

# IMPLEMENTATION SCIENCE AND THE PREVENTION RESEARCH CENTERS

## What is “Implementation Science” and why is it important?

Billions of dollars have been invested in research to develop and test health-related treatments. Even when treatments are effective, they may never be used in routine care. Implementation Science bridges the gap from *research* to *practice*. Implementation Science is the study of methods to promote the use of research findings and other evidence-based approaches into practice, across local, regional or national health care and community settings. The overall aim of Implementation Science is to improve the quality and impact of health services, and health promotion and prevention practices. In addition, through Implementation Science new treatments and practices are improved because they consider factors that influence an organization’s ability to deliver them. Implementation Science research focuses on “real world” settings and involves working with stakeholders like patients, providers, health care systems, and community organizations.

## What is “Health Promotion and Prevention Implementation Science” how is it different?

Health promotion and prevention research seeks to help people and communities to avoid illness, disability and premature death. Many health promotion and prevention programs and practices are well established and supported by scientific research. For example, there are a large number of evidence-based programs proven to be effective for preventing obesity and related disorders such as diabetes and heart disease. However, these programs and practices are often not available to individuals who can benefit from them. The greatest challenge is understanding *how* to achieve the widespread uptake of proven programs and practices in healthcare systems and community organizations, in a way that is affordable, effective, sustainable and culturally relevant. In many respects, “we know what to do but we don’t know how to get it done”. Health Promotion and Prevention Implementation Science addresses several unique challenges and opportunities for moving health promotion and prevention research into practice. These include the following:

- Over 95% of healthcare spending is dedicated to treating diseases. Yet for every dollar spent on health promotion and prevention, it is estimated that we can save almost \$7 in healthcare costs.
- Health promotion and prevention focus on *long-term* benefits, to prevent disease or lessen its negative impact in the future. In contrast, most health care focuses on current problems and short-term benefits.
- Effective health promotion and prevention programs and practices often include changing complex behaviors both of providers who deliver services *and* of patients or community members.
- Health promotion and prevention practices often consist of *multiple, multi-level components* that can target individual, organizational or community-level factors, as opposed to single-focus or one-time interventions. There are additional challenges to effectively implementing programs with multiple or multi-level components.

These factors make it challenging to sustain health promotion and prevention programs and practices settings. However, using the tools of Implementation Science, we can begin to address these challenges and realize the health benefits of evidence-based health promotion and prevention practices.

## How do the CDC Prevention Research Centers advance and apply Implementation Science to promote health and prevent disease across the United States?

The Prevention Research Centers (PRCs) are leading the way in Health Promotion and Prevention Implementation Science. The Centers for Disease Control and Prevention funds a network of 26 PRCs across the country, made up of researchers, providers, policy makers and community stakeholders. They are dedicated to advancing and applying health promotion and prevention science to address the leading causes of death, disability and illness in the nation. The PRCs accomplish this by partnering with communities, public health departments, health care delivery systems, and providers. Together they identify, implement, and disseminate evidence-based health promotion and prevention practices in settings where people receive their care as well as where people live, work, and play. Implementation science projects are conducted by the PRCs as well as the thematic networks of the PRCs. These include the Cancer Prevention and Control Research Network, the Nutrition and Obesity Policy Research and Evaluation Network, the Physical Activity Policy Research Network Plus, the Healthy Brain Research Network, the Global and Territorial Health Research Network and the Managing Epilepsy Well Network. The work of the PRCs transforms health care and public health delivery systems, broadly reaches individuals and communities, and makes meaningful improvements to health.



The findings and conclusions in this article are those of the contributing authors from the network of Prevention Research Centers and do not necessarily represent the official position of the Centers for Disease Control and Prevention.