Commentary: Partnership for the Future of Public Health Services and Systems Research

Debra Joy Pérez and Michelle Ann Larkin

For the Robert Wood Johnson Foundation, this edition of *HSR* is the end of the beginning for Public Health Services and Systems Research (PHSSR). *HSR* is the premier health services research journal in the nation, and to have top quality research on PHSSR published in this prestigious journal demonstrates that PHSSR is a bona fide research field that stands ready to answer important research and practice questions. In the pages that follow, the reader will discover that good scholarship can be brought to bear on how best to organize, manage, finance, and administer public health systems and services.

We recognize that publication of excellent research by those who have benefited from our investment in PHSSR is an achievement; however, this is only one step in the important process of improving people's health. The next step is translating this research into action. Good research that does not lead to action dictated by evidence is sterile and serves neither research nor practice. PHSSR must follow the same pattern as health services research, or for that matter, bench research supported by the National Institutes of Health—the translation of science into practice.

We must begin to develop the dialogue between research and practice that allows research to focus on problems that have real significance for our efforts to improve population health; problems that good practitioners wrestle with on a daily basis. However, by that same notion we must encourage practice leaders to depend on research to make decisions about how best to deliver the services and improve the systems that provide optimal benefit to our communities. This is the challenge remaining. We have made some efforts, with the creation of public health practice-based research networks, but we must find the best possible mechanisms for ensuring the practice–research dialogue. This important work of evidence-driven public health practice is coming of age, but we must remain committed to the processes that have

brought us to this milestone publication and vigilant in our efforts to use science to inform the practice of public health.

At this historic time, a window of opportunity exists to make a difference in health reform. Major challenges confronting the current health system, challenges that include 46 million Americans without health coverage and health premiums that have doubled over the past 9 years at a rate that outstrips inflation by 300 percent.

America is spending twice as much on health care as any other nation. And yet key health measures—infant mortality, life expectancy, diabetes, obesity—are actually *worsening*. In infant mortality we now rank 25th—below Korea and the Czech Republic. Some think the next generation could be the first in American history whose health will be worse than the health of their parents (Organization for Economic Cooperation and Development 2007). It is a time, in other words, when public health is urgently needed. Now, more than ever, we have the chance to make our case for the old adage that an ounce of prevention is worth a pound of cure. The question is, Are we ready to make that case? What evidence do we have about how factors like public health finance, governance, infrastructure, and organization impact the return on investments in our nation's health? Is regionalization of public health services the way to go? How might comparative effectiveness play out in prevention and public health? How can we best combine the vigor and creativity of the private sector with the rigor and expertise of research and governmental public health, and the energy and persistence of community advocates?

Part of the solution to these health system challenges may lie in our ability to advance a new approach to public health. During the last century public health has had major achievements: fluoridation of drinking water, decreasing automobile deaths, the triumph of immunization against childhood diseases. What does the next century hold? Will there be a new list of substantial accomplishments of public health rivaling those we have seen in the past 100 years? Much depends on the ability to deliver public health and preventive services, the role of our nation's health departments and their partners in addressing new diseases and hopefully having the breakthrough that we had during the last century. To build upon the venerable tradition and storied list of public health accomplishments, we need to continue to develop and support the development of a *new* paradigm. In a recent address to public health officials, the president of the Robert Wood Johnson Foundation (RWJF), Dr. Risa Lavizzo-Mourey, said, "Together we are creating a new field of public health study, practice, and innovation. It is literally a new public

health, firmly set on a fresh foundation of accreditation, quality improvement, accountability, advocacy, and a relentless reliance on research and evidence.”

To help create the new public health, we at RWJF have been approaching public health in a multifaceted way, which includes improving services—the Public Health Accreditation Board and a national public health quality improvement initiative are two examples. We also seek to identify the best approaches to delivering preventive services using the research on local health departments to make program decisions. A classic example is the pioneering work of Dr. Nicole Lurie to define local public health’s ability to respond to a public health emergency (Lurie et al. 2004).

Researchers at the University of Arkansas are examining the relationship between community spending on public health and mortality rates among infants and deaths due to cardiovascular disease, cancer, and diabetes. These are the important questions that will help build the evidence for development and support for public health services, systems, and policies. We need to determine if what is done in public health actually improves the public’s health. Our approach also includes ensuring that practitioners are present at the research table and that researchers are present at the practice table, a model that we are confident works. Los Angeles County is a good illustration of how one county health department links research to practice. Jonathan Fielding, the director of the Los Angeles County Health Department, probably one of the largest in the nation, has created a position within his health department for an associate director of science and filled it with a senior public health effectiveness researcher.

PHSSR, though relatively new as a field of inquiry, is ready to provide some answers to the questions we face and to help us build this new public health paradigm. Using PHSSR, we are building the evidence for public health practice and policy by blending epidemiology, economics, law, and the social sciences to respond to complex problems, demonstrate the impact of our public health policy recommendations, and quantify returns on investments in public health.

Our present health care environment is in dire need of change. At \$2.4 trillion a year, health care is our nation’s largest industry, with expenditures larger than defense. Health care costs comprise 17 percent of our national economy with an anticipated devastating impact on the nation’s financial security in the years ahead. While 17 percent is a big number, by 2025—a mere 16 years away—the Congressional Budget Office warns that health care spending is expected to comprise 25 percent of America’s gross domestic product unless we curb the trend (Kaiser Family Foundation 2008).

Retooling how health care dollars are allocated will not be limited to clinical practice. It will require a sustained commitment to evidence-based research that identifies best practices, highlights inequities and waste, and conclusively demonstrates the value and impact of wellness and prevention strategies.

The Obama administration stimulus package includes \$1 billion for public health research and programs and prominently includes prevention programs at the community level. This is an affirmation of our profession's critical role. But the sword of public funding cuts both ways. We have to be realistic about this increase in funding while budgets at the state and local level continue to hemorrhage public health jobs and dollars as a result of the economic downturn.

Previous models of providing and paying for medical care are unsustainable. The costs model of medical reimbursement has rewarded doctors and hospitals for maximizing the number of procedures. It has been a system, in other words, that feeds on, and in some respects, *rewards* sickness. To illustrate this point, 95 cents of every health care dollar still goes to treating illness while 2 cents of that health care dollar supports wellness and prevention (Catlin et al. 2007).

Chronic conditions that result from smoking, obesity, and other health threats comprise a huge percentage of our health care spending, pushing wellness and prevention to the back seat. But now may be public health's moment in the spotlight, as Washington and state capitals explore new practices and policies that reward the *quality* of performance over the *volume* of performance. As interest from policy makers mounts, the public health system must ask: How do we move toward a system that supports health where we live, where we learn, where we work, and where we play, and that makes it easier for everyone to make healthier choices?

Answers to this important question are in the gathering of evidence. Without measurement we cannot make policy recommendations that are truly persuasive. Evidence is our weapon. We need to demonstrate accountability and return on public health investments. A recent study noted that a sedentary 50-year-old man who smokes and is overweight has a 58 percent chance of developing diabetes or cardiovascular disease by the time he is 65. Eliminate the cigarettes and convince him to slim down and get a little exercise—and the chances of onset for those conditions drops to 13 percent—a whopping 75 percent decline (Olshansky et al. 2005). Finding out how to organize and manage programs that promote those changes, in an efficient and effective manner, is a central concern of PHSSR.

And that's exactly why RWJF made its first investment in PHSSR in 2005 with a small number of ad hoc projects and a \$70,000 grant to strengthen the emerging field of PHSSR. AcademyHealth led the charge to build capacity for PHSSR and increase its visibility within the broader Health Systems Research community. We have since funded over 30 public health projects on infrastructure, finance, quality improvement, data identification, data collection, and the convening of practitioners and researchers.

Our next major investment, after supporting AcademyHealth's efforts, was to increase the availability and use of PHSSR-related datasets available at National Library of Medicine. This project was led by the University of Kentucky and was responsible for enumerating data opportunities for research and providing the groundwork for subsequent investments, including multi-year support for three national surveys of PH infrastructure and data harmonization.

In response to the lack of data, the foundation invested in major public health practice organizations, National Association of County and City Health Officials, National Association of Local Boards of Health, and Association of State and Territorial Health Officials, to collect high-quality reliable data. We went from no funding in data collection and related harmonization efforts to authorizing \$9.15 million to these efforts.

This was not an easy task. First, we had to build research capability within each organization; and then we had to harmonize their data collection and reporting of the data, to ensure that they were consistent from one organization's survey to another's and that comparable definitions and questions were asked by both the state public health survey and the local health survey. We discussed and negotiated a groundbreaking memorandum of understanding that led to an agreement to collaborate and integrate data among these practice organizations. Because of this investment, by the end of 2010, for the first time in history we will have the ability to compare public health capacity and infrastructure in each public health jurisdiction across our country and how these factors are associated with community health outcomes.

Another important investment in PHSSR is the development of a public health practice-based research network (PBRN). This PBRN, led by Glen Mays at University of Arkansas, was established to expand the volume and quality of research in PHSSR.

In the *Journal of Family Practice*, Lawrence Green laments the ways in which research is increasingly irrelevant to the circumstances of practice and how the vetting process for research, including the peer-reviewed journal, contributes to the 17-year gap between research and practice. He suggests that

one way to reduce irrelevant research is by increasing participation in PBRNs and supporting quality improvement efforts. "By bringing the research closer to the actual circumstances of practice . . . the research results are made more meaningful to the circumstances of practice with immediate feedback from the practitioners themselves." Green continues, "if we want more evidence based practice, we need more practice-based evidence" (Green 2008). This is what Glen Mays and the PBRN Advisory Committee, led by Jeffrey Harris, are doing in Boston, Seattle, Colorado, North Carolina, and Kentucky. Together, these PBRNs represent a national collaborative of over 120 organizations, including state and local health departments, schools of public health, and national prevention research centers.

Since January 2005, the Robert Wood Johnson Foundation has funded \$34.9 million in PHSSR efforts. We have funded research projects, data resources, researcher training, social network development, the convening of experts, the production of whitepapers and syntheses, and the establishment of research agendas. The research funded by RWJF focuses on the PHSSR Research Agenda developed by the CDC and the Council on Linkages priority research themes, such as determining how public health agencies affect performance, defining and quantifying dimensions of public health systems, and exploring the relationships between performance and health outcomes.

We cannot continue to fill research gaps without first synthesizing our efforts. We need a coordinating body and center to support the growth of the field. But more than anything, the field of PHSSR needs federal funding. It needs Centers for Medicare & Medicaid Services, Veterans Health Administration, Agency for Healthcare Research and Quality, National Institutes of Health, Health Resources and Services Administration, and the Centers for Disease Control to invest their fair share in public health services and systems research so that we can answer critical questions that relate to how we can improve the health of Americans.

Like any organization, RWJF is being held accountable by our Board of Trustees and we need to produce. By 2015, we must demonstrate that \$34.9 million has impacted our community health outcomes, not in the number of articles published or meetings and conferences held but in the accomplishment of our concrete health status changes. We need measurement. In 6 short years, we must be able to show that our work has resulted in more, not less, collaboration; more, not less, private sector investment; and more, not reduced, federal funding.

By 2015, can we show that adequate training of the public health workforce resulted in reduced STDs, fewer low birth weight babies, improved

chronic disease management, or reduced disparities? Will we be able to show through PBRN that we increased vaccination rates of elderly and children or that obesity prevention programs have a greater impact than hospital or clinic-led interventions?

This is a historic moment where we in public health have the opportunity to demonstrate our value and definitively show that investing in public health prevention and systems research can have huge returns. Scutchfield and Keck said it best in the final chapter of their book *Principles of Public Health Practice*:

This is an extraordinary time and change is in the air. It is a time when no one is clearly in charge of the public health world. Consequently, there are remarkable opportunities for entrepreneurial efforts to reshape the public health system. It is a time for public health leaders to take responsibility for shaping the profession's collective destiny. If that leadership can be exerted so that the public system can break out of old molds that are no longer functional, there is every reason to believe that public health workers will provide a valuable service to their communities and that it will be recognized as such. The most important element of that recognition, of course, will be steady, measurable gains in community health status. (Scutchfield and Keck 2008)

The special issue is an example of our commitment to the important field of public health services and systems research and the promising future of practice-based research. We will be looking critically forward for evidence on impact of the research presented here. That is why we see this as the end of the beginning.

REFERENCES

- Catlin, A., C. Cowan, S. Heffler, and B. Washington. 2007. "National Health Spending in 2005: The Slowdown Continues." *Health Affairs (Millwood)* 26 (1): 142–53.
- Green, L. W. 2008. "Making Research Relevant: If It Is an Evidence-Based Practice, Where's the Practice-Based Evidence?" *Journal of Family Practice* 25: i20–4.
- Kaiser Family Foundation. 2008. *Health Care and the 2008 Elections*. Menlo Park, CA: The Henry J. Kaiser Family Foundation.
- Lurie, N., J. Wasserman, M. Stoto, S. Myers, P. Namkung, J. Fielding, and R. B. Valdez. 2004. "Local Variations in Public Health Preparedness: Lessons from California." *Health Affairs (Supplement Web Exclusives)* (23): 341–53.
- Olshansky, S. J., D. J. Passaro, R. C. Hershow, J. Layden, B. A. Carnes, J. Brody, L. Hayflick, R. N. Butler, D. B. Allison, and D. S. Ludwig. 2005. "A Potential Decline in Life Expectancy in the United States in the 21st Century." *New England Journal of Medicine* 352 (11): 1138–45.

- Organization for Economic Cooperation and Development. 2007. *OECD Health Data 2007*. Paris: Organization for Economic Cooperation and Development.
- Scutchfield, F. D., and C. W. Keck. 2008. *Principles of Public Health Practice*. 3d Edition. Clifton Park, NY: Delmar.