SCIENCE FOR A HEALTHIER HUMAN RACE
For decades, organizations concerned with healthcare quality and public health have counted on Battelle for solid science and experienced laboratory support. The Battelle Health and Analytics team brings together the world’s best people, facilities and methods to improve public health and patient outcomes.

WHEN THE ANSWERS MATTER, TRUST BATTELLE.

Our Clients
- Centers for Disease Control and Prevention (CDC)
- National Institutes of Health (NIH)
- Food and Drug Administration (FDA)
- Environmental Protection Agency
- Department of Health and Human Services
- U.S. Armed Forces
- Defense Health Agency
- Department of Veteran’s Affairs
- National Cancer Institute
What We Do

- Technical On-Site Professional Services
- Behavioral Health Services
- Public Health Center for Tobacco Research
- Public Health Support Services
- Healthcare Quality Improvement
- Healthcare Analytics
- Medical Readiness and Response
- Repository Management
WE’RE IMPROVING HEALTHCARE QUALITY AND PATIENT OUTCOMES.
Healthcare Quality Improvement

Battelle works with agencies such as the Centers for Medicaid and Medicare Services (CMS) and the Department of Veteran’s Affairs (VA), along with hospitals and healthcare providers, to provide objective and meaningful information to improve healthcare quality.

- Healthcare Quality Measures
- Clinical Predictive Analysis
- Outcomes Research
- Lab Medicine Process Improvement

Healthcare Quality Indicators

Our healthcare quality indicators, developed in partnership with the Agency for Healthcare Research and Quality (AHRQ), are helping to make healthcare more effective and affordable.

Battelle Healthcare Colloquium

The Battelle Healthcare Colloquium unites community, hospitals, clinicians and science to improve patient outcomes. We are transforming healthcare organizations through a collaborative approach to heart failure accreditation, data-driven quality improvement methodologies, and patient-level predictive analytics.

WayFinder™ Q.I. Dashboard

WayFinder is a cloud-based quality improvement analytics tool that allows hospitals to quickly analyze trends, determine benchmarks, predict performance and easily compare performance to peers, both state- and nationwide.
Public Health Support Services

Our research has long been trusted to guide program development and public policy for organizations such as CDC, NIH, EPA, and many more. We support critical public health research and program development with expert evaluation, on-the-ground support, and subject matter expertise for a wide variety of public health programs.

Program Evaluation

From tobacco cessation to childhood obesity, Battelle has been chosen to evaluate a wide range of large or complex public health programs. Our team combines deep experience in public health policy and program development with advanced data collection and analysis methods to provide deep insight into program efficacy.

Health Communications

Our health communications experts can help you reach your target population with accurate, effective, and easy-to-understand health information. We develop effective communication campaigns and educational programs to help people understand complex issues and make better health decisions for themselves and their families.

Behavioral Health Services

Battelle's experienced, credentialed researchers have led some of the most complex and important studies in behavioral health, on topics ranging from maternal health to nicotine addiction.

- Substance Use/Abuse
- Health Promotion/Disease Prevention
- Nutrition/Physical Activity/Obesity
- Maternal/Child Health
- Mental Health
- Environmental Exposure/Health
- Individual Exposure/Health
WE’RE ANSWERING TODAY’S MOST CRITICAL PUBLIC HEALTH QUESTIONS.

Case Study | Healthy Communities Study
Battelle was chosen to lead the Healthy Communities Study (HCS), the first study of its kind to systematically examine the association between characteristics of community programs and policies targeting childhood obesity and children’s obesity-related outcomes. Researchers collected data from 400 schools, 1,400+ community leaders and 5,000+ households in 130 communities across the country. The results will provide critical insights into what appears to be working to prevent childhood obesity in different types of communities, and help to inform public policy and design effective youth programs.
WE’RE APPLYING NEW METHODS TO TOBACCO AND NICOTINE RESEARCH.
The Battelle Public Health Center for Tobacco Research

The Battelle Public Health Center for Tobacco Research brings together the world’s best researchers, facilities and methods to help the public health community understand the range of tobacco and nicotine products available, how consumers use those products and the risks associated with them.

Our cutting-edge research includes product characterization, human exposure studies and behavioral studies of both traditional tobacco products and emerging delivery mechanisms such as e-cigarettes, waterpipes, and new oral delivery products.

**Product Characterization and Toxicity**

We accurately characterize conventional and emerging new tobacco and nicotine products and evaluate how their physical and chemical properties affect human exposure risks.

- **Product Characterization**: We use state-of-the-art instrumentation and unique characterization technologies to accurately measure volatile and semi-volatile organic compounds (VOCs/SVOCs), heavy metals and particles.

- **Smoking Topography Studies**: Our puff topography equipment helps to analyze how smoking behavior affects exposure and how product design influences puffing behavior.

- **Human Exposure Studies**: We conduct controlled studies to measure biomarkers in human exhaled breath, saliva and blood to accurately quantify exposure levels.

**Behavioral Research**

Our sophisticated smoking chambers allow for discreet observation and precise measurement of smoking behavior in a comfortable and controlled environment.

- **User Behavior**: Survey, observational and experimental studies help us to understand how product characteristics may influence user behavior and choices.

- **User Perception**: Sophisticated survey and observational methods allow us to measure user perception and evaluate how perceptions influence user behavior.

- **Dependence and Withdrawal**: We study dependence, craving and withdrawal behaviors and symptoms for a wide variety of nicotine products.
Healthcare Analytics

We leverage sophisticated analytical, computational and bioinformatics methods to help you identify meaningful and relevant patterns, determine which programs and policies are most effective, and make informed and timely decisions. Our integrated services include statistical and semantic methods of analysis, modeling and simulation, and high-performance computing capabilities for effective data acquisition, analysis and integration.

Environmental Health Research

From chemical exposure to climate change, we provide impactful solutions to characterizing environmental risks, exposures, and pathways to humans, and assessing their impact on human health. Our research has been used to set EPA priorities for chemical exposure and help private and public entities balance and manage environmental risks.

- TSCA characterization
- Data collection, design and management
- Exposure studies
- Statistical design, modeling and analysis

Battelle Has an Array of Healthcare Analytical Tools

Battelle EluciData™

EluciData™ is a powerful analytical program that brings new insight to complex medical questions. EluciData collects and analyzes data from multiple sources like patient medical records, body-worn medical sensors, clinical devices, diagnostics, imaging, billing records and more to enable smarter devices, better decisions and more personalized patient care.

Battelle SmartVision™

SmartVision™ combines human subject matter expertise and advanced analytical methods developed for national security and defense to detect patterns in vast amounts of unstructured data. SmartVision tracks thousands of topics of interest in blogs, social media, news sources, scientific journals, government sites and more to discover and predict changes in consumer sentiment, government regulation and scientific opinion.

Battelle Sematrix™

When you need deep understanding of a topic, Sematrix can help. An automated system that can rapidly collect, process and accurately identify granular scientific and technical knowledge, Sematrix can provide answers to complex questions. The output is stored as linked axioms in a semantic knowledgebase that can be queried and visualized to:

- identify and track targets (e.g. scientists, domains, topics);
- identify knowledge gaps, biases and tendencies;
- discover tacit or hidden patterns of relationships between scientists, organizations, and research activities.
Climate change is increasing the intensity and duration of heat waves in many places around the world, putting vulnerable populations at risk. Older, sicker and poorer people are especially vulnerable to the effects of extreme heat. Battelle researchers analyzed satellite data showing surface temperatures across New Delhi to create a detailed hour-by-hour heat map of the city. Policy makers can use this data to recommend changes such as urban greening, cool roof construction and increased water availability to increase the resiliency of vulnerable neighborhoods, as policy makers have done with results from a similar project focused on Philadelphia.
LET OUR PEOPLE HELP YOUR PEOPLE.
Technical On-Site Professional Services
Our experienced personnel keep your labs and facilities running smoothly so your scientists can stay focused on your core mission. We put qualified lab workers, managers and scientists to work in your environment to support your goals.

- Analytical chemists and biological lab workers, epidemiological program managers and other specialties to meet your needs
- Management services including ongoing staff oversight, search and recruiting services, safety observations, program management, staff education and reviews
- Implementation and oversight of quality systems

Lab Developed Testing
Put our world-class diagnostic laboratory services to work. We have extensive experience with the regulatory support process, and can assist in bringing diagnostic assays through FDA clearances or to a desired state where they are ready for rapid submission in the event of an emergency.

- FDA clearances and assistance – 510(k) & EUA
- Novel in vitro assay development, including muti-plex assays

Repository Management
If you need to maintain and preserve critical biological samples, Battelle can help. We are highly experienced in repository management, including management of high-risk biological specimens.

- Specimen collection, processing and storage
- Inventory management
- Distribution
- Quality assurance

Battelle provides ongoing oversight and management for CASPIR, the largest repository of biological specimens in the U.S. A joint project for the Centers for Disease Control (CDC) and the Agency for Toxic Substances and Disease Registry (ATSDR), the biological library holds more than 6 million specimens, including blood, urine, tissue and DNA, many of them unique in the world.
Medical Readiness and Response
We help first responders, military personnel and public health officials identify, assess and counter environmental, occupational and disease threats. We offer a comprehensive suite of services delivered by experienced, credentialed personnel.

• Program Review and Evaluation
• Reach-Back Assessment
• Situational Analysis
• Course of Action Recommendations
• Training

Areas of Specialty
• Military Force Health Protection
• Emergency Medicine
• Civilian Public Health Preparedness
• Food and Agricultural Security Preparedness
• Occupational Health

The BATTELLE Drill Driven Integration™ (DDI) Method will help you integrate your incident response plan across all of your functional teams and pinpoint the hidden gaps that could mean trouble in an emergency. Our proven all-in-one training and evaluation method uses tactical drills to identify points of integration between teams, build organizational consensus, mitigate potential risks, and optimize your readiness for any kind of incident.

Battelle BEAR™ (Best Estimate Assessment of Risk) method is an improved process for evaluating the potential risks and benefits of a course of action in a severe emergency. Developed to guide military personnel and first responders in the case of a nuclear accident or attack, BEAR provides a clear, consistent and defensible approach to risk management that balances immediate and long-term health risks against mission priorities.
WE HELP RESPONDERS GET READY FOR ANYTHING.
Who is Battelle?

We are the world’s largest independent research and development organization, operating at the forefront of scientific discovery. Our people apply cutting-edge research methods to some of today’s most complex public health and healthcare challenges.

**Experience:** We operate at the forefront of health and analytics research and are a trusted research provider for NIH, CDC, FDA and many other public and private entities.

**Expertise:** We bring together leading experts in data analytics, public health, pharmacology, medical readiness and other related disciplines for a multidisciplinary approach to healthcare and public health research.

**Objectivity:** Our research is grounded in solid, objective science and proven methods. We provide accurate, trusted data to guide healthcare providers, policy makers and regulatory agencies.

**What can we answer for you today?**

solutions@battelle.org
www.battelle.org/public-health