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Accelerating the Production and Application of Evidence for Public Health System Improvement: the Search for New Frontiers

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Accelerating the Production and Application of Evidence for Public Health System Improvement: the Search for New Frontiers

Abstract

The new journal *Frontiers in Public Health Services and Systems Research* provides a platform for rapidly and widely communicating emerging findings and lessons learned from studies of public health services and delivery systems.

Keywords

public health research, evidence dissemination, innovation diffusion, public health services, public health systems

Cover Page Footnote

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Frontiers in Public Health Services and Systems Research*

The need for a strong and effective public health system in the United States is perhaps more urgent today than at any other time in our nation's history. Preventable diseases and injuries account for more than three-fourths of the $2.6 trillion in health care expenditures incurred annually in the U.S.[1] The growing prevalence of obesity, diabetes and other preventable conditions constrains the nation's economic productivity and global competitiveness, and leads the American population to fall farther and farther behind other developed nations in their duration and quality of life. The American public health system –the diffuse constellation of governmental public health agencies and their peers and partners in community-based settings and the private sector – is tasked with developing and delivering strategies that promote health and prevent disease and injury on a population-wide basis. They share the mission of creating conditions in which people can be healthy. This system is uniquely positioned –but not optimally equipped – to mobilize and deploy strategies that can help to "bend the cost curve" that threatens the financial sustainability of our health care system by bending the health risk and disease prevalence curves within U.S. communities.[2] It also can, at the same time, accomplish a second task in the triple aim, improving population health.

The public health system of today is not configured nor resourced optimally to take on these roles and challenges. Only about 3 percent of the nation's $2.6 trillion in annual health expenditures is devoted to public health activities.[3,4] Organizationally and operationally, many public health agencies reflect the communicable disease control challenges of the last century more than the chronic disease prevention imperatives of today. The nation's prevention research enterprise is generating an expanding armamentarium of programs, policies, and interventions that have proven effective in preventing disease and injury in selected populations and community settings. Some of our greatest uncertainties now lie in how best to organize, finance, and deliver these strategies to populations that can benefit from them across the U.S. The field of public health services and systems research (PHSSR) has emerged to fill this void and develop the "science of delivery" in public health, producing evidence on how to re-engineer the public health system, its capacity, organization, finance and administration to address contemporary disease prevention and health protection needs.[6]

A New Vehicle for Rapid-Cycle Evidence

The American public health system and the populations it serves do not have the luxury of waiting the fifteen years typically required to get research-tested solutions widely adopted into practice. The costs associated with missed opportunities for disease prevention and health promotion are straining government and household budgets now. Without rapid and informed action, the current generation of children and young adults in the U.S. may become the first to experience shorter life spans than their parents.[6] Moreover, the solutions to the nation's public

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health delivery problems will not be one-size-fits-all. The strategies that work best to prevent obesity in one community may not work well in another setting due to differences in the socioeconomic, political, cultural, institutional, and physical environment and differences in the population groups most at risk. In this context, the traditional, sequential scientific model of doing research followed by translating and applying research findings is far too slow to be useful. Rather, public health system improvement requires many parallel studies examining innovations in public health delivery in different settings, constantly accumulating and comparing results across studies, feeding back findings and insights to decision-makers within the public health system, and updating their research portfolios with new studies that target newly emerging questions and information needs of these decision-makers. The public health system requires a complex and adaptive scientific learning community embedded within real-world public health practice settings.

To help develop and grow this scientific learning community, we have launched a new, open-access, peer-reviewed journal ***Frontiers in Public Health Services and Systems Research***. This journal provides a platform for rapidly and widely communicating emerging findings and lessons learned from studies of public health services and delivery systems. It seeks in ways that are difficult to accomplish with traditional scholarly journals and other publication platforms, to move research to practice and policy. *Frontiers* will feature brief descriptions of preliminary findings from ongoing or recently completed empirical studies and quality improvement projects that answer important questions regarding the organization, financing, and delivery of public health services; the structure, operation, and management of public health delivery systems; the application of quality improvement methods in public health settings; and the impact of these endeavors on population health. The findings profiled in this journal will have the potential to guide future public health practice, health policy, and research.

Five overarching principles guide the design and development of this new vehicle:

- ***Innovation***: The journal seeks to share early findings and preliminary results from new and ongoing studies in PHSSR, offering a view from the leading edge of the scientific process – often before the final analysis and reporting is complete.
- ***Timeliness***: The goal is to dramatically reduce the cycle time typically required to publish scientific findings in traditional peer-reviewed journals. Whereas traditional journals often require a lag time of 12-18 months or more between initial manuscript submission and publication, Frontiers operates with a target cycle time of 10 weeks.
- ***Quality***: Frontiers seeks to engage the national and international PHSSR community in a strong peer review process to ensure that contributions are scientifically sound, reliable, and credible, and to provide opportunities for continuous improvement in the quality of the scholarship submitted for publication in the journal.
- ***Multi-disciplinary:*** Because actionable knowledge and evidence can be acquired through a variety of scientific paradigms and approaches, Frontiers aims to become a home for

research using many different theoretical and methodological approaches. In particular, we recognize that the application of quality improvement (QI) methods and tools within the public health system creates compelling opportunities for scientific learning, and therefore encourage manuscripts on the "science of improvement" that describe findings obtained from QI projects implemented in public health settings.

- ***Accessibility***: Frontiers uses a low-cost, open-access, web-based publication platform that eliminates the "pay barrier" that prevents access to the peer-reviewed literature for users who lack costly subscriptions and ready access to an academic library. The pay barrier is particularly challenging for public health professionals working in resource-constrained public health practice settings. Neither authors nor readers incur a fee in using Frontiers.
- ***Brevity***: Manuscripts featured in Frontiers are designed to be parsimonious and succinct, communicating key findings and their implications for the public health system while saving an in-depth discussion of a study's rationale, methods and results for a traditional scientific publication. We believe that this will allow the busy practitioner or policy maker the opportunity to use these findings without the difficulty of wading through the traditional scholarly journal.
- ***Utility***: Research findings featured in Frontiers are meant to offer clear implications for the practice of public health, policy decision-making, and the design and conduct of future studies in PHSSR. Each manuscript is accompanied by an independently developed editorial comment that seeks to highlight the ways in which findings can be used to inform practice, policy, and scientific inquiry.

To enhance dissemination, Frontiers is designed to work in tandem with traditional peer-reviewed public health journals. Brief summaries of articles published in Frontiers will appear in a special section of the *American Journal of Preventive Medicine* each month in print and electronic editions. Additionally, selected authors of Frontiers articles will be invited to submit full scientific articles for later publication in the *American Journal of Preventive Medicine*. Frontiers is designed not to replace or preclude the publication of a traditional research manuscript in a traditional peer-reviewed journal, but rather to disseminate the most critical early findings from research much faster – making these findings accessible far in advance of the fully-developed scientific manuscript.

In This Issue

This first issue of Frontiers features findings from three new studies that exemplify the promise and potential of the PHSSR field in helping us understand and address undesirable variation in public health delivery. First, Bekemeier and colleagues demonstrate the use of a new data resource – the Public Health Activities and Services Tracking Study, compiled through practice-based research networks (PBRNs) in several different states—to profile patterns of variation in the delivery of maternal and child nutrition assistance services (WIC) across local health

departments. In a second study, Hays and colleagues present an approach for categorizing and classifying the governance structures of local health departments, demonstrating that significant differences in community health status exist across the identified governance classifications. The final article in this issue by Merrill and colleagues uses the methods of network analysis to examine the relationships and patterns of interaction among the leaders of local health departments across the U.S.

Frontiers represents one of the PHSSR field's first forays into the "open science" movement – the effort to make scientific inquiry more transparent, interactive, collaborative, accessible, and usable in the real world.[7] As such, its success hinges on the active participation of both the producers and users of PHSSR. We invite you to engage in this bold new experiment by submitting and reviewing manuscripts, submitting commentaries and editorials, corresponding with authors, sharing findings with your colleagues, and providing the editorial board with your feedback on the journal's successes and opportunities for improvement. Only through these types of engagement can we build a scientific learning community, embedded within the public health system, to move America to improved population health and bend the cost curve.

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