

OPIOIDS

IN AMERICA



A complex crisis.
A comprehensive response.

Prescription opioids play a critical role in helping millions of people effectively manage chronic pain. But for some, opioid use has become a complex web of misuse or abuse, creating a crisis with devastating costs in human life and economic impact.

For more than 30 years, RTI International has studied the use of illegal drugs, including heroin and the nonmedical use of opioid pain relievers. We've collaborated with the Substance Abuse and Mental Health Services Administration (SAMHSA) on the National Survey on Drug Use and Health (NSDUH) since 1988, and more recently, worked to update and improve NSDUH survey questions about opioid use in the United States.

With decades of NSDUH experience as a foundation, we're exploring multidisciplinary approaches to addressing the opioid epidemic from a number of key angles.

U.S. ADDICTION

Understanding the issue by the numbers



11.1 MILLION

people age 12 or older misused prescription pain relievers in 2017



886,000

people age 12 or older used heroin in 2017



2 MILLION

people were new misusers of prescription pain relievers in 2017



382,867

people in opioid treatment programs received methadone in 2017, a **46% increase** from 2007

PREVENTION

Stopping addiction before it starts

One of the most important responses to the current crisis is to limit future deaths by keeping people—particularly at-risk populations like adolescents and young adults—from misusing opioids in the first place. RTI has conducted comprehensive evaluations of local, state, and national efforts to reduce or prevent substance use disorders, and we're using what we've learned to help prevent prescription opioid misuse in the future.

24.2% of young adults (ages 18–25) were current users of illicit drugs in 2017, compared to 7.9% of adolescents (ages 12–17) and 9.5% of adults (26 or older).

PROJECT

Using Innovative Analytic Techniques to Support Opioid Misuse Prevention

[Strategic Prevention Framework—Partnerships for Success grant program](#)

To help determine which prevention strategies could reduce prescription drug misuse among youth and young adults, RTI collaborated with SAMHSA for the national cross-site evaluation of the Strategic Prevention Framework—Partnerships for Success (SPF-PFS) grant program. Under this grant, SAMHSA funded state and tribal grantees to build capacity to prevent misuse and abuse of opioids, prescription drugs, and other substances and to implement related interventions. The RTI team created instruments and systems to collect data about the interventions that states and communities implemented under the grants as well as about the outcomes of those efforts. The RTI team enhanced the related evaluation capacity of the states through trainings, technical assistance, and evaluation plan review. RTI analyses of the collected data showed that the over 500 participating SPF-PFS communities implemented over 2,000 separate intervention activities that reached over 55 million individuals between fiscal year 2014 and fiscal year 2017. These interventions were associated with reduction in prescription drug misuse and decreases in poisoning calls for stimulant, sedative, and opiate medications.

HARM REDUCTION

Exploring ways to save lives

More than 700,000 Americans have died from overdoses since 1999, including babies born with opioid-related complications, patients dealing with chronic pain, and military veterans treating wounds. High-risk populations need special attention, pain management alternatives, and other interventions.

RTI has been conducting research related to opioid overdoses for nearly 2 decades. Through data analysis, observational studies, and economic modeling, we know that certain interventions—naloxone distribution, prescription drug monitoring programs, and supervised injection facilities—are critical to ending the increasing misuse of opioids.

Around 68% of drug overdose deaths in 2017 involved opioids, a 12% increase from 2016.

PROJECT

Using Fentanyl Test Strips Can Lead to Safer Drug Use Behaviors

New study finds that people are willing to change behaviors to prevent an overdose if they receive a positive test result

Fentanyl is a synthetic opioid 50 times more potent by weight than heroin. Most people who consume street opioids are unaware their drugs contain fentanyl, which increases the likelihood of accidental overdose and death.

In the first-of-its-kind study, RTI examined the use of fentanyl test strips (FTS) among a group of 125 people who inject street opioids in Greensboro, North Carolina, to determine if drug checking with FTS can have an impact on drug use behavior.

The study found that people who use illicitly made street opioids and test them for fentanyl using FTS are five times more likely to engage in safer drug use behaviors when the FTS come back positive. This shows that people who inject drugs can and will change their behavior when they have information about the risks involved. As a result, FTS may represent a new technique to prevent opioid overdoses by allowing people to check street drugs for fentanyl and modify consumption behavior accordingly.

ECONOMIC IMPACT

Maximizing limited resources

Policy makers, funders, and providers face the increasing needs for treating addiction with limited resources—putting these parties in the difficult position of having to choose among alternative treatment options. Economic analyses—including cost, cost-effectiveness, and cost-benefit studies—provide critical information about the value of alternative treatments. RTI has an extensive history of performing economic evaluations for substance use treatment. Our economists have led several studies to identify the resources needed to provide opioid treatment and to estimate the value these treatment programs and interventions provide to society.

Medicaid patients receiving opioid agonist therapy with either methadone or buprenorphine were 50% less likely to relapse and had monthly health care costs that were \$184–\$191 less than those receiving behavioral treatment only.

PROJECT

Using a Cost-Benefit Analysis for the Treatment of Heroin

Simulation models provide insights into the chronic nature of drug abuse

Several studies have examined the benefits and costs of drug treatment; however, these studies have typically focused on the benefits and costs of a single treatment episode. Although beneficial for certain analyses, the results are limited because they implicitly treat drug abuse as an acute problem that can be treated in one episode. We developed a Monte Carlo simulation model that incorporates the chronic nature of drug abuse. Our model represents the progression of individuals from the general population aged 18–60 with respect to their heroin use, treatment for heroin use, criminal behavior, employment, and health care use. We also present three model scenarios representing an increase in the probability of going to treatment, an increase in the treatment length of stay, and a scenario in which drug treatment is not available to evaluate how changes in treatment parameters affect model results. We find that the cost-benefit ratio of treatment from our lifetime model exceeds the cost-benefit ratio from a static model. The model provides a rich characterization of the dynamics of heroin use and captures the notion of heroin use as a chronic recurring condition. Similar models can be developed for other chronic diseases, such as diabetes, mental illness, or cardiovascular disease.



TREATMENT AND RECOVERY

Life-changing, effective treatments to break the cycle of abuse

PROJECT

Developing the First U.S. Rating System for Addiction Treatment Providers

RTI teams up with Shatterproof to create a user-friendly tool to help people find quality addiction treatment

With the opioid epidemic raging, it's critical that patients have reliable information to find available addiction treatments, many of which have been shown to reduce the rates of opioid addiction-related deaths by half.

To fulfill this need, RTI and its partners are developing a new rating tool for evaluating addiction treatment providers. As the first of its kind in the U.S., it will function much like other rating tools used for evaluating nursing homes, inpatient rehabilitation facilities, or long-term care hospitals—bringing transparency to addiction treatment systems and promoting market competition to drive higher-quality care.

Opioid use disorders (OUDs) can be effectively treated with a combination of medications, behavioral therapies, and counseling. OUD medications such as buprenorphine and methadone have been shown to reduce death rates by up to 50% and help individuals return to normal social relations, along with work and/or school. However, effective addiction treatment is often unavailable in a timely, cost-effective manner to those in need and for a long enough time to be effective. RTI is helping to improve access to effective and cost-effective treatments for OUDs.

Less than half of private-sector treatment programs offer medications for OUDs, and of patients in those programs who might benefit, **only 1/3** actually receive those medications.

CRIMINAL JUSTICE INTERVENTIONS AND EVALUATIONS

Supporting treatment and probation release requirements

Behavioral health problems such as substance abuse—which includes opioid abuse—disproportionately affect criminal justice populations and can weigh heavily on their well-being and public safety if untreated. Previous RTI research shows that nonresidential substance abuse treatment reduces both the likelihood and frequency of rearrest among members of a probation population. Moreover, community-based drug treatment has been found to reduce re-offense by about 9%. Mobile phone technology is increasingly being integrated into offender rehabilitation to improve client outcomes.

A former inmate's risk of death within the first 2 weeks of release is more than 12 times that of other individuals, with the leading cause of death being a fatal overdose.

PROJECT

Assessing the Effectiveness of Treatment and Monitoring Tools on Criminal Justice Populations

Using technology to help justice-involved substance users stay on track with their treatment and probation release requirements

RTI is developing, implementing, and assessing whether the use of a mobile phone texting notification system can improve treatment compliance among Treatment Accountability for Safer Communities (TASC) probationers with an application called the Interactive Computer-Assisted Recovery Enabler (ICARE). ICARE will provide reminders, allow clients to schedule appointments and confirm treatment attendance, deliver wellness and treatment satisfaction questionnaires, and deliver health and wellness messages. The assessment will evaluate the impact of ICARE on TASC compliance through a randomized controlled trial of 520 TASC clients and will pursue exploratory research to examine the adoption of this technology among 380 TASC clients. Key outcomes include how brief check-ins affect clients' wellness, health, change readiness, and treatment motivation and whether these factors relate to TASC compliance among both metropolitan and rural clients.

HEALTH COMMUNICATION

Learning how to, or how not to,
spread the word

One of the key ways to prevent opioid abuse is through effective communication: developing messages that help at-risk populations make better decisions about the risks, benefits, and uncertainties of using opioids. This requires a deep understanding of the intended audience and the messages that affect them.

RTI researchers have been directly involved in the development and evaluation of social marketing and communications programs over the past 2 decades. Through the RTI Center for Communication Science, we examine how patients and health care providers make decisions about taking and prescribing prescription medications.

In 2017, almost 20 million people age 12 or older had a substance use disorder, but only 4 million (20%) received any substance use treatment.



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.

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PROJECT

Facing *The Crisis Next Door*: Shedding Light on the Hidden Faces of the Opioid Epidemic

RTI and Ogilvy support the White House campaign to combat opioid stigma

RTI has teamed up with Ogilvy to increase the impact of a campaign supported by the Centers for Disease Control and Prevention and the White House that aims to build awareness around opioid addiction and combat the stigma attached to it. *The Crisis Next Door*, which launched in Spring 2017, is a digital campaign that connects with key audiences through short video stories of those affected by the opioid epidemic.

RTI has contributed to the effort by conducting formative research to develop key messages; evaluating the reach of the campaign; and assessing how the video stories affect people's knowledge, attitudes, and beliefs about opioid use disorder and those who have it. Different research methods will be used to assess the campaign's impact, including social media listening and analysis of campaign ads and use of the website. RTI experts have also recently begun building an educational curriculum to inform youth about the impact of opioids as well as expanding the campaign to reach additional audiences to fight the secrecy and stigma around the opioid crisis.

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