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RESEARCH ARTICLE

Administrative Evidence-based Practices in State Chronic Disease Practitioners

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Introduction: Research and lessons from community implementation have informed evidence-based practices that can improve the effectiveness of health initiatives. Administrative evidence-based practices (A-EBPs) facilitate the role of public health departments in implementing the most effective programs and policies. The purpose of this study is to describe A-EBPs in relation to characteristics of chronic disease practitioners in state health departments.

Methods: Randomly selected chronic disease practitioners who worked in state health departments were invited to complete an online survey in 2016. The survey included questions on five domains of A-EBPs: workforce development, leadership, culture and climate, relationships and partners, and financial practices. State-level variables that could potentially affect the use of A-EBPs were collected and used in a regression model.

Results: Analysis was conducted in 2016 on data from 571 respondents. Mean percentages of those who strongly agreed/agreed were lowest for financial practices (41.49%) and leadership (42.33%) with higher means for culture and climate (54.52%) and relationships and partners (58.71%). State poverty level was the only significant predictor of A-EBP scores after adjusting for other covariates in a regression model.

Conclusions: These results show several areas of high agreement with A-EBP within the domains measured as well as opportunities for improvement. Highlighting the importance of A-EBPs to public health leadership level may enhance practice. There is also need for developing plans for an aging workforce and cultivating partnerships with health care and other sectors. Findings can be used to target training for enhancement of A-EBPs within state health departments.

INTRODUCTION

Public health programs and policies have substantially contributed to population health improvements over the past century.[1,2] Decades of empirical research paired with lessons learned from community implementation have informed evidence-based practices that can improve the effectiveness of health initiatives.[3–5] Evidence-based public health practices (EBPH), developed formally in the late 1990s, have several key characteristics: making decisions based on the best available peer-reviewed evidence (both quantitative and qualitative research), using data and information systems systematically, applying program planning frameworks, engaging the community in assessment and decision making, conducting sound evaluation, and disseminating what is learned to key stakeholders and decision makers.[4–6] Capacity-building efforts for improving EBPH focus on public health practitioners' personal (e.g., knowledge and skills) and organizational (e.g.,

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incentives for use) factors. The importance of EBPH is shown in national recommendations[7]—and is central in standards set forth by the Public Health Accreditation Board.[8]

Although the importance of EBPH is well established,[3–5,7,9] a gap remains between knowledge and practice.[10] Significant challenges exist in identifying the best ways to increase the awareness of and capacity for EBPH among public health practitioners.[7,10,11] Administrative evidence-based practices (A-EBPs) were developed to facilitate the role of health departments in implementing the most effective programs and policies. A-EBPs are agency-level structures and activities that are positively associated with performance measures.[10] For example, capacity is one of the main components of performance measurement because of its importance in enhancing abilities to carry out essential services of public health.[12–14] Several A-EBP constructs (e.g., leadership, relationships) determine capacity within health departments. Additionally, other administrative practices related to infrastructure, operational procedures, and environment can also support EBPH,[9,11] and ultimately population health outcomes, such as lower premature mortality and more favorable health status.[15] Based on an extensive review of the literature, Brownson et al.[16] identified five major domains of A-EBPs: workforce development, leadership, organizational culture and climate, relationships and partnerships, and financial processes. Workforce development refers to on-the-job trainings and competency-based education. Leadership includes the skills and backgrounds of public health leaders, their values and expectations, and their use of participatory decision making. Culture and climate within an organization can also impact A-EBPs.[9–11] Culture describes deeply held beliefs and values within an organization, whereas climate refers to shared perceptions and attitudes.[17] Aspects of this domain include free flow of information, support for innovation, and atmosphere for learning. The presence of inter-organizational relationships and a collaborative vision are also A-EBP qualities. Lastly, the domain of financial processes relates to funding allocation and fiscal policies and priorities.[10] Elements within these five domains are modifiable within a relatively short time frame, typically inexpensive to address, and when improved, can increase the capacity for health department impact.[9,10]

Several studies have explored different aspects of A-EBPs in local public health settings (e.g., patterns of use,[9] awareness,[10] training needs,[4] and within-organization differences[16]). In spite of the growing interest in this topic, little is known about the patterns and correlates of A-EBPs in state public health settings. State chronic disease practitioners are of particular interest, given that chronic diseases are responsible for a large population health burden.[18] Much of this impact is preventable via risk reduction (e.g., tobacco use, poor nutrition, inadequate physical activity).[19] Consequently, state-level chronic disease programs can facilitate prevention and management of these conditions.

The purpose of this study is to describe A-EBPs in relation to characteristics of public health practitioners who work in chronic disease prevention and control in state health departments. Practitioners are those who direct or implement population-based intervention programs and are directly involved in program delivery, setting priorities, or allocating resources for programs related to chronic disease risk factors.

METHODS

This analysis was part of a larger study conducted by the National Association of Chronic Disease Directors (NACDD) and the Centers for Disease Control and Prevention in collaboration with the Prevention Research Center at Washington University in St. Louis. NACDD is a national organization that supports state chronic disease directors to advocate for preventive policies and programs, encourage knowledge sharing, and developing partnerships for health promotion.[20] All states and most territories have identifiable chronic disease prevention and control divisions, and all staff working in these programs are members of NACDD. These members include a wide range of levels, from division/bureau directors to technical staff (e.g., epidemiologists, health educators, research analysts). NACDD offers programs and training initiatives through a variety of mechanisms in an effort to assist state health departments with planning and implementation of EBPH.

Study Population

A sample of 943 chronic disease prevention and control practitioners working in state health departments received an e-mail with a description of the study and an invitation to complete a 15-minute online survey. The sample was randomly selected from a list of 2,771 NACDD members.

Measures

The methods and development of the A-EBP assessment were developed based on the work of Brownson et al. and are described in detail elsewhere.[9,10,16,21,22] The A-EBP survey consisted of four questions pertaining to workforce development that assessed perceptions of the respondent's work unit as a whole. These yes/no questions included content related to access to training in quality improvement processes, performance assessment, evidence-based decision making, and effective management practices. The leadership section consisted of 11 statements with a 7-point response scale (1=strongly disagree to 7=strongly agree). These questions included concepts related to quality of leaders, evidence-based decision making, management, and unit capacity. The third A-EBP section of the survey assessed perceptions of organizational culture and climate. Ten statements with the same 1 to 7 response agreement scale that was used in the leadership section were