

Public Health Services and Systems Research

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Recently the *American Journal of Preventive Medicine* published a commentary on the emerging field of public health systems research (PHSR).¹ PHSR has been defined as “a field of study that examines the organization, financing, and delivery of public health services within communities, and the impact of these services on public health.”² This is a new and emerging area of inquiry in both the health services research and public health research communities. Many consider it a new sibling to the larger field of health services research (HSR), which is also relatively new, but has grown rapidly over the past several decades.

Despite its name, HSR has focused primarily on issues of medical care delivery and financing rather than corresponding issues in public health. This focus is not surprising given that medical care consumes progressively larger proportions of total United States annual production. Research that can improve the affordability, accessibility, and effectiveness of medical care is likely to be high on any policymaker’s priority list. Indeed, issues of health insurance reform and quality measurement and improvement are now returning to the forefront of policy discussions, leading to calls for even more research effort to determine what works and what does not in the medical care system. Public health services, by contrast, consume a minor portion of the nation’s healthcare dollar, and have never been a major part of the HSR research agenda nor of most elected officials’ policy agendas.

A robust public health research enterprise does exist, but it focuses primarily on understanding the etiology and epidemiology of specific diseases and health risks in the population, and on finding places in the causal chain for interventions. There has been little research effort that focuses on the direct delivery of public health services or the public health system’s work to “ensure conditions in which people can be healthy.” There is nothing pejorative in the notion of disease specific epidemiology and prevention research; in fact, such research has the potential to transcend a specific disease or health risk to inform broader research questions about public health services and systems. But the failure to establish an active field of research like HSR in public health means that there is no place for generalizable lessons from services and systems-level research to get extracted and applied widely.

A pivotal event in the history of public health was the release of the 1988 Institute of Medicine report, *The Future of Public Health*.³ This was followed in 1994 by the creation of the list of 10 essential public health services.⁴ With that as a backdrop, there was brief renewed emphasis on how best to provide these core public health services. The Centers for Disease Control and Prevention (CDC) created a small, under-resourced and now defunct Public Health Practice Program Office (PHPPPO) to monitor and encourage efforts to improve delivery of public health services and cut across disease-specific

categorical funding. Another milestone in this development was the inclusion of chapter 23 in *Healthy People 2010*.⁵ This is the chapter that lists objectives to be achieved in the development of public health infrastructure, rather than focusing on a specific health program or problem.

There were other major developments in public health during the 1990s that chronicle the development of a contemporary public health services renaissance. The National Association of County and City Officials and the National Association of Local Boards of Health were part of this development, as was the creation of leadership institutes for state and local health officials.⁶

The terrorist attacks on New York followed by the anthrax episode also lent new emphasis to the importance of public health including new resources. However, a major issue with the budgeting of those new funds was how to invest them to create the best payoff. Research did not exist that linked funding and improved performance even for conditions or problems unrelated to preparedness. Now, years later, there are still no accepted standards for how to measure the progress in preparation and planning for human-created or natural disaster. This has added additional fuel to the fire for creating the PHSR discipline.

The 1990s also saw the emergence, in a couple of public health curriculums, of research designed to look broadly at those organization and management factors that could improve the public health infrastructure and the delivery of core public health services.⁷⁻⁹ In a similar vein, the creation of the National Public Health Performance Standards Program by PHPPPO and several public health practice partners provided a new public health tool to measure the public health system's capacity to deliver the 10 essential public health services.¹⁰ Exploratory research has focused on the use of that tool to determine the relationship of resources expended on public health infrastructure, the ability to provide high-performance programs, and impact on the health status of communities. The core concept was that resource expenditure should measurably link agency capacity to health outcomes.¹¹

Over the last several years, initial investments in PHSR made by the CDC have diminished, although more recently, responsibility for this activity has moved to the new CDC Office for Public Health Practice. One hopes that recent promising efforts by that office to fund research on public health performance standards and accreditation of health departments signal CDC's intent to return to the important public health systems research questions.

Recently, PHSR has begun to prosper as the result of interest from the Robert Wood Johnson Foundation. To illustrate, the Foundation is now supporting the PHSR interest group, AcademyHealth, the organizational home for health services researchers that had been initiated by CDC. Other Foundation initiatives include: (1) funding several rounds of PHSR research through the Changes in Health Care Financing and Organization, an Academy-Health organization; (2) helping the National Library of Medicine to assist

PHSR researchers by making databases with important public health system information available for analysis through the Health Services Research Resources portion of the Library website; and (3) supporting the newly developing area of public health finance and research targeted at defining the nature of local public health department structure. This growing support from the Foundation reflects increasing concern over the fragility of the public health infrastructure and the recognition that without a strong science base to assess the best structural and system characteristics, any recommendations made to help service improvements remain merely opinions with limited substance behind them.

Although PHSR is beginning to be established in the lexicon, there are several reasons to recast the name and nature of this emerging discipline. Perhaps we should be using “public health services and systems research” (PHSSR).

First, it demonstrates clearly that PHSSR is a sibling, not a distant relation, to the existing field of health services research, a well-established and, as we suggested, growing discipline. The new name provides an invitation to those who have been laboring in the fields of disease-based research and research into systems that relate to caring for ill people, to move to the discipline that emphasizes population health and provision of health services more broadly defined. With this move they will hopefully bring the tools that they used for medical care research to this new area of inquiry. Further, this field may help bring clinical care and public health closer together, a link that many have called for in the past.¹²

The delivery of services in public health implies the provision of a good or service to a population. It logically follows that the concept of quality in public health practice can be studied, just as HSR became the basis for the quality improvement movement in medical care. Clearly, public health is about the provision of public health services, but at present the public struggles to understand what those services are and to what extent they are getting high-quality service for the investment. Thus, one of the most important potential benefits of renaming this field to PHSSR is the ability to engage those who have promoted quality improvement and error prevention in the medical care system, and stimulate a parallel movement in the public health arena to improve quality and safety. Quality improvement has become a watchword in the medical care sector, as evidenced most recently by the Institute for Healthcare Improvement’s successful campaign to save 100,000 lives by implementing a small number of proven patient care processes in hospitals across the country.¹³ Perhaps a parallel campaign to implement a set of evidence-based, high-quality practices in public health settings could result in saving 1,000,000 lives, given the multiplier effect of public health and its focus on populations.

We also believe that there is a valuable, existing body of research on categorical disease prevention and health promotion interventions that is currently not well utilized by the public health practice community, despite dissemination tools like the *Community Guide* and other public health practice guidelines. The field of PHSSR can play a leading role in further developing this intervention research to obtain generalizable lessons about delivery that might otherwise be lost to the public health system change effort. PHSSR

can reveal the organizational structures, financing systems, workforce characteristics, and delivery mechanisms necessary to implement interventions effectively in various practice settings. In doing so, PHSSR might provide insight into the “carrying capacity” of public health systems to implement and maintain evidence-based interventions, in particular as they grapple with how to balance intervention opportunities for specific categorical diseases and risks like cancer, diabetes, and heart disease.

PHSSR will require nourishing if it is to achieve its potential. Important steps to promote development of the field include establishing centers of excellence in PHSSR where research methodologies can be developed, applied, and disseminated broadly, and developing the pipeline of new investigators through pre- and post-doctoral fellowships and early career awards. Moreover, the field cannot and will not prosper without adequate and stable research funding for both investigator-initiated and targeted research in PHSSR. Especially important is support for translational research that bridges the historical gaps between public health science and practice, thereby ensuring that new findings are practical enough to be rapidly translated into action by public health departments.

The continued development of this area is imperative if we are to have any possibility of success in rebuilding and modernizing our public health infrastructure and improving our nation’s health. It is difficult to change major disease indicators one person at a time. It is much more parsimonious to attack these problems on a population basis, where even modest changes can lead to major changes in the incidence of disease. The knowledge of how we build and design systems to provide population based services efficiently and effectively is key to that effort. Research that answers questions focused on those efforts is vital to the nation’s health. No financial conflict of interest was reported by the authors of this paper.

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