neglect investigations.

From 1999 through 2014, when the project ended, we completed longitudinal data collection with two cohorts comprising more than 12,000 children and 75,000 variables.

2 cohorts
12,000 children
75,000 variables

One of our early innovations was development of a computerized mechanism that recorded random samples of interviews. Because many of our subjects had unreliable access to a telephone, we used this computer audio-recorded interviewing—known as CARI—to replace standard telephone verification procedures.

Throughout the study, RTI played an active role in disseminating findings to help inform child welfare practice.

In 2014 alone, the Administration for Children and Families released two policy spotlights, a research brief, and a comprehensive set of tables looking at safety, permanency, and well-being outcomes for children three years after a maltreatment report. The study team also published four manuscripts.

These publications and reports draw attention to topics such as the high rates of domestic violence among families involved with the child welfare system and the frequency of polypharmacy—the use of multiple psychotropic medications—among children living in foster care.

"Findings from this study have raised the bar for child protective services," said Kathryn Dowd, who led the project for 15 years. "The results expanded the focus from basic safety to child well-being, including physical and mental health and developmental needs."

Data from the National Survey of Child and Adolescent Well-Being have been used in 469 publications, significantly expanding a body of rigorous, empirically based research that barely existed before 1997.

Developing the Nuclear Industry's Leading Emergency Response Program

In the aftermath of the 2011 disaster at the Fukushima Daiichi nuclear power plant, RTI partnered with ScottMadden, Inc., one of North America's leading energy consulting firms, to develop an emergency response program that would lead the nuclear industry into a safer future.

Bruce Power, the world's largest operating nuclear facility, requested the help of RTI and ScottMadden to devise and deploy a strategy that would improve emergency response communications and bolster its radiological monitoring systems.

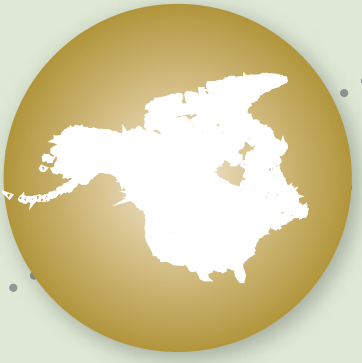
"We incorporated lessons learned from the Fukushima Daiichi event to enable Bruce Power's emergency response program to become an industry-leading model for the nuclear industry," said Tony Marimpietri, senior director of Sustainable Business Solutions at RTI.

In partnership with ScottMadden, we conducted a gap assessment, designed and deployed a state-of-the-art remote radiological monitoring system, and customized a centralized analytical software tool that enabled all responders to access a "single version of the truth" in the event of an emergency.

The new tools and associated processes significantly reduce the risk of radiation exposure for first responders in the field and diminish the potential for erroneous or conflicting data that could hamper response efforts in a rapidly evolving situation.

"We believe this model is relevant for all of the approximately 70 nuclear power plants operating in North America today," Marimpietri said.

"What we learned during Fukushima and in our subsequent work is that enhanced monitoring systems, coupled with analytics provided by RTI-developed software, can substantially improve preparedness and response capability."



Understanding Sex Differences in the Behavioral Effects of Cannabinoids

In May 2014, the National Institutes of Health (NIH) announced new steps to address sex differences in preclinical research—that is, to design studies to consider and elucidate the effects of existing drugs and candidate medications in both male and female models. For a variety of reasons, preclinical trials to date have only rarely included females.

The announcement acknowledges the growing body of research indicating the importance of detecting these differences before drugs are used in clinical studies and, ultimately, clinical practice.

As one of only a few research institutes already studying these differences, RTI is in the third year of a study funded by the National Institute on Drug Abuse to examine the sensitivity of males and females to delta-9-tetrahydrocannabinol (THC), the primary psychoactive compound in marijuana.

A collaborative effort with researchers at Washington State University, the study focuses on dependence-related and potential therapeutic effects. Results to date have identified differences in sensitivity to the subjective and analgesic effects of THC and predict that women require lower concentrations of THC than men to feel high or experience pain relief.

These results will pave the way toward further research and greater understanding of the mechanisms that underlie sex differences in the response to cannabinoids and could support differentiated treatments for addiction and in dosing for marijuana-based medications.

"Given the recent trend toward decriminalization of marijuana and the increase in its medicinal use," said principal investigator Jenny Wiley, PhD, "our results could inform educational efforts aimed at delineating consequences of use for women versus men as well as suggest sex-based differences in dosing recommendations."

Implications of the work may be even broader. Revealing differences in the effects of drugs on the basis of an individual characteristic as fundamental as sex is consistent not only with the new NIH policy, but also with increased emphasis in health care on personalized medicine.

Jenny Wiley, PhD
Principal Investigator

Safeguarding Public Health Through Support for the National Toxicology Program

More than 80,000 chemicals are registered for use in the United States, and another 2,000 are introduced each year for use in foods, personal care products, prescription drugs, household cleaners, lawn care products, and other commonly used items.

Since 1984, RTI has supported the efforts of the National Toxicology Program (NTP) to assess the potential health risks posed by commercial and consumer chemicals.

In 2014 we were awarded a 10-year contract to continue our work in the areas of test chemical characterization, dose confirmation, and internal dose determination—critical initial steps in NTP's rigorous research and testing process.

Under this contract, RTI finds reliable sources of chemicals, and our analytical chemists ensure the test substances are high quality and high purity—meaning they are free of contamination and not degraded. This work helps ensure that NTP studies yield accurate, reliable results about health effects.

Under the predecessor contract, in the past three years RTI characterized more than 63 chemicals—including compounds included in antiretroviral treatment for HIV, phthalates known to cause adverse health effects, and chemicals present in sunscreens that may affect the endocrine system.

In all, RTI has supported NTP studies of more than 1,300 chemicals.

"Our scientists and lab technicians take great pride in supporting NTP," said principal investigator Reshan Fernando, PhD.

"Through objective analyses and testing, we are helping safeguard public health and contributing to the fields of toxicology and environmental health."

Our experts in metabolomics also support NTP, assessing the presence of chemical toxicants or metabolites in biological samples, which can indicate the potential for lasting health outcomes caused by exposure to a given chemical.

Chemist Jennifer Gilliam is one of 25 scientists and lab technicians at RTI who provide critical analytical chemistry capabilities to the National Toxicology Program.

Understanding the Link Between Violence and Mental Illness

RTI's research often results in new information that challenges conventional thinking.

In FY2014, a team led by our researchers examined the link between violence and mental illness and found that, contrary to popular belief, adults with mental illness are significantly more likely to be victims than perpetrators of violence.

The study, which involved 4,480 participants, was conducted by researchers at RTI, North Carolina State University, Duke University, Simon Fraser University, and the University of California, Davis.

The research team found that nearly 31 percent of participants had been victimized in the six months prior to being interviewed, while less than 24 percent had committed acts of violence. Of the violent acts committed by adults with mental illness, the majority—just under 64 percent—were committed in residential settings, not in public. Among those who said they had been victims of violence, less than 44 percent said they had been victimized on multiple occasions.

"We found that individuals with mental illness are at high risk of victimization, representing a substantial public health concern," said Richard Van Dorn, PhD, coauthor of the study and principal investigator of the grant.

"We found a strong correlation between violence and victimization, meaning that it's essential that we do more than just focus on the reduction of violence perpetration; we also have to identify ways to reduce victimization in this population."

The study, which was published in the *American Journal of Public Health* and funded as part of a grant from the National Institute of Mental Health, also found a strong correlation between community violence and victimization.

Ongoing studies at RTI are focusing on the relationship between violence and victimization over time and the leading indicators of these events. We are also examining ways to reduce the occurrence of both violence and victimization among adults with mental illness.

Richard Van Dorn, PhD
Principal Investigator and Coauthor

Establishing a Shared Commitment Through Public-Private Partnerships in Guatemala, Nicaragua, and El Salvador

In FY2014, RTI successfully concluded a 10-year project that significantly improved health services and educational opportunities—and established a new, sustainable model for development—for the people of Guatemala, Nicaragua, and El Salvador.

Funded by the United States Agency for International Development (USAID) and best known simply as Alianzas (which means "alliance"), the project pioneered new mechanisms for cooperation between public and private partners. Alianzas formed alliances by inviting new potential partners to participate in existing projects and jointly create solutions that could be implemented through government-led projects.

In Guatemala alone, Alianzas established partnerships with 259 private organizations—national and international companies, nongovernmental organizations, and universities—and ultimately directed $53.4 million from the private sector and $26.6 million from USAID into programs that reached 9 million Guatemalans.

Alianzas funds have been used to train health care providers, improve HIV/AIDS interventions, provide scholarships and learning materials to primary and secondary students, and deliver reproductive, maternal, and child health services.

In 2014, the project's final year, Alianzas education and health partners reached more than 37,400 students through activities such as scholarships, improved classroom methodologies, and teacher training. We delivered teacher training in curriculum-based assessment, conducted sexual and reproductive health/family planning counseling for more than 75,000 people, and disseminated public health campaigns on sexual and reproductive health via newspaper, radio, and television.

Alianzas partners also provided maternal and child health services to 45,000 mothers and children under five and immunized more than 10,000 children.

"By fostering voluntary mergers of resources and competencies," said Tere Ligorría Goicolea, the project's chief of party, "Alianzas transcended the capacity of any particular sector or partner alone and established a shared commitment to making sound social investments."

Alianzas directly provided 168,551 books and other learning materials to Guatemalan schools and facilitated delivery of 2.8 million textbooks in collaboration with the Guatemalan Ministry of Education.

Enabling Integrated Management of Water Resources in Latin America

Irrigation, water supply, hydropower, and other infrastructure projects depend on the availability of sufficient water resources, but these resources are vulnerable to climate change, population growth, and shifts in land use associated with urbanization, industrial growth, and increasing demand for food.

To ensure water is managed in a sustainable, efficient, and socially equitable way, governments and planning authorities are increasingly adopting a framework known as integrated water resources management. This framework requires accurate estimates of the amount of water that will be available in the future, under various development and climate scenarios.

RTI developed the proprietary WaterFALL® modeling system as a platform for preparing such estimates. In FY2014 with funding from the Inter-American Development Bank (IDB), we delivered an adaptation of this system for use in Latin America and the Caribbean.

The system, called Hydro-BID, includes a rainfall-runoff model, watershed delineations for more than 233,000 catchments, and data to support applications throughout the region.

"For Argentina's Rio Grande, we projected that by 2060, with increased temperatures due to climate change, water demand for irrigation will rise 37 percent. Urban and industrial demand will increase 100 percent due to population growth," said Fekadu Moreda, PhD, the RTI hydrologist who led the study. Most of the additional demand can be met by improving the efficiency of irrigation and urban water systems.

In a similar study this year in Peru, RTI simulated water flow from the Piura River under various climate scenarios over the next 30 years. Peru's National Water Authority will compare the results with its estimates of water demand over the same period.

"Over the next two years, we will continue working with IDB to add new capabilities to Hydro-BID and support integrated water resources management in Ecuador, Peru, Brazil, and Colombia," said Moreda.

Fekadu Moreda, PhD
Lead Hydrologist

Calculating the Benefits of Treating Alcohol Dependence With a Pill

An estimated 3.3 million deaths each year are linked to the harmful use of alcohol. Alcohol abuse contributes to injuries, diseases such as cirrhosis of the liver and cancer, and infectious diseases such as tuberculosis and HIV/AIDS. Beyond individual health, alcohol abuse also causes serious societal problems.

In 2013, the European Medicines Agency approved nalmefene, marketed by Lundbeck as Selincro, for the reduction of alcohol consumption in adult patients with alcohol dependence. Compared with placebo, the drug—in combination with psychosocial support—was shown to significantly reduce the consumption of alcohol by alcohol-dependent patients.

Once a drug is deemed safe and effective and is approved for marketing in Europe, each country evaluates the drug for reimbursement within its health care system.

RTI Health Solutions' Thor-Henrik Brodtkorb, PhD, director of health economics, collaborated with Lundbeck to conduct the cost-effectiveness and budget impact analyses needed to support the drug's launch across Europe.

The research team then adapted the economic models to multiple countries to support reimbursement recommendations. This collaborative approach allowed for seamless and efficient knowledge transfer between markets and ultimately facilitated earlier treatment access for alcohol-dependent Europeans.

In the United Kingdom alone, a positive reimbursement recommendation by the National Institute for Health and Care Excellence makes the drug available to 600,000 patients.

The economic and quality of life research in the UK showed that the nalmefene combination treatment, compared with psychosocial treatment alone, provided a clinically effective and cost-effective alternative to use in treating alcohol dependence.

Results indicated that at the five-year mark, nalmefene therapy would save 250 lives and avoid 4,857 alcohol-attributable diseases or injuries per 100,000 patients. It also showed that treating alcohol-dependent patients in the UK with nalmefene would result in a lower total cost to the health care system and reduce societal costs related to crime and lost productivity.

Supporting Environmental Protection in Abu Dhabi

From left, RTI's Samer Akl, Camille Heaton, and Richard Marinshaw conduct a site visit in support of the Eltezam environmental improvement program.

RTI is midway through a 10-year contract to provide environmental services for the Environment Agency–Abu Dhabi (EAD). Our work includes establishing new policies and regulations, conducting evaluations and inspections, and transferring knowledge to local experts to help develop and operate a world-class environmental protection program.

"It is extremely rewarding for RTI to provide scientific analysis, policy advice, and implementation assistance to a client like EAD, which is actively using that support to increase knowledge about environmental issues, build technical capacity, and improve environmental management," said deputy project manager Camille Heaton.

In FY2014 the team made significant progress toward strengthening EAD's capabilities to fully implement its environmental inspection and permitting programs. We conducted classroom and on-the-job training with EAD staff to build core capabilities in industrial sector processes and emissions reporting, geographic information systems, leadership, and environmental management.

Our team also made strides toward implementing a campaign to reduce the release of particulate matter in operations related to the ready-mixed concrete manufacturing sector.

Known as Eltezam ("compliance" in Arabic), the campaign is a first-of-its-kind outreach and enforcement program in Abu Dhabi aimed at improving rates of compliance at nearly 150 ready-mixed concrete facilities.

RTI also helped EAD write its 2014 annual report on marine water quality. We recommended standards for ambient marine water and sediment quality, conducted a review of the current marine monitoring design, reported on the impacts of desalination plants, investigated discharges into the marine environment from industrial areas, and supported emergency response to sewage spills.

Other accomplishments included conducting an average of 60 environmental inspections and reviewing approximately 24 environmental studies per month to support industrial facility permitting and development projects. We also completed more than 200 industrial facility hazard evaluations, developed draft standards for controlling air pollution emissions from power plants and iron and steel facilities, and established policies, standards, and permit conditions for managing solid wastes.

Eclipsing the 1 Billion Milestone for NTD Treatment Distribution

In May 2014, the United States Agency for International Development (USAID) celebrated the delivery of 1 billion treatments for neglected tropical diseases (NTDs) to some of the world's poorest populations, cumulatively reaching approximately 465 million people in 25 countries.

As a lead implementing partner of USAID's NTD control program, RTI played a vital role in helping reach this incredible milestone, managing 86 percent of those 1 billion treatments.

1 billion NTD treatments

86% managed by RTI

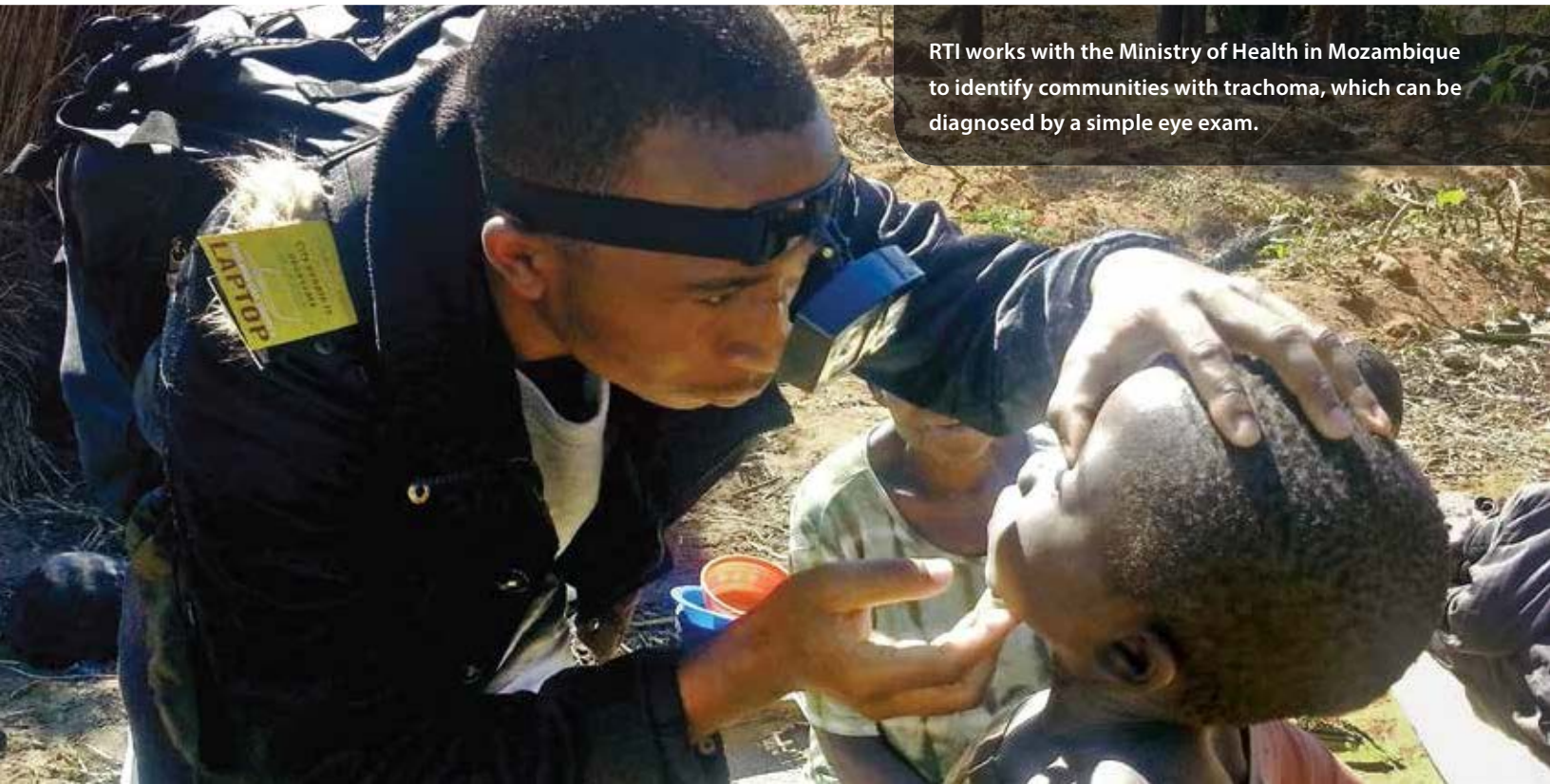
Reaching this milestone is the culmination of a remarkable global public-private partnership between ministries of health, the World Health Organization, donors such as the U.S. government and the Bill & Melinda Gates Foundation, not-for-profit organizations, and several large pharmaceutical companies, which have donated $6.7 billion in medicines.

The impact of these efforts has been dramatic. With scale-up and continued support for mass drug administration targeting at-risk communities, 59 million people now live in areas where they are no longer at risk for acquiring lymphatic filariasis, which can cause disfigurement and disability. In addition, 35 million people live in areas where blinding trachoma is no longer a public health problem.

The aim is to eliminate lymphatic filariasis and trachoma by 2020, while controlling other diseases that can cause blindness, malnutrition, impaired development, and other debilitating symptoms so that they no longer constitute a significant public health problem.

RTI currently partners with 14 countries to help implement and monitor their integrated NTD control programs. We are a core contributor to international committees tasked with developing program guidelines, monitoring and evaluation strategies, and innovative tools and approaches required for NTD control and elimination.

Our approach reinforces government ownership and health systems strengthening, resulting in a stronger foundation for health interventions.



RTI works with the Ministry of Health in Mozambique to identify communities with trachoma, which can be diagnosed by a simple eye exam.

Reducing Substance Use and HIV Transmission Through Gender-Focused Interventions

South Africa is believed to have more people with HIV/AIDS than any other country.

In an ongoing collaboration with the South African Medical Research Council, RTI researchers found that by reducing substance use and sexual risk behavior, interventions can lower HIV incidence rates in high-risk populations. These findings are particularly significant in South Africa, where substance use is highly prevalent and HIV incidence continues to be high, particularly among young women of reproductive age.

With funding from the U.S. National Institutes of Health, we led two studies aimed to reduce behavioral risks for HIV among high-risk women and couples from poor communities in the Western Cape. The studies tested brief workshops—designed specifically for women, men, or couples—that empowered participants with information about role expectations and skills to reduce their substance use, risks for victimization, and sexual risk behaviors.

Results showed that participants in the women's intervention were significantly more likely to be drug-free 12 months after the intervention than women who did not participate, and were one-third less likely to contract HIV.

Women who received the RTI intervention were able to reduce alcohol and drug use and lower their risk of HIV transmission.

Similarly, results from the couples study showed that men who received the intervention were less likely to drink heavily and were more likely to report protected sex than men in the control groups. Participants in the couples intervention were also significantly less likely to contract HIV.

"What is needed now is a coordinated effort to make these interventions implementable in other communities, substance use treatment facilities, and health care settings," said Wendee Wechsberg, PhD, director of the RTI Global Gender Center and lead investigator of both studies.

Going forward, RTI will implement the women's intervention with support from the U.S. National Institute on Alcohol Abuse and Alcoholism and will assess the intervention's feasibility, acceptability by providers, adoption, and sustainability as a prevention intervention in general practice.

Combating the Spread of Malaria in Guinea

By providing insecticide-treated bed nets and helping citizens correctly hang them, the StopPalu project, led by RTI, is working to significantly reduce the risk of malaria throughout Guinea.

As part of the President's Malaria Initiative, RTI is implementing a project in Guinea to provide training and resources to identify, treat, and stop the spread of malaria.

During 2014, under what is known as the StopPalu project, RTI led the effort to train more than 600 community health workers, who then apply their knowledge in local communities. The program focuses on teaching behavior change and malaria prevention techniques, using rapid diagnostic tests, managing simple cases using artemisinin-based combination therapy, and referring severe cases.

One of the most successful StopPalu campaigns of the past year was the distribution of more than 2 million long-lasting insecticide-treated nets in just one week in November 2013—enough to achieve 95 percent coverage across half the country. A follow-up event delivered an additional 478,000 nets in May 2014.

600+ health workers trained

2.5M+ nets distributed

Insecticide-treated bed nets are one of the most effective methods for preventing malaria, yet, according to a 2012 demographic and health survey, less than 30 percent of the most vulnerable populations—pregnant women and children—slept under a bed net.

The StopPalu team partnered with the Guinea Ministry of Health to implement the bed net distribution campaign.

RTI staff conducted visits to determine the number of bed nets needed per household, and households were issued coupons and instructed to redeem them at the distribution sites. Each distribution site was operated by five staff members, men and women, who were trained to educate the public on correct use and maintenance of the nets.

We also conducted an interactive radio program to explain the consequences of malaria and the importance of using the insecticide-treated bed nets. The radio program allowed listeners to call in to express their concerns and opinions and receive answers to questions.

StopPalu aims to achieve the United Nations Millennium Development Goal to reverse the incidence of malaria by 2015.

Delivering a Health Information System to Improve Data and Service Delivery in Zimbabwe

Under direction from the Zimbabwe Ministry of Health and Child Welfare, and with support from the U.S. Centers for Disease Control and Prevention, RTI is developing a health information system to improve data sharing and service delivery in Zimbabwe. The system is based on open-source software, which supports integration of outpatient and inpatient, health facility, HIV, tuberculosis, psychiatric, and village health worker datasets.

We are also helping the ministry build mobile phone–based systems for disease surveillance and early infant HIV diagnosis, both of which are based on an open-source system. For the surveillance system, health workers complete a form on a mobile phone and transmit the data to a centralized messaging center. Health workers at all levels can access current disease surveillance data easily to detect potential outbreaks and evaluate public health policies.

The early infant diagnosis program enables nurses to notify Zimbabwe's National Microbiology Reference Laboratory when samples are collected in the field. The system automatically transmits laboratory results to health facilities via text messaging. The system also uses text messaging to notify parents that results are available at the health facility.

Since the complete rollout of the health information system, reporting rates and timeliness have improved significantly. For example, reporting rates for outpatient department statistics rose to 97 percent in the fourth quarter of 2014.

97% outpatient reporting rates

1,600+ health facilities

Geographic coverage of disease surveillance increased from fewer than 600 facilities in 2009 to more than 1,600 health facilities as of October 2014, while the completeness and timeliness of reporting improved from below 40 percent in 2009 to above 95 percent. Turnaround time of early infant HIV diagnosis results have decreased from more than 120 days to about 60 days.

The new system is a historical milestone in Zimbabwe's transition from using obsolete systems to collect and disseminate health statistics and will be a critical part of the country's ongoing efforts to improve the health of its people.

Gordon Cressman
Senior Technical Advisor

Fostering Sustainable Development and Environmental Project Management in China

China boasts the world's fastest-growing economy and, in order to cope with exploding growth, is seeking to leverage the power of the Yangtze River—which provides one-third of the nation's water resources—in ways that are economically, socially, and environmentally viable. The Chinese government aims to turn it into the "Golden Waterway," mirroring the balance between economic development and environmental protection achieved by the Mississippi River in the United States.

To assist in that endeavor, RTI is working closely with the Changjiang (Yangtze) Water Resources Commission (CWRC) and the Changjiang Institute of Survey, Planning, Design and Research (CISPDR), which is administered by the CWRC, on issues of sustainable development.

The CWRC is responsible for administrative functions in the Yangtze River Basin and other river basins of southwestern China, while the CISPDR is the biggest survey and design institute for hydro-engineering in the world.

In collaboration with Duke University, our team is providing a mix of classroom training, field visits, and meetings with U.S. experts to demonstrate best practices in project management, international business development, and emerging environmental topics to engineers from CISPDR. During a two-month training in late 2014, we trained 24 CISPDR staffers, providing them with the tools necessary to facilitate large, multifaceted projects such as the Golden Waterway initiative.

"Our team's technical skills in areas such as project management, sustainable development, and environmental modeling will add value and support decision-making on CWRC's large infrastructure projects around the world," said Rebecca Nicholson, vice president of environmental engineering and economics at RTI.

"By demonstrating our expertise through the training program, we are building a relationship with the CWRC that could result in broader collaborations in the future."

In 2014, RTI and Duke University experts led field visits for CISPDR engineers to demonstrate best practices in sustainable development.

Reinventing the Toilet Through Multidisciplinary Collaboration

Nearly 2.5 billion people worldwide do not have access to safe and effective sanitation, leading to waste-borne illnesses that result in the deaths of 1.5 million children every year. In developing regions that lack piped-in water, a sewer connection, or outside electricity, communities need innovative solutions to ensure sanitary and affordable waste treatment.

To help address such challenges, RTI was awarded a grant in 2012 from the Bill & Melinda Gates Foundation Reinvent the Toilet Challenge. Under the grant, we are developing a toilet that could disinfect liquid waste, dry and burn solid waste, and convert the resulting combustion energy into stored electricity, all at a cost of less than 5 cents (U.S.) per user per day. Since the original grant, we have received additional funding and now have six programs related to sanitation.

We partnered with Duke University, Colorado State University, NASA's Ames Research Center, and the U.S. Naval Research Laboratory to transition design concepts from the laboratory to demonstration.

Our work extends beyond technology development to addressing social, political, and economic factors that impact adoption.

Recent user studies in India allowed for walk-throughs of our prototype toilet, giving participants a chance to review the self-contained system that can be used anywhere with minimal maintenance and cost.

In FY2014, the new toilet system was demonstrated at the Reinvent the Toilet Fair in New Delhi, India, followed by a series of user studies in Ahmedabad and Vadodara, India. The studies offered valuable feedback on water reuse, the practices and preferences of men and women, and the user interface.

As part of the phase 2 grant, our team is partnering with Indian engineering firm L&T Technology Services and local nonprofits to manufacture and evaluate the prototype systems. In early 2015, field performance testing will begin, user studies will continue, and commercialization partnerships will be pursued.

On a broader scale, we aim to apply the project's multidisciplinary model in the quest for solutions to other complex global problems.

Empowering Indonesia's Local Governments to Deliver Innovative, High-Quality, Responsive Services

Improvements in maternal health care services and outcomes fostered by the Kinerja program earned recognition from district officials in Simeulue.

While Indonesia has successfully transitioned to a democratic system, governance challenges remain. Low levels of transparency and accountability have undermined the ability of public institutions to provide essential services.

To address these problems, RTI and the United States Agency for International Development (USAID) are partnering in a program aimed at improving local government service delivery in three sectors: education, health, and the business-enabling environment.

63 districts

358 schools

212 health clinics

Known as Kinerja—which means "performance" in Bahasa Indonesia—the program started out in 24 districts and is being replicated in another 39 districts in five provinces across the country.

Launched in 2010, Kinerja establishes a partnership between citizens and their governments. It builds governing capacity and consolidates public service delivery through the introduction of minimum service standards, critical citizen engagement and oversight, multistakeholder forums, citizen journalism, and gender integration.

The program is based on three main principles: using incentives to improve services, supporting innovation in service delivery, and ensuring replication of successful approaches at the national level.

Fundamentally, with better incentives, greater innovation, and more avenues for replication, Indonesian local governments are empowered to deliver services that are less expensive, of higher quality, and/or more responsive to local needs and preferences.

Outcomes to date include increased citizen participation and oversight through more than 300 active multistakeholder forums. Local governments have scaled up pilot programs into district-wide initiatives in nearly all 24 initial districts, covering more than 358 schools, 212 community health clinics, and 31 one-stop shops for business licensing. Numerous government entities have been recognized with public service awards.

Looking ahead, in FY2015 Kinerja will continue to build capacity, facilitate partnerships, and generate innovative practices that form the foundation of sustainability, accountability, and effectiveness at all levels of government.

Harnessing Intellectual Capital in Philippine Universities and Industry

RTI is partnering with the United States Agency for International Development (USAID) on an innovative initiative in the Philippines designed to better harness the intellectual capital of the country's higher education system to drive economic growth and development.

Launched in FY2014, the Science, Technology, Research, and Innovation for Development (STRIDE) program aims to improve quality and capacity in higher education and strengthen linkages between private industry and academia. Sectors of focus include alternative energy, translational medicine, electronics, chemical industries, agribusiness, and information technology, with cross-cutting themes of manufacturing and new product development.

Under STRIDE, we are working to enhance the research capabilities of Philippine universities and industries and help universities develop advanced technical curriculums. The program is also creating a network of researchers, entrepreneurs, and investors who facilitate innovation-led economic growth.

Ultimately, STRIDE will create homegrown intellectual property and build a professional workforce in the Philippines that is well-equipped to flourish in the global economy as employees, researchers, and entrepreneurs. End to end, the program will help turn ideas into products and companies.

The STRIDE model in many ways reflects that of Research Triangle Park, home of RTI's headquarters campus in North Carolina.

STRIDE actively facilitates collaboration between universities, private industry, and government to combine knowledge and expertise and develop impactful partnerships.

In the first year, STRIDE has awarded five research grants to Philippine universities collaborating with Philippine businesses and U.S. universities, as well as 10 scholarships to Philippine scholars for graduate studies in the United States. Additionally, the program is actively mentoring five career centers and six knowledge and technology transfer offices.

In the years ahead, STRIDE's impact will be felt on a larger scale as these activities scale up and support the creation of new businesses and the upgrading of industry technologies.

Andrew Baird
STRIDE Technical Manager

Living Our Mission

At the individual and institute levels, RTI is deeply committed to living our mission—not just in our work but through support for local charities, scientific and educational outreach, and environmental stewardship.

Giving Back to Our Communities

The commitment of RTI's staff members to our mission extends beyond work and into their personal lives. Many donate time and resources to support organizations that help people in the communities where we work and live. The institute supports this commitment through our Community Partnerships Program, United Way campaign, and other fundraising and volunteer initiatives.

This year, RTI donated more than $137,000 to over 60 charities—each nominated by one of our employees—through our Community Partnerships Program. For example, we supported the Homeless Youth Alliance in San Francisco, the Raleigh-Durham chapter of the Foundation Fighting Blindness, and the Bumi Sehat Foundation International in Jakarta, Indonesia, which works to reduce infant and maternal mortality rates. Our donations help these and other organizations provide food, housing, and other basic needs as well as educational programs for children and services for victims of domestic violence.

The Community Partnerships Program also supported employee teams who participated in numerous fundraisers and events, including the Food Bank Sort-A-Rama, the American Heart Association Triangle Heart Walk in North Carolina, the AIDS Walk in San Francisco, and Project Bread's annual Walk for Hunger in Boston.

Our annual United Way campaign raised more than $434,000, and many staff members volunteered at our United Way drop-in event in April to sort books and create flash cards for schoolchildren, make blankets for hospice patients, and package food for people in need. RTI was proud to receive the United Way of the Greater Triangle Chairman's Award for Best Overall Campaign and, for the fourth consecutive year, the United Way Spirit of North Carolina Award.

In our 15th year of support for public television in North Carolina, staff members helped raise $31,000 for UNC-TV—including an institute donation of $10,000.

Our employees contributed more than $37,000 to Red Cross relief response to the devastation caused by Typhoon Haiyan in the Philippines in November 2013. Together with the institute's donation of $50,000, our support totaled over $87,000. In September 2014, RTI and our employees together donated $60,000 to the Red Cross Ebola Outbreak Fund.

Rising to the Challenge in STEM Education

Many of our researchers routinely volunteer at educational and STEM outreach events at local schools, universities, and events such as the North Carolina Science Olympiad. This year, RTI joined the Research Triangle Foundation and other Triangle-area organizations under US2020, an initiative created in response to President Obama's call to engage more children in STEM.

As a partner in the Research Triangle Park US2020 initiative, our goal is to place 20 percent of our staff members as mentors in classrooms and across the community by the year 2020.

Reducing, Reusing, and Recycling

RTI continues to embrace a strong commitment to environmental stewardship and sustainable operations, always seeking opportunities to boost efficiency and reduce consumption of resources everywhere we work.

This includes investments at our headquarters campus in Research Triangle Park, such as LEED Gold standards for new facilities, high-efficiency central utilities, advanced utility submetering systems, and condensate collection and reuse programs.

We provide subsidies for public transportation for many employees, and in FY2014 we continued our support for renewable energy through NC Green Power, a nonprofit program working to improve the environment in North Carolina.

We also continued our support for local agriculture as host of the Research Triangle Park community-supported agriculture program and farmer's market.

In these and other ways, we continue to live our mission of improving the human condition and protecting the environment needed to sustain us.

RTI is proud to host a community-supported agriculture program at our Research Triangle Park headquarters.

Executive Leadership

RTI is led by an experienced group of senior executives who represent a cross-section of our research fields and business operations. These leaders implement our business strategy and oversee operations for our global enterprise.

E. Wayne Holden
President and Chief Executive Officer

Don Bailey
Chair, Fellow Program, and Distinguished Fellow, Early Childhood Development

Tim J. Gabel
Executive Vice President, Social, Statistical, and Environmental Sciences

James J. Gibson
Executive Vice President and Chief Operating Officer

Michael H. Kaelin Jr.
Executive Vice President and Chief Financial Officer

Allen W. Mangel
Executive Vice President, RTI Health Solutions

Martha J. Roberts
Senior Vice President, Human Resources and Facilities Services

G. Edward Story
Executive Vice President, General Counsel, and Corporate Secretary

Aaron S. Williams
Executive Vice President, International Development Group

Don Bailey, Allen Mangel, Jim Gibson, Aaron Williams, Tim Gabel, Wayne Holden, Martha Roberts, Mike Kaelin, Eddie Story

Board of Governors

Our executives are accountable to RTI's president and board of governors, our primary governing body, which formulates policy consistent with our mission. The board meets at least bimonthly and consists of up to 15 governors who represent the 17 University of North Carolina institutions, Duke University, and the business and scientific communities.

William M. Moore Jr. (Chair)
Chairman, Lookout Capital

Peter M. Scott III (Vice Chair)
Former CFO, Progress Energy; Former President and CEO, Progress Energy Services Company

Christopher S. Brown
Vice President for Research and Graduate Education, University of North Carolina

Thomas F. Darden
Chief Executive Officer, Cherokee Investment Partners

Barbara Entwisle
Kenan Professor and Vice Chancellor for Research, University of North Carolina at Chapel Hill

E. Wayne Holden
President and Chief Executive Officer, RTI International

Robert A. Ingram
General Partner, Hatteras Venture Partners; Former CEO, GlaxoWellcome

Peter Lange
Thomas A. Langford University Professor of Political Science and Provost Emeritus, Duke University

Terri L. Lomax
Vice Chancellor for Research and Innovation, North Carolina State University

Harold L. Martin Sr.
Chancellor, North Carolina A&T State University

W. G. Champion Mitchell
Former CEO, Network Solutions

John H. Moellering
Chairman Emeritus, USAA

Hilda Pinnix-Ragland
Vice President, Corporate Public Affairs, Duke Energy

James N. Siedow
Professor of Biology and Former Vice Provost for Research, Duke University

Phail Wynn Jr.
Vice President, Durham and Regional Affairs, Duke University

Back Row: **Bob Ingram, Harold Martin, Peter Scott, Wayne Holden, Chris Brown, Terri Lomax, Peter Lange, Barbara Entwisle, Bill Moore** ***Front Row:*** **John Moellering, Phail Wynn, Jim Siedow, Champ Mitchell** ***Not Pictured:*** **Hilda Pinnix-Ragland, Tom Darden**

RTI at a Glance

Financial Strength

RTI is a successful research institute with a strong financial position and outlook. During the fiscal year that ended September 30, 2014, we recorded revenue from contracts and grants totaling $788.2 million. As a 501(c)(3) nonprofit institute, we reinvest net revenue in investigator-led research, facilities, and new capabilities that further our mission to improve the human condition.

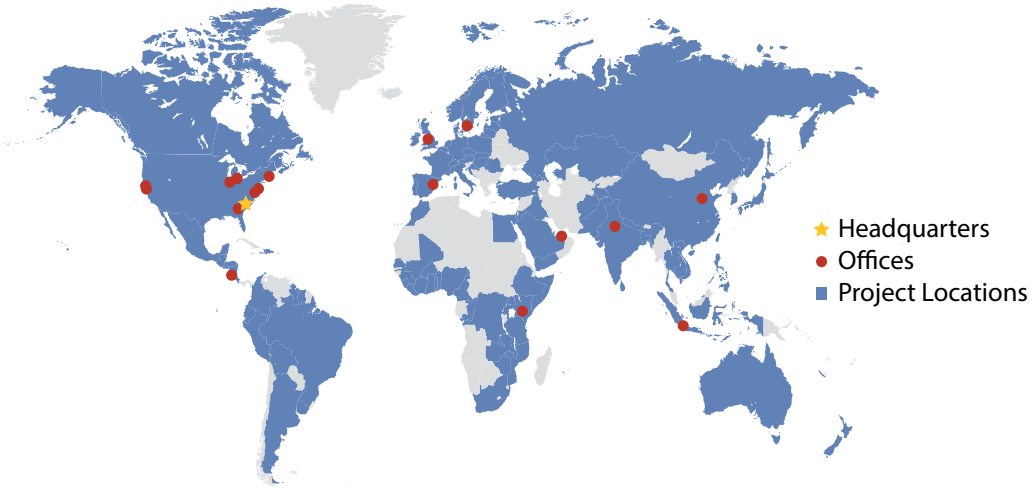
$788.2M
Revenue

2,600
Projects

965
Clients

9
U.S. Offices

9
International Offices



Scientific Stature

At RTI International, our commitment to advancing knowledge is evident in our contributions each year to scientific and technical literature. In addition to publishing in scholarly journals and presenting at conferences and other meetings, our researchers and technical experts are often called upon to serve on scientific and technical advisory committees and serve in leadership positions for scientific and professional associations.

In FY2014, our staff members published nearly 650 peer-reviewed journal articles, as well as five books and 38 book chapters. RTI Press disseminated 11 publications, spanning topics in social and environmental science, statistics, and international development.

At our spring and fall policy forums, we brought together renowned experts to explore pressing public policy challenges in strengthening the U.S. workforce, the global youth employment crisis, nutrition education for low-income Americans, and the future of long-term care.

In September 2014, RTI hosted a symposium at which researchers funded under the RTI Fellows Program's annual Grand Challenge initiative presented their findings. Each year the Grand Challenge initiative seeks to identify complex problems that have a major impact on society and to marshal RTI resources to find solutions. The seven studies funded in FY2014 focused on identifying innovations to improve outcomes for people with noncommunicable diseases—including cancer, diabetes, obesity, and stroke—in China, India, Indonesia, and Sri Lanka.

Through these efforts, we strive to communicate the results of our independent, objective research to a wide audience of scientists, policymakers, and others in order to advance our understanding of the world and inform decisions that will carry us into a better future.

Scientific Stature

11 RTI Press Publications

649 Journal Articles

38 Book Chapters

22 Editorials

5 Books

4 Policy Forums

4 Congressional Testimonies

78 University Faculty

Staff Members

3,882 Worldwide

31 Fellows

250 Degree Fields

90 Languages

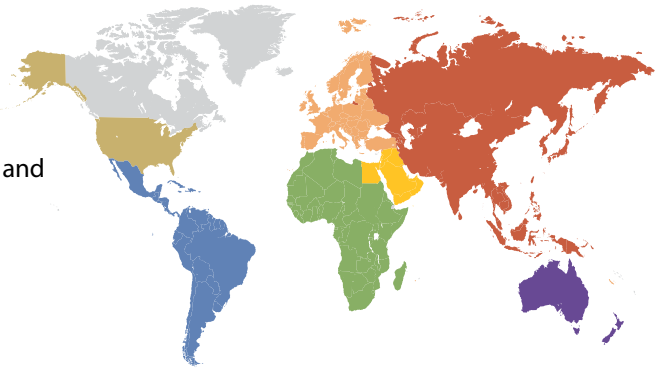
80 Nationalities

Staff By Region

2,713 United States

58 Latin America and the Caribbean

522 Africa



497 Asia

57 Europe

33 Middle East

2 Australia

University Collaborations

At RTI, we have a long history of collaboration with research universities, extending our capabilities through collaborative project work with faculty, staff, and students to better serve our clients and contribute to scientific scholarship. This year we supported more than 180 joint research projects with university partners, and more than 75 of our researchers served as adjunct faculty at academic institutions.

Always seeking to broaden and deepen our university relationships, in FY2014 our University Collaborations Office launched a program with Duke University to identify opportunities for new collaborations that have a demonstrated benefit to clients. Dubbed FLARE—Funds Launching Alliances for Research Exploration—the program funds collaborative research and showcases speakers with a history of successful collaborations across a range of disciplines.

RTI International is an independent, nonprofit research institute that provides research, development, and technical services to government and commercial clients worldwide. Our mission is to improve the human condition by turning knowledge into practice.

Selected Clients and Funding Agencies

U.S. Government

Department of Agriculture
Department of Commerce
Department of Defense
Department of Education
Department of Energy
- Fermi National Accelerator Laboratory
- SLAC National Accelerator Lab

Department of Health and Human Services
- Administration for Children and Families
- Administration on Aging
- Agency for Healthcare Research and Quality
- Assistant Secretary for Planning and Evaluation
- Centers for Disease Control and Prevention
- Centers for Medicare & Medicaid Services
- Food and Drug Administration
- Health Resources and Services Administration
- National Institutes of Health
- Office of Population Affairs
- Office of the Assistant Secretary for Health
- Office of the National Coordinator for Health Information Technology
- Office of the Secretary
- Substance Abuse and Mental Health Services Administration

Department of Homeland Security
Department of Justice
Department of Labor
Department of State
Department of the Interior
Department of the Treasury Bureau of the Public Debt
Department of Transportation
Environmental Protection Agency
Federal Bureau of Investigation
Federal Deposit Insurance Corporation
General Services Administration
Library of Congress
Medicaid and CHIP Payment and Access Commission
Medicare Payment Advisory Commission
National Aeronautics and Space Administration
National Institute of Corrections
National Institute of Standards and Technology
National Science Foundation
U.S. Agency for International Development
U.S. Embassy, San Salvador
U.S. Geological Survey
U.S. Postal Service

Private Sector

Abbott Laboratories
AbbVie, Inc.
Advanced Energy Consortium
American Beverage Association
American Petroleum Institute
American Physical Therapy Association
Amkor Technology
AN Group, Inc.
AngloGold Ashanti Limited
ApoPharma, Inc.
Aramco Services Company
Area Detector Systems Corporation
Ascend Performance Materials
Axens
BASF
Battelle
Bio-Rad Laboratories
BMS Intermediaries, Inc.
Boston Scientific Corporation
Bruce Power
Buchanan Renewables
CavitroniX Corporation
Cempra Pharmaceuticals
Chevron Corporation
Climate Change and Emissions Management Corporation
Contec, Inc.
Cormetech, Inc.
Corning, Inc.
Cristal
DemeRx
Dow AgroSciences LLC
Dow Pharmaceutical Sciences
Dragon Oil
Drake Cement LLC
DRS Technologies
Duo Research Inc.
DuPont
Eastman Chemical Company
EC/R Incorporated
Electric Power Research Institute
Ferro Corporation
FMC Corporation
GE Healthcare
General Mills
Genesis Air, Inc.
Harris Corporation
Indiana Integrated Circuits, LLC
Instituto do Ambiente e Desenvolvimento
International Resources Group
IQAir North America
Kraft Foods Group
LipoScience, Inc.
LORD Corporation
Medtronic
Mentor Corporation
Micross Components
Nestec, Ltd.
Newell Rubbermaid
Nielsen
NOVA Sensors
Novartis
Pfizer
PPG Industries
PROCTER & GAMBLE
Protochips, Inc.
Purdue Pharma L.P.
Qualcomm
Reckitt Benckiser, Inc.
RF Micro Devices, Inc.
SABMiller
Santa Barbara Infrared, Inc.
Semprius, Inc.
Shire
SNF s.a.s.
State Farm
Syngenta Crop Protection
Tenax Therapeutics, Inc.
Teraphysics Corporation
The Center of Waste Management Abu Dhabi
Thermo Fisher Scientific
United Technologies Corporation
URS Corporation
U.S. News & World Report
Vorbeck Materials Corporation
Xinhua Agriculture

Colleges and Universities

Baylor College of Medicine
College of Lake County
Columbia University
Flathead Valley Community College
King Abdullah University of Science and Technology
Queens College
Stony Brook University
University of Alaska Anchorage
University of Cincinnati
University of Kansas
University of Michigan
University of North Carolina at Chapel Hill
University of Washington

Other

Abu Dhabi Executive Affairs Authority
Alliance for Sustainable Energy, LLC
American Board of Forensic Toxicology
American Cancer Society
American Industrial Hygiene Association
American Institutes for Research
American Psychological Association
ASHRAE
Asian Development Bank
Australian Department of Foreign Affairs and Trade
Bill & Melinda Gates Foundation
Blue Shield of California Foundation
Brunei Darussalam Ministry of Health
Canada Foundation for Innovation
CDC Foundation
Children's Investment Fund Foundation
ConnectEd: The California Center for College and Career
Department for International Development
Economic Development Partnership
Environment Agency - Abu Dhabi
Environmental Defense Fund
Environmental Health Foundation
Everglades Foundation
Feeding America
First Microfinance Foundation
Ford Foundation
Global Alliance for TB Drug Development
Growth Sector
Health Authority - Abu Dhabi
Health Canada
Institute for the Ages
Inter-American Development Bank
International Life Sciences Institute
International Molybdenum Association
International Partnership for Microbicides
Kansas Health Foundation
LIVESTRONG Foundation
Manufacturers Resource Center
MassMep
Merck Childhood Asthma Network
Merck Company Foundation
NAPE Education Foundation
National Center for Youth Law
National Jewish Health
National Multiple Sclerosis Society
Nemours Foundation
NewSchools Venture Fund
North Carolina Chamber
Organization of American States
Partnership for a Healthier America
Patient-Centered Outcomes Research Institute
Physicians for Human Rights
Puget Sound Clean Air Agency
Qatar Supreme Council of Health
Rhode Island Quality Institute
Robert Wood Johnson Foundation
Statistics Sweden
Stuart Foundation
The College Board
The Education Trust
The Eli & Edythe Broad Foundation
The John Merck Fund
The Nature Conservancy
The New York Academy of Sciences
The Rapides Foundation
The SCAN Foundation
The Smith Family Foundation
The William and Flora Hewlett Foundation
The World Bank
UNICEF - Tanzania
United Arab Emirates
U.S. state governments
W.K. Kellogg Foundation
Winrock International
Wood Buffalo Environmental Association
Youth Villages

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Ann Arbor, MI
Atlanta, GA
Berkeley, CA
Chicago, IL
Rockville, MD
San Francisco, CA
Waltham, MA
Washington, DC

International Offices

Abu Dhabi, United Arab Emirates
Barcelona, Spain
Beijing, China
Jakarta, Indonesia
Ljungskile, Sweden
Manchester, United Kingdom
Nairobi, Kenya
New Delhi, India
San Salvador, El Salvador

RTI INTERNATIONAL