Bridging the gap: Translating research into policy and practice

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A B S T R A C T
Effective physical activity interventions do not achieve their full potential if they are not applied beyond their original testing in research studies. Potentially effective interventions can be adopted in community settings through the efforts of numerous agencies, organizations, and individuals. This paper highlights the important roles of public health practitioners and policy makers, who differ in their decision-making processes. To enhance the uptake of evidence-based interventions, several steps are needed to: build the science by moving upstream, increase the understanding of practice-based evidence, move beyond the “what” to the “how,” re-frame the dissemination challenges, place greater emphasis on workforce development, and make research more accessible for policy audiences. The most effective strategies to bridge the gap between research and practice, will have at their heart, effective academic-practice-policy maker partnerships.

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It is often necessary to make a decision on the basis of information sufficient for action but insufficient to satisfy the intellect. – Immanuel Kant

Effective physical activity interventions do not achieve their full potential if they are not applied beyond their original testing in research trials. For example, even partial implementation of the public health recommendation for moderate physical activity would likely result in thousands of preventable deaths each year in the United States (Powell and Blair, 1994). Evidence-based interventions promoting physical activity are cost-effective and represent a good value (Roux et al., 2008). Therefore, more efforts are needed to systematically disseminate effective approaches in “real world” conditions (both practice and policy settings). In a recent national survey of state chronic disease practitioners, an estimated 58% of chronic disease programs were described as evidence-based (Dreisinger et al., 2008). This compares closely with a recent study of clinical preventive services in which 55% of patients received the medical care that is recommended in the literature (McGlynn et al., 2003).

Two converging bodies of scientific knowledge hold promise for bridging the gap between discovery of new research findings and application in public health settings. First, the concept of evidence-based public health is growing in prominence due in part to a larger body of intervention research on what works to improve population health (e.g., the Community Guide recommendations on promoting physical activity) (Brownson et al., 2009). Evidence-based decision-making in public health follows the following principles: 1) making decisions using the best available peer-reviewed evidence (both quantitative and qualitative research), 2) using data and information systematically, 3) applying program-planning frameworks (that often have a foundation in behavioral science theory), 4) engaging the community in assessment and decision-making, 5) conducting sound evaluation, and 6) disseminating what is learned to key stakeholders and decision makers (Brownson et al., 2009). Second, effective methods of dissemination and implementation (D&I) are needed to put evidence to work in “real world” settings. While in its infancy, there is increased attention and growing literature on D&I research. This type of research elucidates the processes and factors that lead to widespread use of an evidence-based intervention by a particular population or within a certain setting (e.g., worksite, school). This D&I research has identified a number of important factors to enhance the uptake of evidence-based interventions in both practice (e.g., a state health department) and policy (e.g., a state legislature) settings. For example, if an intervention is too complex and resource intensive, it may be difficult for a small agency to implement. It is noteworthy that the decision to adopt, accept, and utilize an effective intervention is not an instantaneous act, but more often a process that occurs in stages (Rogers, 2003). In practice settings, effective dissemination of an evidence-based program often calls for time-efficient approaches, ongoing training, and a high organizational value on research-informed practice (Dobbins et al., 2001). In addition, practitioners often seek: a strong connection to community needs, realistic and economically-feasible intervention options, and leadership capacity to translate research to policy.
The potential by setting

There are several important settings for D&I of physical activity interventions. Potentially effective interventions can be adopted in community settings through the efforts of numerous agencies, organizations, and individuals. Here, we highlight the important roles of public health practitioners and policy makers, whom differ in their decision-making processes (Table 1). Many of these differences can be considered contextual factors (Rabin et al., 2006), that should be kept in mind when attempting to translate science to practice or policy.

Public health agencies (the executive branch of government)

State and territorial health departments are important conveners for promoting physical activity interventions. Their role is crucial because of their ability to assess public health problems, develop appropriate programs or policies, and assure that the programs and policies are effectively delivered and implemented. There is limited information on D&I of physical activity interventions among health departments. Recently, data on use of evidence-based physical activity recommendations were collected from state and local health departments (two years after publication of the Community Guide). At the state level, several key factors were associated with the adoption of evidence-based interventions, including the presence of state funding for physical activity, whether the respondent participated in moderate physical activity, presence of adequate staffing, and presence of a supportive state legislature (Brownson et al., 2007b). In these data, only 30% of local health respondents were aware of the Community Guide and even fewer (11%) believed the leadership of their agency was aware of the Community Guide (Brownson et al., 2007a). The most important factors related to decision-making at the local level were the availability of adequate resources and the presence of established community coalitions.

Policy-making bodies (the legislative branch of government)

We focus on the state-level policy given the constitutional doctrine of reserved powers, where the fifty states retain enormous authority to protect the public’s health. The states shoulder their broad public health responsibilities through work carried out by state and local agencies (e.g., state health departments). At the state level, a state legislature can promote policies that are supported by scientific evidence. For example the Community Guide has identified several types of policy interventions that are effective in promoting physical activity (e.g., enhanced access to places for physical activity, urban planning and policy) (Heath et al., 2006). State level policy is reflected in funding priorities where chronic disease programs often receive disproportionately low funding in relation to health and economic burden of diseases such as heart disease, cancer, stroke, and diabetes (Brownson and Bright, 2004).

Table 1

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Executive branch, public health administrator</th>
<th>Legislative branch, elected official</th>
<th>Legislative branch, staff member</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time in position</td>
<td>Longer</td>
<td>Shorter</td>
<td>Shorter</td>
</tr>
<tr>
<td>Accountability</td>
<td>Governor, board of health, agency head</td>
<td>Constituents by whom they are elected, political party</td>
<td>Elected legislator, committee chair</td>
</tr>
<tr>
<td>Personal connection to constituents</td>
<td>Moderate</td>
<td>High</td>
<td>Less depth, wider breadth</td>
</tr>
<tr>
<td>Knowledge span</td>
<td>Deeper knowledge on health issues</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Decision making based on external factors (aside from research)</td>
<td>Low to moderate</td>
<td>Low to moderate</td>
<td></td>
</tr>
<tr>
<td>Time spent on a particular issue</td>
<td>Longer</td>
<td>Shortest</td>
<td>Shortest</td>
</tr>
<tr>
<td>Type of evidence relied upon</td>
<td>Science, empirical studies from the field, personal experience</td>
<td>Science, media, “real world” stories, constituents, lobbyists, party priorities</td>
<td>Science, the media, “real world” stories, constituents, lobbyists, party priorities</td>
</tr>
</tbody>
</table>

* External factors commonly include habit, stereotypes, and cultural norms.

The path ahead

Drawing on experience in clinical and community practice, several lessons about D&I of evidence-based interventions to promote physical activity should be considered.

Build the science by moving upstream

Too much of our research in physical activity has focused on downstream, individual-level interventions. Upstream approaches (e.g., macro-level policy change) hold great potential (McKinlay, 1998) yet are often not well evaluated and are under-utilized.

Increase understanding of practice-based evidence

More evidence needs to come from settings and organizations that reflect public health practice and policy. For example, efforts such as the Steps to a HealthierUS Initiative, YMCA Activate America, and faith-based interventions demonstrate that using existing leadership development approaches can enhance the use of evidence for promoting physical activity (Cyzman et al., 2009; WK Kellogg Foundation, 2002).

Move beyond the “what” to the “how.”

The “how” in D&I research often relates to context for the intervention—i.e., What factors need to be taken into account when an internally-valid program or policy is implemented in a different setting or with a different population? If the adaptation process changes the original intervention to such an extent that the original efficacy data may no longer apply, then the program may be viewed as a new intervention under very different contextual conditions. Feasibility research can help to inform the adaptation and expansion of research to practice (Bowen et al., 2009).

Re-frame the D&I challenges

Research on D&I has now taught us several important lessons: 1) D&I does not occur spontaneously, 2) passive approaches to D&I are largely ineffective, and 3) single-source prevention messages are generally less effective than comprehensive approaches. Given the lack of a marketing and distribution system for D&I evidence-based public health programs, we need to build system infrastructure and responsibility for D&I in public health (Kreuter and Bernhardt, in press).

Place greater emphasis on workforce development

The majority of the public health workforce has no formal training in a public health discipline (e.g., epidemiology, health education). Therefore, without a greater commitment to workforce
training and leadership development, it is unlikely that goals for translation of research to practice can be attained. A model program in this area is the course for practitioners: Physical Activity and Public Health (Franks et al., 2005). In addition, policy-related skills are not prominent in competency frameworks for workforce development.

Make research more accessible for policy audiences

Evidence becomes more relevant to policy makers when it involves a local example and when the effects are framed in terms of its direct impact on one’s local community, family, or constituents (Jones et al., 2006). In the policy arena, decision makers indicate that relevance to current debates is a critical factor in determining which research will be used and which proposals will be considered. Research on contextual issues and the importance of narrative communication is beginning to present data in the form of story that helps to personalize an issue.

Conclusion

To ensure that scientific discoveries on reducing the burden of physical inactivity are realized, key actions are needed. For example, these are several immediate steps that researchers can take:

- Design research trials for dissemination by involving end users of potentially effective interventions early on, to propose and test approaches that can be “scaled up” at the appropriate time (Caburnay et al., 2001);
- Seek out partnerships with practice agencies (e.g., state and local health departments) with the goal of adding evaluation and measurement expertise to existing programs. This can be especially useful for a variety of state-level programs supported by the Centers for Disease Control and Prevention or tobacco settlement funds;
- Put more emphasis on D&I research at the federal level. For example, new funding announcements support translational research from the National Cancer Institute, the National Institute of Mental Health, and the Centers for Disease Control and Prevention (Colditz et al., 2008);
- Identify and advocate for faculty incentives that support D&I research (e.g., promotion standards calling for D&I research) and the creative packaging of research findings for various audiences (e.g., turning promising research findings into policy briefs); and
- Develop and implement training programs to reach the vast array of practitioners whom have no formal training in public health, with special emphasis on tested, effective training models (Dreisinger et al., 2008; Franks et al., 2005).

In taking these steps, researchers will better recognize the practical application of their scientific findings. The most effective strategies to bridge the gap between research and practice, will have at their heart, effective academic-practice-policy maker partnerships. Without greater attention to the issues briefly described in this article, adding to the evidence-based alone will do little to address the current joint epidemics of physical inactivity and obesity.

Conflict of interest statement

The authors declare that there are no conflicts of interest.

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References