

Research Insights

■ Using HSR to Influence Policy Change and Population Health Improvement

Summary

This issue brief draws on the session at AcademyHealth's 2012 Annual Research Meeting in Orlando, Florida. The session, "Using HSR to Influence Policy Change and Population Health Improvement," addressed the multifaceted, multidirectional sharing of information between providers and users of research and new and existing approaches for moving knowledge into action to address challenges related to population health. The brief has three sections:

- *Models for HSR knowledge translation and dissemination.* As background, the first section of this issue brief reviews several models for bridging the gap from the creation of knowledge through HSR to the dissemination of and use of such knowledge by individuals and entities beyond academia.
- *Challenges in developing and implementing evidence-based research in public health.* The second section identifies some of the challenges for practitioners and policymakers in developing and using research evidence to increase the availability of evidence-based public health (EBPH) in practice.
- *Adapting HSR knowledge translation and dissemination models to facilitate the expansion of evidence-based public health.* The third section identifies a few of the challenges and opportunities for researchers to move HSR and PHSSR knowledge into action to increase the availability of EBPH in practice.

Introduction

Health services research (HSR), including the emerging discipline of public health services and systems research (PHSSR), often produces findings with serious implications for health and health policy. Unfortunately, though, many service providers, including public health practitioners, never see these findings, and the insights offered by these studies are not translated into health policy or practice. One of AcademyHealth's goals is to improve health and health care by generating new knowledge and moving knowledge into action. So we're interested in improving this connection between the research community and research users.

AcademyHealth's June 2011 report on models to ensure that research informs health policymaking identified four steps to knowledge translation¹:

1. Identify and understand the target user audience.
2. Articulate the goals and purpose of the knowledge translation strategy.
3. Select the right approach to promote the uptake and use of knowledge.
4. Identify and evaluate the impact of the approaches employed.

This issue brief draws on what we know about knowledge translation and applies it to public health.

Genesis of this Brief:

This policy brief is drawn, in part, from a panel discussion on using health services research (HSR) to influence policy change and population health improvement held June 25, 2012, at AcademyHealth's 2012 Annual Research Meeting in Orlando, Florida. The panel, sponsored by the Robert Wood Johnson Foundation, addressed the multifaceted, multidirectional sharing of information between providers and users of research and new and existing approaches for moving knowledge into action to address population health challenges.

The panel chair was Maureen Dobbins, B.Sc.N., Ph.D., associate professor in the School of Nursing, and scientific director of the National Collaborating Centre for Methods and Tools in Public Health at McMaster University in Canada. Panelists were Jeffrey Harris, M.D., M.P.H., M.B.A., professor and director of the University of Washington Health Promotion Research Center; Donna Petersen, M.H.S., Sc.D., dean, College of Public Health, University of South Florida; and Bonnie Sorenson, M.D., director, Volusia County Health Department.

Models for HSR Knowledge Translation and Dissemination

The process of making findings from research accessible and useful for an audience that goes beyond academia has gone by a variety of names, including ‘knowledge translation and dissemination,’ ‘knowledge translation and implementation,’ and ‘knowledge transfer.’ For brevity, this issue brief will henceforth refer to this overall area of study as ‘knowledge translation and dissemination.’

At the Canadian Institutes of Health Research, knowledge translation is defined as “a dynamic and iterative process that includes synthesis, dissemination, exchange, and ethically-sound application of knowledge to improve the health of Canadians, provide more effective health services and products, and strengthen the health care system.”²² Dissemination activities can include such things as summary/briefings to stakeholders, educational sessions with patients, practitioners and/or policymakers, engaging knowledge users in developing and executing dissemination/implementation plan, tools creation, and media engagement.

Many models and frameworks have been designed to encapsulate the concepts of knowledge translation and dissemination. Three types of models with slightly different functions are highlighted in the discussion that follows:

- Models that can be used singly or in combination to link HSR research to action (Lavis);
- The “**Knowledge-to-Action (KT) Cycle**,” which portrays steps in the process of generating knowledge and knowledge products and steps in the process by which knowledge is implemented (i.e., the “action cycle”); and
- Models portraying the considerations and steps needed for translation and dissemination when the goal is the creation of evidence-based public health.

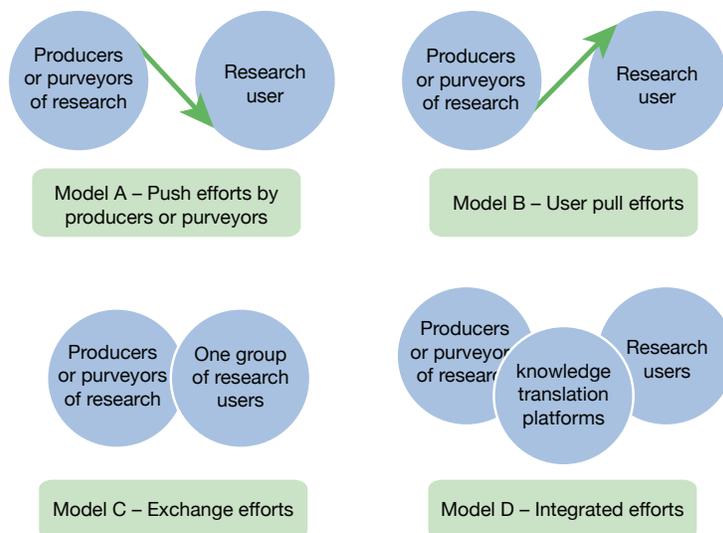
It is important to note that, as the science advances, the models describing HSR and PHSSR knowledge translation and dissemination are undergoing continual revision, and additional models are likely to be added to the literature as time goes by.

Models That Can Be Used Singly or in Combination to Link HSR to Action

For research to influence policy or practice, members of the policy and practice community need to be aware of its availability. In 2006, John Lavis and his colleagues assessed efforts by country members of the World Health Organization to link research to action.³ As shown in Figure 1, Lavis et al. identified four clusters of activities used to link HSR research to action in these countries:

- “Push” efforts consist of efforts by researchers or other interested parties to direct messages to those who are unaware or unwilling to act on their own;

Figure 1: Four Models Used to Link Research to Action Among WHO Member Countries



Source: Lavis et al.³

- “User-pull” efforts consist of efforts by interested parties, such as practitioners, patients, or health professionals, to search out research from the literature;
- “Exchange” efforts consist of partnerships between the producers of research and the users of research; and
- “Integrated efforts” combine the previous three approaches through the use of a “large-scale knowledge-translation platform,” such as an organization that utilizes push and pull, uses priority-setting processes, creates clear goals, and represents knowledge producers, purveyors, and users.

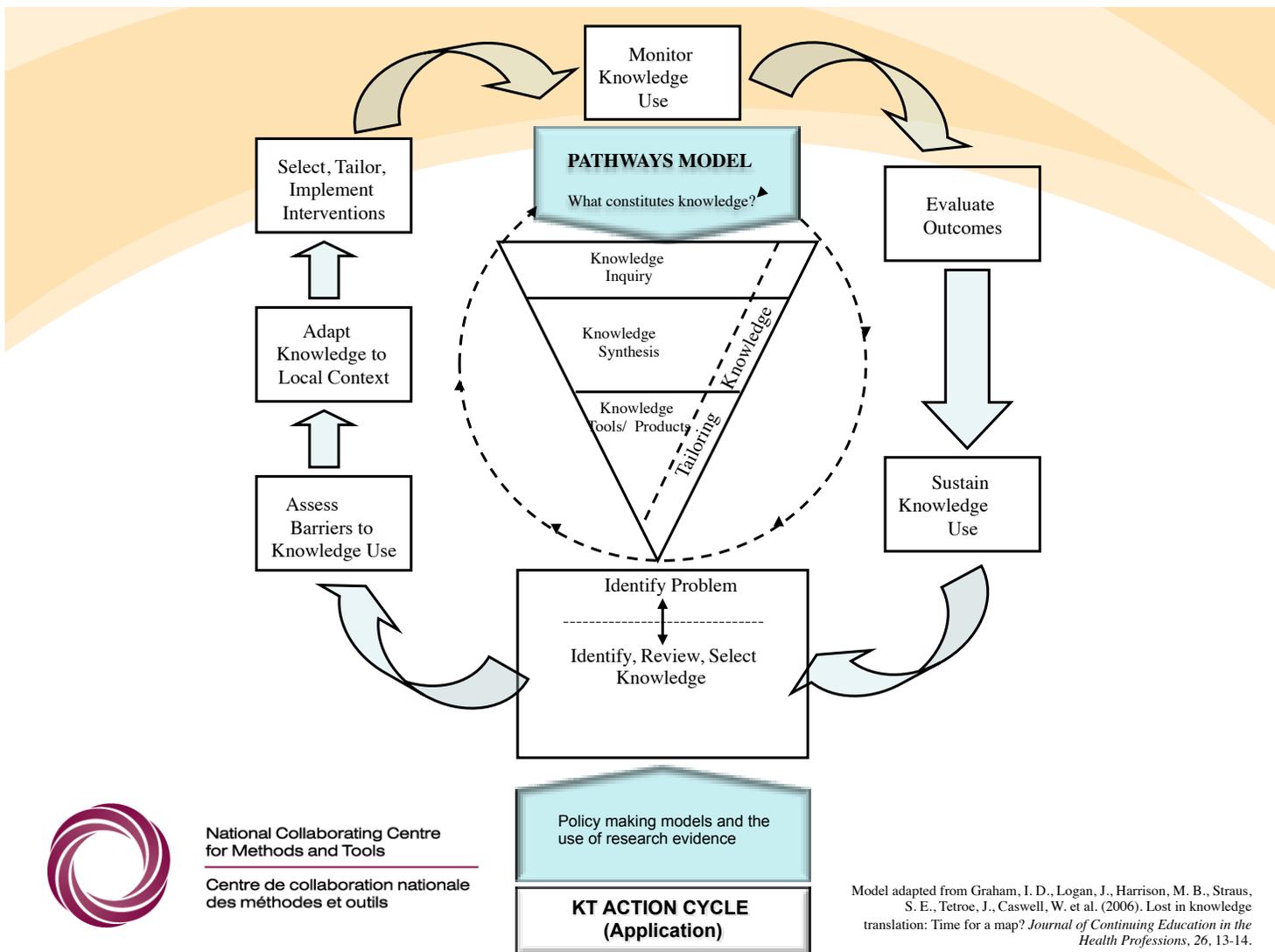
Lavis and his colleagues acknowledge the potential weaknesses of the individual approaches on their own, and state that “there is great value in using all four approaches simultaneously.”

The Knowledge-to-Action Cycle

Interrelated Canadian organizations such as Health-Evidence.ca, the National Collaborating Centre for Methods and Tools in Canada, the Public Health Agency of Canada, the Canadian Health Services Research Foundation, and the Canadian Institutes of Health Research have produced large amounts of research on the science and practice of knowledge translation and dissemination. These organizations frequently rely on the “Knowledge-to-Action Cycle” available at the KT Clearinghouse website funded by the Canadian Institutes of Health Research.

That model, as shown in Figure 2 on the next page, portrays two stages of the knowledge translation process: (1) the process of knowledge inquiry and generation, and (2) the process of taking generated knowledge and disseminating it to target audiences (i.e., the action cycle).

Figure 2: The Knowledge-to-Action Cycle Used in Canada



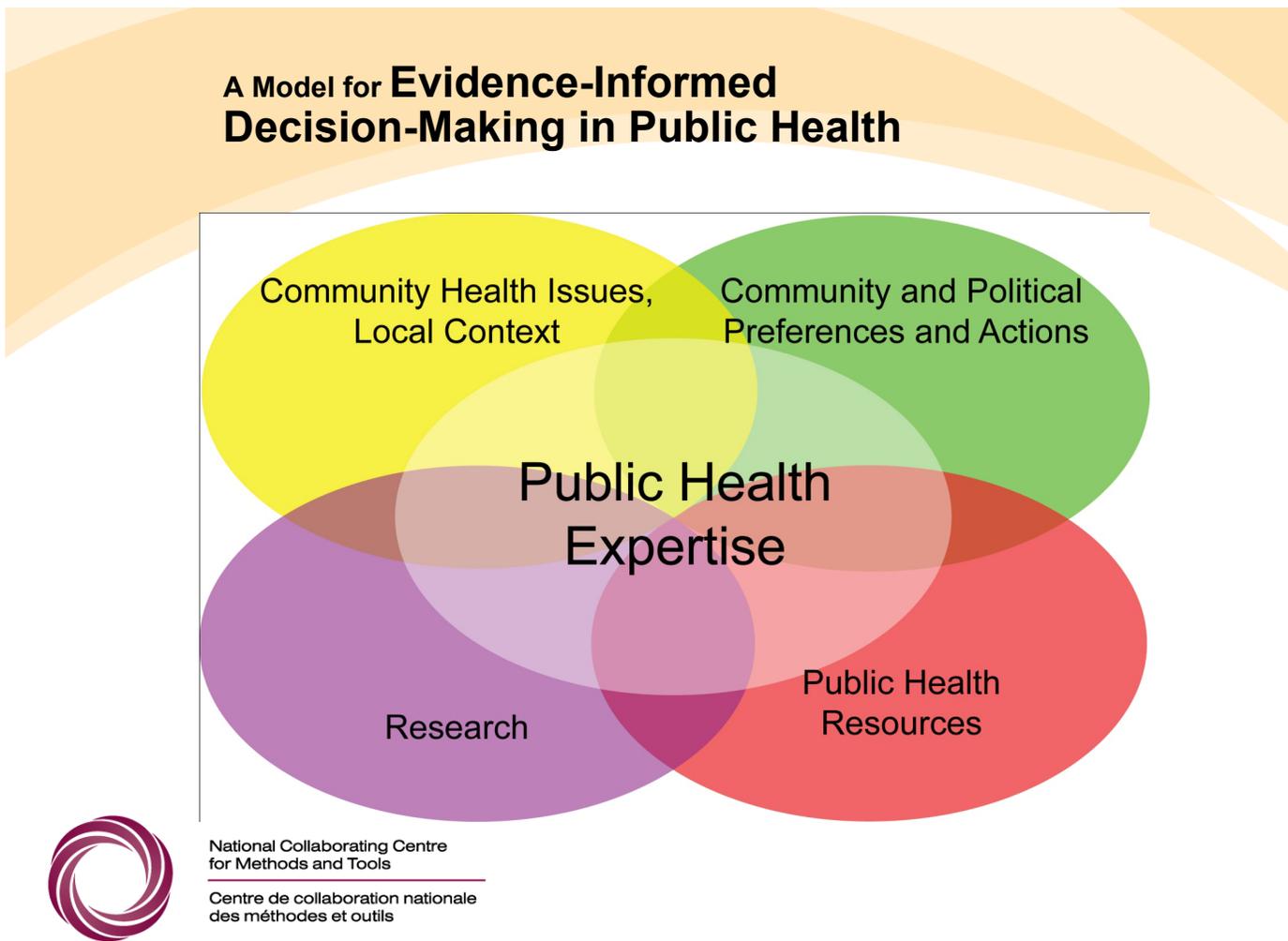
Source: KT Clearinghouse website funded by the Canadian Institutes of Health Research.

Adapting Models for HSR Knowledge Translation and Dissemination to Foster Evidence-Informed Decisionmaking in Public Health

A public health solution that works in New York City may not work in Lincoln, Nebraska, due to any number of differences between the two cities. Maureen Dobbins, scientific director for the **National Collaborating Centre for Methods and Tools in Canada**, emphasizes that anyone seeking to create “evidence-based public health” has to consider the public health system’s complexity and variation. As shown in the model for evidence-informed decisionmaking in public health in Figure 3, public health decisionmakers must draw on the best research that is available and also must utilize and take

into account local context and community health issues; community and political preferences and actions; and public health resources. These factors interact and must be considered in tandem in order to successfully tailor the creation of evidence-based public health at the local level. Dobbins suggests that individuals who want to promote evidence-informed decisionmaking in public health account for subtle differences among communities and follow seven steps: define, search, appraise, synthesize, adapt, implement, and evaluate. She anticipates and welcomes the continued evolution of the evidence-informed public health model she utilizes in her work, viewing it as essential to creating models to describe dynamic processes.

Figure 3: A Model for Evidence-Informed Decisionmaking in Public Health Used in Canada



Source: National Collaborating Centre for Methods and Tools.

Challenges to Implementing Evidence-Based Public Health

In 1999, Brownson et al. defined evidence-based public health (EBPH) as the “development, implementation, and evaluation of effective programs and policies in public health through application of principles of scientific reasoning, including systematic uses of data and information systems, and appropriate use of behavioral science theory and program planning models.”⁴ Among the benefits of EBPH, they said, are a higher likelihood of successful program and policy development; greater workforce productivity; and the more efficient use of resources.

The findings from a Web-based survey and interviews conducted by the National Association of County and City Health Officials (NACCHO) suggest that many health practitioners want to be involved in the creation and use of EBPH.⁵ Among the more than 300 local health department staff leaders in the United States responding to the NACCHO survey, 87 percent indicated that they were

“familiar with the general concepts around evidence-based public health,” and 82 percent planned to use evidence-based interventions in the future. Moreover, 77 percent said that research findings about which interventions work were an important input to their local health department’s strategic planning process. When asked about what resources they use, respondents reported using resources provided by their state health agency (68 percent), peer-reviewed journals (44 percent), and resources provided by another local health department (30 percent).

The Community Guide is a resource created by the Centers for Disease Control and Prevention (CDC) that provides evidence-based recommendations and findings from the Community Preventive Services Task Force about what works to improve public health.⁶ This free resource to improve the practice of EBPH available for public health practitioners covers pressing topics such as diabetes, obesity, and tobacco use. Despite the large interest among the public health practice community to seek information and implement EBPH as

noted above, only 7 percent of respondents to the NACCHO survey said they always or almost always consult this resource. This finding suggests a potential disconnect between public health practitioners' desire to perform EBPH and their actual practice of it.

Baker et al.⁷ surveyed practitioners who had taken an EBPH training course developed, in part, by the Saint Louis University School of Public Health. They found that these practitioners, despite having completed the course, still did not regularly provide EBPH. The practitioners cited restrictions on time, resources, and limits on adequate training as obstacles to using EBPH. One practitioner stated that, although leadership in an organization may stress the importance of EBPH, “the lower you go on the hierarchical scale, it seems they just want to get the work done, and don't have the time to stop and check the research.” Commenting on limited resources the participants stressed “that it is difficult to do what ‘needs to be done’ when there isn't enough money.” Finally, instability in leadership was also identified as disruptive to EBPH efforts.

For policymakers as well, time, limited resources, and changes in the priorities of leadership can act as an impediment to the creation and adoption of EBPH. Glen Mays, editor-in-chief of the new journal *Frontiers in Public Health Services and Systems Research*, reports that “key decision-makers within the public health system simply are not aware of the body of evidence that indicates these [successful intervention] strategies are effective.”⁸ In other cases, Mays says, “decision-makers are familiar with the strategies but lack detailed knowledge about how to implement them in specific settings and circumstances. And in many cases, decision-makers lack the resources, authority, and/or motivation to depart from their status-quo operations and adopt new ways of doing business.”⁸

Such obstacles are difficult to overcome, but the creation by academics generating HSR and PHSSR of new tools and resources for public health practitioners may be helpful. A report from Jacobs et al.⁹ published in the CDC's *Preventing Chronic Disease* highlights many (often free) tools to assist public health practitioners in implementing evidence-based approaches in their work. Jacobs and her colleagues state: “Practitioners need skills, knowledge, support, and time to implement evidence-based policies and programs. Many tools exist to help efficiently incorporate the best available evidence and strategies into their work. Improvements in population health are most likely when these tools are applied in light of local context, evaluated rigorously, and shared with researchers, practitioners, and other stakeholders.”⁹ A useful framework to consider is the *Framework for disseminating evidence-based health promotion practices* from Harris et al.¹⁰

Challenges and Opportunities for Academic Researchers in Moving HSR and PHSSR into Health Policy and Practice

For academic researchers generating HSR and PHSSR to continue creating new tools and resources that will enable public health practitioners to practice EBPH, they themselves must overcome challenges in academic settings. As discussed below, changes in the promotion and tenure structures are rewarding new types of publications in a growing number of schools, and changes in the type, use, and prevalence of electronic publications are making information more widely available for a broad audience to enact EBPH.

Promotion and Tenure Policies at Academic Institutions

The promotion and tenure structures in most academic institutions tend to discourage work that can be most helpful in translating research into policy. In a 2010 study of the role of academic incentives in applied health services research and knowledge transfer based on interviews with 24 junior and senior faculty at 16 universities, Pittman et al., reported that knowledge transfer activities were generally not considered in the promotion and tenure process (10). The investigators stated: “most interviewees indicated that research-related and research-informed activities that are commonly recommended in the knowledge transfer literature—research syntheses, policy briefs, user guides, toolkits, cyber seminars, etc.—are not considered in the promotion and tenure process because they are not peer-reviewed. There was a lesser level of importance given to this type of work, even among faculty that supported recognition of high quality grey literature.”¹¹

Academic researchers—especially junior researchers eager to add to their CVs and gain tenure—are not likely to spend much time on the development of dissemination- and implementation-friendly knowledge translation products if such products are not recognized in academic institutions' promotion and tenure processes. In fact, Pittman et al. reported a general “recognition by senior faculty that they should encourage junior faculty to delay conducting more applied research and knowledge translation until they have secured tenure.”¹¹

The lack of recognition of the development of knowledge translation products at universities is likely to apply to the conduct of applied research, which is especially essential in PHSSR. As noted by Jacobs et al., public health evidence “often derives from cross-sectional studies and quasi-experimental studies, rather than the so-called ‘gold standard’ of randomized controlled trials often used in clinical medicine. Study designs in public health sometimes lack a comparison group, and the interpretation of study results may have to account for multiple caveats.”⁹

A study by the Association of Schools of Public Health (ASPH) identified similar obstacles to the conduct of applied research and development of tools for knowledge dissemination and implementation in schools of public health.¹² In surveying 49 accredited schools and 84 accredited programs encompassing the degrees of M.P.H., M.S.P.H., M.H.A., M.H.S., M.S., Ph.D., Sc.D., and Dr.P.H., this study found that more credit and a faster route on the tenure track is granted for single, traditional, investigator-led, scientific, peer-reviewed research. Donna Petersen, the chair of the ASPH Education Committee and dean of the University of South Florida's College of Medicine, explains that since most academics and professors have received unidisciplinary training, have been trained to "eschew the applied world," and strive to maintain the "purity" of science, they are largely teaching their own students to similarly neglect applied research and dissemination and implementation efforts.¹²

In order to validate and reward translational work, Petersen says, the ASPH Education Committee is recommending increasing the weight given to translational or applied research that involves "multidisciplinary teams of academicians and practitioners and members of the community, is community-based, is evaluative or qualitative and results in a variety of products."¹² The committee is also recommending a greater recognition of collaborative research, where participation in research projects is encouraged and rewarded even if an individual is not the primary author or a co-principal investigator. It remains to be seen whether this recommendation of the **ASPH Education Committee** will be adopted; however, its adoption would certainly break down a long-standing barrier between researchers and users of knowledge from research.

Despite the challenges just described, Petersen suggests there are many new opportunities for public health researchers who are interested in moving knowledge into action. Some schools of public health are now moving toward a system that encourages new types of research and publications in the promotion and tenure process.¹² The University of South Florida's College of Public Health's academic promotion and tenure guidelines, for example, now encourage collaborative, community-engaged, and applied research. The tenure and promotion guidelines are being revised in an effort to emphasize community-based participatory research and collaborative research. Some schools of public health are developing their Dr.P.H. programs to emphasize more applied research and collaboration than traditional Ph.D. programs. According to Petersen, Dr.P.H. degrees are intended to bridge research and practice, with related competencies such as advocacy, communication, critical analysis, and leadership. If more academic institutions make changes to reward research that is collaborative and bent towards translation efforts, this would likely increase the ease with which research can be applied to affect policy and therefore positively affect population health.

Opportunities Afforded by Increased Access with Electronic Publications

The increased levels of communication and availability of information made possible by the Internet offer new means of rapidly disseminating and implementing knowledge yielded by HSR and PHSSR. Some journals are implementing a form of rapid-cycle peer review to improve the research's usefulness. One example of a publication dedicated to quick turnaround and enhanced dissemination is *Frontiers in Public Health Services and Systems Research*, a new journal published by the National Coordinating Center for Public Health Services and Systems Research.

According to *Frontiers* Editor-in-Chief Glen Mays, "the traditional, sequential scientific model of doing research followed by translating and applying research findings is far too slow to be useful" when it comes to public health issues. The journal's goal is to feature peer-reviewed articles that offer "brief descriptions of preliminary findings from an ongoing or recently completed empirical study or quality improvement program." These findings "must have the potential to guide future public health practice, health policy, and research." *Frontiers* aims to employ a rapid-cycle dissemination system that approves and publishes peer-reviewed articles within 8 to 10 weeks of submission. In order to reach a wider audience and attract more attention to the articles published in *Frontiers*, the abstracts from the journal will also be published in a special section of the *American Journal of Preventive Medicine* each month. Perhaps most significantly for its dissemination efforts, *Frontiers* is available online for free.

Blogs can also be used to facilitate the rapid translation and dissemination of knowledge from HSR and PHSSR. Austin Frakt, creator and primary contributor to the blog contemplating health care with a focus on research, *The Incidental Economist*, suggests this in his January 2012 post "Blogging vs. peer review." In the post, Frakt reflects on two of his written products that were released on the same day: a post for the *Journal of the American Medical Association (JAMA)* blog and a peer-reviewed commentary in the *New England Journal of Medicine (NEJM)*.¹³ Frakt's post on *JAMA*'s blog received much more attention in the wider media than his commentary in *NEJM* and intersected much better with current policy conversation. According to Frakt, slow, deliberate peer review of journal articles is important and needs to continue, but the post on *JAMA*'s blog was a clear example of how blogs can disseminate relevant information much more efficiently than articles in peer-reviewed journals. Presenting information on a website that does not require peer-review (or cost money to access) can decrease turnaround times and increase the research's audience.¹³

Elsewhere on his blog *The Incidental Economist*, Frakt emphasizes the importance of using blogs to highlight and bring back into focus those peer-reviewed journal articles that have already been published.¹⁴ If, for instance an article on childhood obesity preven-

tion was published in 2009, and childhood obesity prevention policy gained a spotlight in a state legislature debate in 2012, a non-peer-reviewed article such as a blog post could pull that article back into the spotlight and inform the policy debate. In an interview with Frakt, published on the AcademyHealth blog, Frakt explains “a good quote or chart from the right paper at the right time can give that study, its authors, affiliated institutions, and funders visibility that they would otherwise not receive. Moreover, it can influence the debate and, one hopes, achieve better policy outcomes. Isn’t that the purpose of our work?”

In recognition of the opportunity presented by electronic publications that enable a quicker turnaround, a number of journals are beginning to offer blogs that, although not externally peer-reviewed themselves, link to peer-reviewed information and pull those resources into timely discussions. One particularly strong example is the *Health Affairs* blog. Other resources such as *Milbank Quarterly*, *Journal of the American Medical Association* and the *American Journal of Public Health* frequently offer free access to peer-reviewed articles online. *Milbank Quarterly* also offers a newsletter to notify subscribers via email when new content is available.

Conclusion

The HSR community has a strong track record of producing rigorous, policy relevant research. As the health care system transforms and addresses population health more broadly, an opportunity exists for PHSSR. By applying what we know from translation theory to new challenges for improving population health, we can overcome barriers to dissemination and translation, and support evidence-based decisionmaking, and practice, in public health.

About the Authors

Bryan Kelley, research assistant, and Kate Papa, director, staff AcademyHealth’s public health program.

About AcademyHealth

AcademyHealth is a leading national organization serving the fields of health services and policy research and the professionals who produce and use this important work. Together with our members, we offer programs and services that support the development and use of rigorous, relevant and timely evidence to increase the quality, accessibility, and value of health care, to reduce disparities, and to improve health. A trusted broker of information, AcademyHealth brings stakeholders together to address the current and future needs

of an evolving health system, inform health policy, and translate evidence into action. For additional publications and resources, visit www.academyhealth.org.

Endnotes

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