Taking Evidence-based Interventions to Scale in Public Health Systems

Although the United States spends almost three trillion dollars on the delivery of health care, the country has a lower life expectancy and more uninsured people than many of the other industrialized nations.[1] Of the dollars expended on health care, a small percentage is spent on primary prevention. Since health care contributes only a small portion (10%) of the overall health of a population, improvements in the health and well-being of the population require behavior changes and supports in social and physical environments. In addition, investments in social determinants of health—e.g., going "upstream" to prevent disease and illness—are cost effective, save lives, promote health equity, and increase productivity.[2]

Evidence-based Solutions Exist to Promote Health and Well-being

The research base documenting the effectiveness of public health programs and policies for improving population health is large and growing. Public health has a number of databases (e.g., Health Impact in 5 Years [HI-5],[a] Guide to Community Preventive Services, County Health Rankings and Roadmaps, Results First Clearinghouse Database) which list over a thousand evidence-based programs, policies, and strategies to improve health. A recent report of the Trust for America's Health recommends evidence-based policies that promote health, control costs, and reduce health inequities in states by addressing social determinants of health related to education, healthy behaviors, housing, safety, and employment.

Despite this extensive body of research on evidence-based programs and policies that have been shown to improve health and well-being, many are not being implemented at scale in public health and other systems. In fact, there have been large time lapses between the documentation of threats to health outcomes and the implementation of programs and policies to address the threats. For example, over 25 years elapsed from the release of the Surgeon General's Report on Smoking and Health in 1964 to the development of the first tobacco control programs in Massachusetts and California. The recommendations of other Surgeon General reports on a variety of topics (e.g., obesity, addiction, mental health, oral health, youth violence, physical activity, nutrition) have not been implemented at scale in states or nationally.

Many evidence-based programs and policies to improve population health have not been implemented at scale.

Little is Known About Taking Evidence-based Interventions to Scale

A task force of prevention scientists from the Society of Prevention Research (called Mapping Advances in Prevention Science IV Translation Research Task Force) reviewed what is known about scaling up evidence-based programs and policies in five public systems (behavioral health, child welfare, education, juvenile justice, public health). They found a lack of information about either the scaling-up process or the factors that guide the process in each public system. The task force identified six factors that affect scale-up in the five systems: public awareness, skilled workforce, data and evaluation capacity, leadership, community engagement, and developer/funder capacity.

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[a] Centers for Disease Control and Prevention

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Several papers and frameworks related to evidence-based implementation and dissemination include a phase on sustainability and some steps related to scaling up, but few include steps, processes, or research methods for scaling up programs and policies. The most frequently used frameworks in public health and health care for dissemination and implementation (e.g., CFIR,[b] PCORI[c] Dissemination and Implementation Framework, RE-AIM,[d] Value Added Research Dissemination Framework) include factors to consider in the implementation and replication phases, but not explicit steps for scaling up programs and policies at a population level. The Pew-MacArthur Results First Initiative describes how states utilize core actions necessary for state-level, evidence-based policy making. Although there are evidence-based policies and programs that have been scaled up in public health systems, there are very few studies of the scaling-up process to guide the development of a framework or theory about scaling up. In addition, relatively little funding has been committed for effectiveness and dissemination trials and scaling up, and few journals publish articles on dissemination and implementation research.

> **Existing prevention science frameworks for dissemination and implementation do not include specific steps for scaling up to produce population impacts.**

An emerging literature that reviews and proposes frameworks and steps specifically for scaling up of public health interventions offers promise for future research and practice. One research group[10] proposes a schema for scaling up or scaling out that implements evidence-based interventions either with new populations, or in a new delivery system, or both. Two other research teams have addressed pathways for scaling up public health interventions to broader population levels in a global context. One developed a conceptual framework for use in high-income countries.[11] The other team has conducted the only review of models and frameworks used for scaling up public health interventions for population level outcomes; the majority of frameworks reviewed were developed for global health with a focus on low- and middle-income countries.[12]

Recommendations for Scaling Up Evidence-based Interventions in the Public Health System

- Develop prevention science for scaling up evidence-based programs and policies in the public health system.
  - o Conduct studies, both prospective and retrospective, of the scaling-up process to determine key characteristics and processes that lead to successful scale-up on a population level.
  - o Develop and refine a framework for scaling up.
  - o Design and implement data systems that can be used for monitoring and evaluating the scaling-up process.
  - o Determine which methods (e.g., random assignment, quality improvement strategies) are best used for scaling up programs and policies.
- Create awareness about evidence-based solutions to improving health among policymakers and the public.
- Include prevention science about scaling up evidence-based interventions in public health curricula, criteria for accreditation of public health departments, and competencies in public health credentials.
- Invest in the scaling up of evidence-based solutions.
  - o Fund the prevention initiatives in the Prevention and Public Health Fund of the Affordable Care Act at its original levels.
  - o Fund public health initiatives at the local, state, and federal levels to support scaling up of evidence-based programs and policies.
  - o Provide a national framework and monitoring system for assessing progress made at the state and national levels on scaling up evidence-based solutions.

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[b] Consolidated Framework for Implementation Research
[c] Patient-Centered Outcomes Research Institute
[d] Reach, Effectiveness, Adoption, Implementation, and Maintenance

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