Understanding Mis-implementation in Public Health Practice

Ross C. Brownson, PhD, Peg Allen, PhD, MPH, Rebekah R. Jacob, MPH, MSW, Jenine K. Harris, PhD, Kathleen Duggan, MPH, RD, Pamela R. Hipp, MPH, Paul C. Erwin, MD, DrPH

Introduction: A better understanding of mis-implementation in public health (ending effective programs and policies or continuing ineffective ones) may provide important information for decision makers. The purpose of this study is to describe the frequency and patterns in mis-implementation of programs in state and local health departments in the U.S.

Methods: A cross-sectional study of 944 public health practitioners was conducted. The sample included state (n=277) and local health department employees (n=398) and key partners from other agencies (n=269). Data were collected from October 2013 through June 2014 (analyzed in May through October 2014). Online survey questions focused on ending programs that should continue, continuing programs that should end, and reasons for endings.

Results: Among state health department employees, 36.5% reported that programs often or always end that should have continued, compared with 42.0% of respondents in local health departments and 38.3% of respondents working in other agencies. In contrast to ending programs that should have continued, 24.7% of state respondents reported programs often or always continuing when they should have ended, compared to 29.4% for local health departments and 25% of respondents working in other agencies. Certain reasons for program endings differed at the state versus local level (e.g., policy support, support from agency leadership), suggesting that actions to address mis-implementation are likely to vary.

Conclusions: The current data suggest a need to focus on mis-implementation in public health practice in order to make the best use of scarce resources.
(Am J Prev Med 2015;48(5):543–551)

Introduction

Mis-implementation in public health practice refers to both the de-adoption of effective programs, policies, or other interventions that should continue and to the continuation of ineffective interventions that should end. It is important to understand the mis-implementation of public health programs for several reasons. First and most importantly, public health resources are limited and decreasing in many settings.[1–3] Resources are most efficiently used when effective programs are continued and ineffective programs are discontinued. Second, understanding reasons for mis-implementation can help practitioners in designing and implementing more effective programs. For example, if having a program champion or "spark plug" is essential for continuing an effective program,[4] this knowledge can help shape how a program is staffed and managed. And third, building in part from Diffusion of Innovations Theory,[5] a significant gap in the field of dissemination and implementation science is guidance on how to "de-implement" or reduce the use of interventions that are not evidence-based, have been widely adopted prematurely, or are detrimental.[6,7] Building this knowledge in public health may translate to other areas (e.g., healthcare delivery, education, social services) and provide new frameworks for action.[8]

Mis-implementation in public health and closely related settings involves two seemingly opposite

From the Prevention Research Center in St. Louis (Brownson, Allen, Jacob, Harris, Duggan), Brown School; Division of Public Health Sciences and Alvin J. Siteman Cancer Center (Brownson), Washington University School of Medicine, Washington University in St. Louis; Medical Affairs (Hipp), Centene Corporation, St. Louis, Missouri; and Department of Public Health (Erwin), University of Tennessee, Knoxville, Tennessee

Address correspondence to: Ross C. Brownson, Washington University in St. Louis, 621 Skinker Boulevard, St. Louis MO 63130-4838. E-mail: rbrownson@wustl.edu.

0749-3797/$36.00
http://dx.doi.org/10.1016/j.amepre.2014.11.015

strategies. In some cases, programs are ended that are effective and should be continued. An example of this is the VERB campaign, which was a national program to promote physical activity using a social marketing approach.[9] The VERB campaign delivered positive messages to youth aged 10–13 years via multiple channels (e.g., mass media, school and community promotions, the Internet).[10] VERB positively influenced children's physical activity and campaign effects persisted into their adolescent years. Despite the benefits of VERB, national-scale efforts to continue VERB have not been successful and sustained community commitment to VERB-like efforts is challenging.[11,12] In other cases, programs are continued that are not effective and should be ended. A prominent example is the Drug Abuse Resistance Education (D.A.R.E.) program, which is one of the most widely used school-based drug use prevention programs in the U.S. that has been disseminated to over half of U.S. school districts.[13–15] Although not typically carried out by public health departments, D.A.R.E. relates to core public health topics (substance abuse) and uses public resources. Systematic reviews of D.A.R.E. program evaluations have shown the program is ineffective in preventing substance use behavior.[16,17] Although these examples may appear opposite, they have the same consequence: inefficient use of scarce resources.

To date, much of our knowledge related to mis-implementation comes from public policy and medicine. The concept of mis-implementation in policy settings is commonly deemed policy "termination" and is an important part of the policy process. Policy termination has been described for several decades and suggests that a specific policy should be regularly evaluated, and in some cases ended if it is redundant or outmoded.[18–21] Most of the literature on policy termination consists of case studies,[22] with sparse quantitative research. In medicine and health services research, the attention has been on underuse of certain types of medical care (e.g., not prescribing aspirin after myocardial infarction), misuse/incorrect care (e.g., prescribing a drug the patient is allergic to), and overuse of medical services that lack benefits or cause harms (e.g., treating a simple viral infection with antibiotics).[23–25] It is estimated that overuse may account for up to 30% of U.S. healthcare spending.[23]

Given its importance and the sparse empirical literature, this article reports on the frequency and reasons for mis-implementation among state and local public health departments.

Methods

The reported data were derived from two cross-sectional surveys of the state and local public health workforce as part of ongoing research projects (the State Survey and Local Survey described below).[26–28] Participants were state and local public health department employees and key partners from other agencies who were identified by leaders in the public health agencies (e.g., coalitions, voluntary health organizations, advocacy organizations, healthcare organizations, universities). Human subjects approval was obtained from Washington University in St. Louis.

State Survey

A sample of 596 public health practitioners was drawn from six randomly selected states (Arizona, Delaware, Minnesota, South Dakota, Washington, and Wisconsin) that are part of a larger ongoing cluster randomized trial examining dissemination and implementation of evidence-based practices in state health departments.[26] Potential respondents were selected by state health department chronic disease directors and their leadership teams of program managers. Represented program areas were cancer prevention and screening, obesity prevention, physical activity, healthy eating, tobacco control, heart health, diabetes, school health, and related areas. The state survey asked about evidence-based public health skills and resources and contained 63 items. The 596 State Survey participants included 277 state health department employees, 50 from local health departments, and 269 from other partnering health organizations or agencies. Most participants worked in chronic disease prevention and health promotion.

Local Survey

The local data came from a follow-up 66-item survey on evidence-based public health with local health departments in selected states. The sampling was derived from a merged database of two national surveys previously conducted by the research team.[27,28] In the original data collection, a random sample of 1,067 U.S. local health departments was drawn from the database of 2,565 local health departments maintained by the National Association of County and City Health Officials. The baseline survey consisted of 849 local health department directors (or their designees) and program managers. The follow-up survey was part of evidence-based public health capacity-building activities in four intervention states (Michigan, North Carolina, Ohio, and Washington) along with a set of controls from the original two national samples.[29] In this follow-up survey, a subsample of local health department directors and program managers was invited to participate. For this study, post-intervention data were used from 348 local public health practitioners drawn from 34 states including the four intervention states.

Measures

In addition to the core questions in each survey, a set of new questions on program mis-implementation was developed for both the State and Local Surveys. First, the literature was reviewed to identify reasons for potential mis-implementation from medicine and policy. An initial set of items was reviewed by the research team, revised, and reviewed with a larger team of faculty and practice-oriented partners. The final instrument included three mis-implementation items. A definition of a *program* was provided and included any type of organized public health action, including direct service interventions, community mobilization efforts, policy implementation, environmental changes, outbreak