Formative Assessment of PHSSR

Harry P. Hatry
Randall R. Bovbjerg
Elaine Morley
Rachel Brash
Reed Jordan

July 2013

This report was prepared by its Urban Institute authors for The Robert Wood Johnson Foundation under Grant No. 69934 after being designed under Grant No. 11261. The support of RWJF is gratefully acknowledged. The authors also thank the Association of State & Territorial Health Officials (ASTHO) and the National Association of County and City Health Organizations (NACCHO). Their cooperation and assistance enabled us to survey their membership.

THE URBAN INSTITUTE 2100 M STREET, N.W. WASHINGTON D.C. 20037

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Summary

This multifaceted assessment of the Robert Wood Johnson Foundation's support for Public Health Systems and Services Research (PHSSR) finds that after a decade, this emerging field has reached the end of the beginning. Many new undertakings fail, and this progress is noteworthy. Field building has also been rapid, as compared with its older sibling Health Services Research (HSR). This project's surveys, interviews, and analysis have found the following as a sample of achievements:

- PHSSR is now "on the map," certainly among researchers, increasingly also among thought leaders, as on IOM panels, and to some extent among federal policy makers.
- Public health agency data are being improved and regularly surveyed by national associations.
- A consensus PHSSR research agenda has been created.
- The field's professional Interest Group is now AcademyHealth's largest.
- *Frontiers* has been created as a quick turnaround journal, accessible yet scholarly.
- Public Health Practice-Based Research Networks (PBRNs) have begun to bring together practitioners and researchers and thus have great potential for producing actionable work. Their participants were enthusiastic and a majority of the network partners we surveyed felt that public health research in their state had become more useful to public health officials because of the work of their network. Leaders in PHSSR have reached out to new funders.
- PHSSR structures and responsibilities are being streamlined.

However, substantial shortcomings and challenges have also been observed and could limit continued progress. For example:

- It remains challenging to describe PHSSR to non-initiates, much less to promote its work.
- Research remains heavily descriptive, short on actionable findings and on the costs of the public health activities being examined.
- The promulgated PHSSR Agenda seems more of a typology than a prioritized action plan.
- PHSSR products are inaccessible for many in local and state health departments, which are also low on analytic capacity for generating or understanding them.
- Our surveys indicate that articles in *Frontiers* and other PHSSR products are not yet read by practitioners. More clearly relevant projects and products are needed, along with translation of findings for practical decision makers.

- PHSSR studies appear to make only limited use of recognized tools of program analysis and improvement such as program evaluation, cost-effectiven**e**ss analysis, and cost-benefit analysis.
- Field building is far more advanced than funding, which seems to remain highly dependent on RWJF and has an uncertain future, notably as seen by our surveys of researchers and by PBRN participant survey and interviews.
- Translation and dissemination with the potential to help increase the resources available to public health agencies seems a key both for improved public health and to support practice-relevant research, yet seems to gets less attention than promoting peer-publication-worthy research.
- The new data often developed by PHSSR studies tend to be aggregated to a higher level than likely to be useful to individual public health agencies. More specific data are needed at the level of programs and activities believed to be a pathway to good health outcomes.

Key recommendations for improvement include the following:

- Broaden the scope of PHSSR to include more work that is readily actionable by public health practitioners, e.g.:
    - ◇ Promote studies that examine the outcomes and costs of specific promising improvements, e.g., particular interventions in community wellness.
    - ◇ Encourage grantees to examine potentially innovative, or "best," policies and practices, and identify evidence-based practices that other jurisdictions are likely to find adaptable.
- Build on the excellent idea of PBRN networks, less by adding new networks than by assuring that networks can document effects of "best and promising practices" including affordable program costs and ease of implementation.
- Consider expanding the scope of PBRN to take advantage of other academic capabilities to increase networks' value to state and local public health practitioners, such as training and technical assistance opportunities.
- Expand study tools to use program evaluation, cost-effectiveness, and return on investment (ROI) /cost-benefit analysis.
- Build on pervasive interest in QI (Quality Improvement) projects and public health accreditation efforts through systematic, multi-site study of the costs and effects of promising programs and policies (take advantage of "natural experiments/variation").
- Routinely estimate the added costs of any activities examined in research.

- Fund capacity building for agencies' analytic capacity to do public health data-driven management.
- Follow up products to find out about their actual use by intended audiences.
- Prioritize among many topics and activities PHSSR has set for itself.
- Develop the business case for PHSSR's value to public health practices and to agencies facing budgeting battles.

More details are presented in the later sections of this report.

Section 1: Background, Purpose, and Approach

Background

Public Health in the U.S. is in a period of great opportunity and challenge. Policy makers and the public have increasing appreciation for the importance of prevention and public health that found expression, for example, in federal health reform. Yet public health and other non-entitlement public programs also face increasing budgetary pressure, often asked to justify their budgets and assure wise priority setting across activities. Improved understanding of "what works" in public health is thus badly needed. The Robert Wood Johnson Foundation (RWJF) has for a decade sought to expand the evidence base to support more effective provision of public health. One component of this effort has been to fund a succession of projects that over time evolved into a formal portfolio of Public Health Services and Systems Research (PHSSR).

Developments

PHSSR is a new field of research, recognizable as a self-aware field only since about 2000, although with earlier roots (Scutchfield et al. 2009). Its Interest Group at AcademyHealth was formed in 2002 with initial funding from the federal Centers for Disease Control and Prevention (CDC), soon joined by RWJF (Holve et al. 2010). Its genesis reflected the strong belief among thought leaders that public health could more effectively protect and promote health by generating more and better evidence about how the public health system's organization, and funding affects activities, processes, and outcomes (Mays et al. 2003). The idea of "branding" such work as its own field was believed to be helpful in building a critical mass of researchers and research, raising the field's profile among policy makers and funders, and ultimately increasing its usefulness to practical public health decision making, to the benefit of the public's health. PHSSR was explicitly modeled upon the development of Health Services Research (HSR), both for its field building and for its perceived impacts upon public policy.[1]

PHSSR seeks to study the links between outcomes beneficial for public health and the organization, financing, or delivery of public health services by public agencies or other components of the public health system in communities (Mays et al 2003). Sometimes quality of public health is added as a fourth factor (RWJF 2012). The term was coined in the early 2000s and elaborated upon over time, as thought leaders sought to emulate the success of health services research (HSR) in influencing policy.[2] RWJF was adding to the start made by the Centers for Communicable Disease Control Prevention. CDC had in the latter 1990s funded seminal research

[1] See DeBuono (2009), University of Kentucky Research Foundation (2010). The parallels between PHSSR with HSR extend even to the circumstances of their early formative brainstorming sessions, both reported to have occurred in basements—at the CDC and NIH, respectively (Scutchfield 2010, Berkowitz 1998).

[2] Public Health Systems Research (PHSR) was the term used by originators in the early 2000s and the Academy Health Interest Group formed in 2002 (Mays et al. 2003, Holve et al. 2010). A second S for Services was added to PHSSR as thinking about the topic evolved, particularly at RWJF (Scutchfield et al. 2007). The Interest Group continues to use PHSR (AcademyHealth 2013).

on measuring how well public health provides its ten essential core functions.[3] The foundation has sought to promote the field in a number of ways:

- an Interest Group for PHSSR researchers within AcademyHealth (the HSR professional association),
- creation of agendas to guide needed research,
- additional funding for AcademyHealth to promote PHSSR,
- ad hoc grant support of projects through RWJF's program on Changes in Health Care Organization and Financing, administered by AcademyHealth,
- improved data harmonization and collection by the three leading national associations of state and local public health practitioners, the Association of State & Territorial Health Officials (ASTHO), the National Association of County and City Health Organizations (NACCHO), and the National Association of Local Boards of Health (NALBOH),
- dissemination support for datasets and publications at the National Library of Medicine, and
- support for a 2009 special issue of PHSSR articles in *Health Services Research*, the flagship journal for HSR.

With that special issue, RWJF public health leaders believed PHSSR to have reached "the end of the beginning" of establishing its bona fides as a field of research and improvement (Pérez and Larkin 2009, pp. 1788, 1794). They commented on the impressive collection of *HSR* articles:

> 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.

Seeking to move to this next stage of development, RWJF staff sought expert input on how to structure its approach to the NCC and ASO (RWJF 2009, DeBuono 2009), and the foundation decided to fund a national coordinating center (NCC) for PHSSR. In August 2010, the University of Kentucky was chosen from among five invited applicants to run the NCC. It was to help weave together the different strands of earlier and ongoing research and also promote further development of the fledgling field through a range of additional activities. The enumerated goals of the NCC were (RWJF 2010):

- "coordinating current PHSSR investments,
- supporting real-world applications of research,
- strengthening the capacity of researchers and practitioners,
- catalyzing the translation and application of findings into practice,

[3] The listing of essential services was developed by 1994, following the lead of the landmark IOM report (1988) on the future of public health. See CDC et al. 10 Essential Public Health Services, http://www.cdc.gov/nphpsp/essentialservices.html.

- increasing visibility and champions for the work, and
- attracting other funders to the field."

An accompanying award funded an Administrative Services Organization (ASO) that essentially "outsourced" the administrative aspects of grants applications, awards and management; that aspect of the PHSSR portfolio is not a central focus of this assessment. The foundation had previously funded a closely related NCC for Public Health Practice Based Research Networks (PBRNs), which relocated to Kentucky during 2011 to operate alongside the NCC for PHSSR.

Project Purpose, Approach, and Structure of Report

In 2012, RWJF commissioned this formative evaluation of PHSSR related efforts to help crystalize understanding of PHSSR activities, interrelationships, and achievements as well as to identify shortcomings and suggest helpful change going forward. The goals are primarily to aid RWJF's own policy making on its PHSSR portfolio and strategy and secondarily to provide useful feedback to the two NCCs noted above.

This project's qualitative information came from literature scan, document review, interviews with key informants, including PBRN network participants, observation of two meetings of the NCC for PHSSR National Advisory Committee, and feedback from presentations at two Keeneland Conferences during 2012 and 2013, as well as at two Interest Group meetings at AcademyHealth conferences in those years. Quantitative input came from review and classification of all PHSSR projects and products and from "user" surveys—of state & local public health agency leadership, participants in PBRN networks, and RWJF successful and unsuccessful PHSSR grant applicants.

We, thus, used a mix of structured and semi-structured data collection suitable for generating experience, insights, and advice. Many of the most illuminating observations from the structured surveys came from open-ended responses. A surprisingly high share of respondents sought to express opinions in that way. Comparative context was provided through literature scan, interviews and the principal investigators' participant-observer knowledge of the evolution of HSR as well as of the development of data-driven management culture elsewhere in government and in the private nonprofit sector.

Our assessment is presented in the next sections. We first provide our overall findings and recommendations—Section 2. The report then provides our findings on each of our major tasks: (a) review and categorization of PHSSR projects and their products--Section 3; (b) survey of state public health agency leaders (with ASTHO)—Section 4; (c) survey of local public health agencies (with NACCHO)—Section 5; (d) examination of PBRN networks—Section 6; (e) survey of successful PHSSR applicants—section 7; and (f) survey of unsuccessful PHSSR applicants—Section 8.

Each section presents the major and detailed findings and the methodology we used to obtain the information.

Because we believe the responses to open-ended questions in our surveys (particularly requests for improvement suggestions) contain considerable additional information that might be of interest to many researchers, state and local health department officials, and funders of research, we have included the responses, edited to preserve anonymity, in appendices to the sections reporting survey findings.

Section 2: Overall Findings and Recommendations

This section provides our principal findings and recommendations. More consequential findings and recommendations generally appear before than less important ones, but this ordering is not exact. Additional findings are presented in the later sections of this report.

Finding 1: PHSSR has made substantial strides in field building.

The NCCs for PHSSR and for Public Health PBRNs, RWJF, AcademyHealth and CDC have supported or engaged in many activities that logically support public health research field building and that were seen in the course of HSR development.

Three key, logical components of field building have been addressed. RWJF and others have supported data, researchers, and funding. Data came first, in the form of improved information about public health agencies' funding and infrastructures. Data have been gathered through surveys by the relevant national associations and with data harmonization has improved over time (e.g., ASTHO 2011). Researchers have begun to tap the data for useful analyses. Such efforts are a necessary but not sufficient step in moving toward evidence-based public health administration, and much remains to be done to improve data (Lieder et al. 2012, Lieder 2013).

Second, researchers have been attracted through several sensible approaches. A series of competitive mini-grants have sought to encourage new young researchers to investigate public health issues. Requiring that each be mentored by an already established researcher simultaneously reaches out to older researchers as well. A series of competitive project grants from RWJF have sought investigator-initiated projects. Our surveys found that successful applicants, and also unsuccessful applicants, want to stay in the field. NCC sources say that the quality of submissions has improved over time, a somewhat self-interested but credible observation. However, the amounts of funding and the number of grants are quite limited relative to the interested population of potential PHSSR researchers and practitioners, as applicants complained. The NCC principals themselves target researchers to do sole-source projects they believe are needed. This effort helps keep high-quality researchers engaged. The public health PBRNs have also attracted researchers, with the important attribute that they are able and willing to work closely with practitioners.

Other logical activities have also promoted the field. That RWJF was able to encourage an IOM consensus committee to address public health infrastructure, metrics, and funding needs was a substantial accomplishment. RWJF also commissioned a series of literature reviews of the state of the art in local health department performance, health agency structure, PHSSR methods, and in public health workforce needs (Erwin 2008, Hyde & Shortell 2012, Holve et al. 2010, Hilliard and Boulton 2012.). The NCCs' principals have frequently given presentations to numerous academic

and policy making audiences. The NCC principals, RWJF staff, and key grantees have repeatedly described the field and its relevance in numerous journals that reach different audiences (e.g., Scutchfield et al. 2007, 2009, 2010; Scutchfield 2010; Mays et al. 2012). The Interest Group and conferences have encouraged communication and collaboration among established researchers and ways to reach out to potential new researchers already engaged in HSR. The creation of a research agenda met a widespread expectation and recommendation of the IOM committee (2003) and was deemed worthy of a symposium issue of the *American Journal of Preventive Medicine* (Consortium 2012).

Several indicators show the progress made in PHSSR's field building. One is its higher profile among opinion leaders, most clearly seen in a comparison of two reports from the Institute of Medicine (IOM). In 2003, the IOM published a 15 year update of its seminal 1988 report on the future of public health, (IOM 1988, 2003). That book contains zero mentions of systems analysis or of PHSSR. Indeed, the committee specifically commented on the "limited" evidence available to provide "specific guidance" on public health infrastructural needs (IOM 2003, p. 9). A decade later, an RWJF-funded IOM committee specifically addressed such metrics and how to invest wisely in public health, receiving input from a number of key PHSSR researchers. Its capstone report mentions "PHSSR" 15 times, with extended discussions, and cites its research agenda (IOM 2012, p. 3-13), while calling for redoubled effort for the production of useful research. This is a substantial achievement. The IOM has broad credibility, is routinely described as "the prestigious" IOM, and has often influenced policy, certainly in research (e.g., Neergaard 2013).

A second indicator is that the RWJF supported Keeneland Conferences have attracted growing attendance over time, including both active participants and very strong plenary speakers, such as the head of the CDC. There is a plan to wean the conferences from RWJF support over time. A third is that the PHSR Interest Group at AcademyHealth recently passed Health Economics as the single largest IG.[4]

Finding 2: Few studies as yet seem to have produced actionable information for use by local or state health departments (LHDs and SHDs)

The major shortcoming of the work to date, relative to expectations, has been the lack of actionable information that local and state health departments can and have put to use. Funded PHSSR projects have to date primarily generated descriptive information, as seen in our review of projects considered part of the RWJF PHSSR portfolio and in our onsite visits to a small number of PBRN networks.

[4] For the IG's webpage see AcademyHealth (2013). The head count came from AcademyHealth staff in May 2013 (personal communication).

We do not mean that descriptive studies are not useful for a number of other purposes. However, descriptive and theoretical PHSSR projects need to be balanced by work with practical, and reasonably near-future, implications.

We attempted in our surveys of participants in the PBRN networks and the surveys of local and state health departments to obtain specific examples of how research findings had been used by these health departments. Products reported to be useful primarily related to research either (i) helping to advance the quality improvement (QI) movement or (ii) helping agencies gain accreditation. In most cases, the uses given were vague and difficult to interpret. We found few specific examples of the research that contributed to improvements in the health departments' services, except indirectly in accreditation requirements.

We looked for such material as "What Works" studies building on the "evidence-based practices" movement, currently a major topic throughout public services. We found few studies that would contribute What Works evidence.

A partial exception to this gap is the "quality improvement" (QI) movement, as just noted. This has clearly gained traction among leaders of SHDs and LHDs. PHSSR has provided some support for this activity, such as the "Quality Improvement Quick Strike" PBRN research projects (e.g., examination of shared-service activity). PHSSR QI efforts appear to be practical, though limited in scope, often focusing on development of tools for QI efforts rather than directly examining particular service practices. QI studies have the benefit of involve health department staffs both in selecting the subjects to be examined and then doing the work. It is our understanding that PHSSR funds have been used primarily to research the process and tools for undertaking such studies rather than participating in QI studies themselves.

The general picture here was echoed by one local health agency interviewee:

> Most research in this [PHSSR] area depends either on mining of databases or on survey research. Neither of these approaches is very good at handling the complicated local stories that explain the way local public health departments interact with and affect their communities…. There is value in overview studies on public health spending and health status, but they are in their nature a bit vague and don't really address state and local decision makers' concerns in my experience. We use them, but I don't think such findings are major influence and they certainly don't help us figure out how to do public health better at the community level.

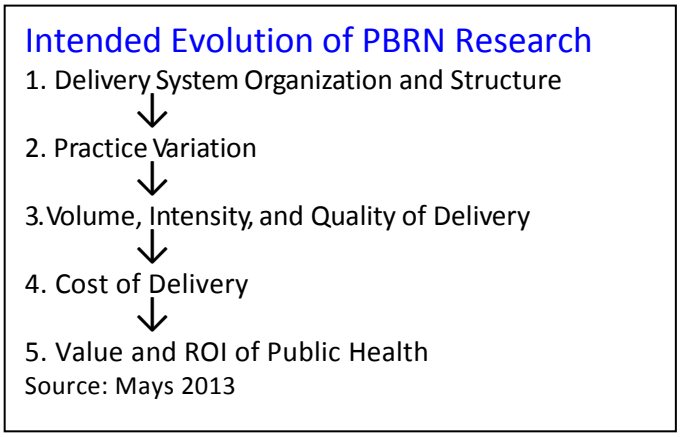
To quote another local health official, "Don't do research for the sake of research. You want to do something with it. For example, just saying there is a shortage doesn't help."

In sum, despite the desire among PHSSR leadership for more translation of findings for practical use, it seems clear that PHSSR has a lower profile among practitioners than among health services researchers or IOM panels on public health. The lack of such actionable material would seem to

undercut potentially available support from LHDs and SHDs for PHSSR, if not with direct funding then in lobbying for more funding elsewhere. As one interviewee said of local public health in general, "If we do not have a constituency we have no one to call for increasing in the legislature and resulting increases in the state public health department budget to provide more local funding."

Recommendation 1: Place more emphasis on funding research and producing products that are directly and quickly useful to public health agencies.

The public health PBRN program embodies a clear desire to move from descriptive to actionable research in an accelerated way by routinizing interactions between practitioners and researchers. Its research-development logic clearly envisions progression over time toward ever more practical research that will ultimately measure the value of public health activities and document their "return on investment," that is, likely future benefits for current public health spending (box).



Achieving this fifth stage—what works in public health and how well it works—will presumably allow agencies and other actors providing public health services to reallocate resources from less to more productive uses, Moving to this worthy end stage should be a very high priority, but the progression seems to remains very much a work in progress, according to what we heard from participants. Moreover, PBRN program funding remains quite small in current dollars and uncertain of its future. The developmental logic of PHSSR generally is quite similar (Scutchfield 2011). The challenge is to achieve at least some early successes with actionable findings.

Recommendation 2: PHSSR and PBRN should take advantage of the Quality Improvement interest among SHDs and LHDs to build on this interest by supporting studies of public health agency operational issues.

The current QI movement appears to be primarily one in which individual health departments use such procedures routinely without academic assistance. However, public health researchers could expand the basic concept of QI to explore public health policies and practices which have the potential of application in multiple local health departments

Studies might examine a public health service delivery problem in one or a number of jurisdictions believed to employ a novel and successful practice (or procedure or policy) for service delivery or management. If properly tested against conventional practice elsewhere, even within a jurisdiction, analysis could show which practices appear to work well, identify the key factors contributing to success or failure, and examine the likely replicability/transferability to other locations. Comparisons might draw on providing "natural experiments" using pre-existing variation or could involve implementing in only part of a jurisdiction or network, with unaffected areas as comparisons. Or the researchers might examine a public management practice or idea that appears highly promising, but has not yet been used in a public health setting, and seek one or more other jurisdictions to test the practice.

Boosting the "action-ability" of products should greatly enhance the visibility and perceived utility of PHSSR (and PBRNs) to local and state health departments. In turn, that could make them willing to help win funding from legislatures, private foundations, and federal agencies. Health departments might even be willing to fund some of the work themselves, perhaps through in-kind contributions.

Given the addition of the second "S" (for "Services") into PHS(S)R, more projects might examine how best to deliver services of great interest, and not solely examine the overall organization or financing of the jurisdiction within which the service is provided.

One local health official, for example, reported wanting "to see research applicable to typical programs and services offered at the local level: healthy start, WIC, STD, HIV, TB, dental health education, swimming pool health and safety, epidemiology and communicable disease programs." While those topics may appear to some to be too narrow for PHSSR, at least a partial shift in emphasis seems desirable, where the result will be evidence-generating examination of public health programs, practices, and policies to assess their outcomes, their costs, and their transferability to other communities.

Recommendation 3: PHSSR researchers should be asked, for each of their products, to consider and identify the implications of their findings for local and state health departments.

This would both (i) encourage researchers to design their research to be more actionable; and (ii) increase the interest of state and local health departments in their work.

In many studies, it appears that the public health researchers treated the implications for public health agencies as only afterthoughts. Researchers traditionally may be reluctant to provide recommendations that at least partly flow from their work, believing that they do not have sufficient evidence to make specific recommendations (other than the need for additional future work). However, it seems preferable for researchers to suggest the implications for change even with what they believe to be limited evidence. PHSSR researchers need to be pressed to be relevant just as hard as they are pressed to be published.

Being useful is so important that more effort should go into highlighting the relevance of findings. Really accessible presentations are important, likely one page briefs that summarize the work and state specific implications of their work, even if not yet proven effective. Talking points are another useful communication tool typically appreciated by practical people (even if looked down upon by many academics).

Recommendation 4: RWJF and NCC might examine the findings from completed descriptive studies to identify opportunities for subsequent research that can lead to more actionable subsequent research.

For example, a 2007 grant examined a number of case studies to identify the presence of public health workforce shortages and indicated in a final report that "noteworthy efforts are underway in some communities to alter this trajectory." A subsequent research project identifying such noteworthy efforts and documenting that those efforts had been successful in reducing shortages could provide useful evidence for LHDs throughout the country.

Another grant from 2007 examined state efforts relating to eliminating health disparities. Again, case studies were used to investigate the use of state-level disparities data to shape interventions. The study in one of its final reports noted that its two case study states had taken creative approaches to eliminating disparities, but pointed out that "little is known about which actions would be effective ways to eliminate disparities." A considerably more actionable project would then examine those approaches to learn whether or not they indeed had significant effects on reducing disparities and the transferability of any success stories to other locations. (It may be that this report encouraged Robert Wood Johnson Foundation to move forward on its "Finding Answers," a major program effort to reduce disparities in accessing healthcare.)

A third example was an examination of the roles of the City and State Departments of Public Health during Hurricane Katrina. It would have developed into a more actionable study had follow-on research been undertaken to identify the lessons learned for use by local and state health departments for future management of disasters.

Finding 3: Achieving sustainable funding for PHSSR has been a goal throughout but remains a major challenge.

For example, well over half the PBRN respondents reported not having obtained funding or promises of funding beyond 2012 other than RWJF funds from the National Coordinating Center (60 percent of respondents from the first (five) core networks, 71 percent of the respondents from the second (seven) core networks, and 88 percent of respondents from the 12 Affiliate networks).

> Similarly, more than half (58 percent) of respondents were not confident that their network will be operating in 2015 in the absence of NCC funding. This includes 19 percent who

thought continued operation was very unlikely without such funding. Only six percent reported such funding was very likely.

The funding thus far provided by RWJF has been very important for the development of the field, both before and after the creation of the NCC for PHSSR. Yet a major impediment to PHSSR's continued growth is the uncertain prospects for continued support of researchers. The research community in public health has long been limited by the "paucity of research funding available to study public health, as opposed to medical care" (Mays et al. 2003, p. 181).

For PHSSR, funding is needed to attract existing HSR and other researchers to conduct appropriate projects and, even more, to interest younger researchers in choosing careers at least partly devoted to PHSSR. Without a career ladder with plausible prospects of future funding, they will naturally turn to opportunities elsewhere, especially the most talented ones being recruited by others.

With respect to funding, the early development of PHSSR is very different from that of HSR. The predecessor to today's federal Agency for Healthcare Research and Quality (AHRQ) was dedicated to HSR from its early days in the late 1960s. It supported specific projects as well as field-building ones (Berkowitz 1998, 2011; University of Virginia 2006).[5]

PHSSR's supporters have always recognized the central importance of funding to sustain it as an evidence-building field. The key IOM report of 2003 deplored the lack of funding to generate evidence to improve public health practice, along with the lack of an agenda for doing so that was already cited above (IOM 2003, pp. 9, 161) The 2009 DeBuono report to RWJF called for long-term attention to developing a "continuous funding stream" "a serious long term commitment to measure and improve public health performance," from various public and private sources (p. 16). "[E]xpanding funding for PHSSR" was one of five key components of the NCC for PHSSR under its award from RWJF (2010). The NCC principal investigator has more colorfully noted about field building that "Funding is key," and the "Willie Sutton principle applies in the academy, if you fund it they will come." (Scutchfield 2011, slide 19).

How to get more funding is, of course, the big question. Federal statutory change seemed within PHSSR's grasp when the federal health reform act of 2010 authorized PHSSR funding.[6] However, the Act provided no actual dollar amounts, leaving actual appropriation of funds to future Congressional action. However, PHSSR has not been funded (Mays & Scutchfield 2012), it can be argued, not because it was deemed unworthy but because implementation of health reform in general has faced considerable political resistance. Even the Act's specific appropriations, like the

[5] Co-author Bovbjerg's career also testifies to the influence of the then National Center for Health Services Research (NCHSR). It funded his first job in health policy, within the wide-ranging Program on Legal Issues in Health Care at Duke Law School during the mid-1970s.

[6] See sect. 4301, "Research on Optimizing the Delivery of Public Health Services," of the Patient Protection and Affordable Care Act, Public Law 111-148, 124 Stat. 119-1025, March 23, 2010, as amended by the Health Care and Education Reconciliation Act of 2010, Public Law 111-152, 124 Stat. 1029-1083, March 30, 2010, both accessible online from http://www.gpo.gov.

public health and prevention fund, have been cut back. Research enterprises including population surveys and support for AHRQ have been threatened with elimination. A good argument for better funding has already been made by an authoritative source, the most recent IOM panel, relying heavily on general principles and limited PHSSR evidence: The panel set its sights very high, recommending "a strengthened research infrastructure" (IOM 2012, recommendation 15; Gold 2012) "including dedicated funding of up to 15 percent of total public health funding." Both the level of funding and having a dedicated funding stream are what management consultants call "stretch goals."

A lesser level of support and from existing funding agencies not dedicated to PHSSR would be a very good start. And that is what RWJF, the NCC, and AcademyHealth are already seeking to achieve at the federal level. Efforts are being made to engage existing agencies and argue the value of PHSSR, presenting selected findings. Targeted agencies include the CDC, NIH, HHS, and OMB.[7] Two indicators of progress are that an NIH executive now chairs the NCC's National Advisory Council, and the most recent Council meeting featured participation by the head of PCORI.[8]

Recommendation 5: Obtaining funding from non-RWJF sources needs to get even higher priority in the immediate future

This recommendation applies to efforts by the NCC for PHSSR and by others within the PHSSR community, notably at RWJF itself and at AcademyHealth. Without ongoing funding, all the efforts being put into field building will likely achieve little lasting change. This observation is not new in this assessment.

Several extensions of PBRN concepts are worthy.

(i) The NCC for public health PBRNs should continue, and even expand, its good work to provide leads to the networks on public health research funding opportunities. For example, it provided notice of a procurement from CDC on impacts of Hurricane Sandy in which participation of public health agencies was required, a natural target for a high-functioning PBRN.

(ii) Networks would do well to increase the "demand" side to their work by accelerating actionable research—as recommended above. This should make their work more attractive to their participating agencies and hence more fundable.

(iii) RWJF and the NCC should consider reengineering the network concept to open networks beyond research alone to include other academic-practitioner collaborations, such as staff training and technical assistance, and perhaps introducing recognition awards to local health departments for successfully introducing improved evidence-based practices.

[7] The listing of federal presentations by Mays (2012, p. 6) is instructive.

[8] Robert Kaplan, Ph.D., directs the Office of Behavioral and Social Sciences Research at the National Institutes of Health, http://www.publichealthsystems.org/phssr-national-advisory-committee.aspx. Dr. Joe V. Selby directs the Patient-Centered Outcomes Research Institute (PCORI).

Such rethinking of the PBRN charters could open the door to more in-state support, such as from the state government and local foundations. The goal is to broaden the approach to take advantage of the linking of practitioner and academic strengths to the advantage of both.

This effort is closely allied with the need to improve the usefulness of PHSSR to practical policy makers and administrators in public health by genera.

We reason that there are two ways to win funding. First, PHSSR funding could be a necessary adjunct to other support for public health, notably in federal funding for state and local operations. The IOM committee by mentioning a percentage implied that PHSSR funding should be thought of as part of basic funding for public health. It seems highly implausible that legislative appropriations could earmark in this way without the support of existing agencies being funded. Winning support from agencies seems important so that they do not campaign against PHSSR funding as a subtraction from their own support and a source of new oversight requirements. They would likely be more supportive if PHSSR can show that it helps agencies do their job better and helps them win more funding for themselves by documenting worthwhile outcomes. In addition, winning support from operating agencies is important because they are the source of information needed to conduct good PHSSR. Any compilation of data through surveys or administrative record keeping is only as good as the motivation of those asked to supply the information.

Second, PHSSR could "sell" itself better to public and private entities that support research in health and health related areas. In the current climate, it is hard to obtain designated or field building support such as was sought through the health reform Act. Persuading funders to contribute almost certainly will call for making a reasonable case that the work will have useful, practical products. We also observe that PHSSR and its individual researchers could benefit by making themselves part of separately funded public health research. As explained more below, quality improvement, accreditation, obesity reduction projects—all of these can be seen as having aspects of PHSSR where PHSSR consists of efforts to develop generalizable and replicable information about the value and cost of operations within public health.

Finding 4: The methodological tools used are overly limited

The set of studies we examined used such tools as network analysis, and, especially, surveys, most being surveys of organizations and not populations.

Considerably lacking is the use of such potentially highly relevant methodologies as: program evaluation procedures, cost-effectiveness analysis, and cost-benefit (i.e., return-on-investment) analysis. In our work we looked for studies that involved some form of systematic comparisons of the effects of programs, activities, or policies, whether or not the study used highly rigorous evaluation designs such as randomized control trials or strong quasi-experimental designs, or even relatively simple pre vs. post comparisons such as interrupted time series designs.

Among the projects provided for our review as PHSSR efforts, we found only one study that we felt we could label as a "cost-effectiveness" study and one that could be labeled a "cost-benefit" analysis. (See next section for more details.) The cost-effectiveness study compared the costs and effectiveness in an STD program of adding partner notification to "selective screening only" procedures. The team also reported on the additional costs and outcomes from various numbers of attempts at making contacts with partners. The team reported that the findings helped in recommending modifications to the operational guidelines for disease intervention specialists and their supervisors. The team also reported a side benefit, identifying procedures being used that were noncompliant with the operational guidelines. This, the report states, resulted in actions being taken to correct those problems.

We found just nine studies that constituted program evaluations (using a liberal definition of program evaluation).

A number of studies were based on analysis of the data from the NACCHO surveys of LHDs. The NACCHO survey findings provide a substantial source of information on the characteristics of local health departments, trends over time, and needs assessments. This large array of data is highly attractive to researchers seeking to conduct various statistical analyses. However, the resulting body of research does not seem to provide much guidance to local health departments as to what they can do to improve the health of their communities. Information on budgetary changes over time, however, did yield important results when matched with health outcome data by Mays and others.

Recommendation 6: RWJF and the NCCs should encourage the use of a much wider set of tools, including program evaluation methods, cost-effectiveness analysis, and cost-benefit analysis.

Finding 5: The PBRNs seem to have had similar limitations in their scope.

The PBRN networks appear to be an excellent concept. They have considerable potential to help improve public health practice within their respective states. Few people that we heard from said anything negative about them … other than that they are underfunded. Pulling together the academic world with the practice community in a state seems highly desirable, and this enthusiasm was expressed in meetings that we attended and in our interviews.

Thus far, as we found in other PHSSR products, the impact of the networks on practice seems very limited. We found few network products that appear to have been used by either LHDs or SHDs. The director of the NCC has presented a clear logic model for moving toward very actionable work, as already noted. The MPROVE (Multi-network Practice and Outcome Variation Examination) work that is under way across a number of PBRN jurisdictions seems especially promising in part because of its efforts to standardize information (Mays 2012). It seeks to

examine and measure practices and outcomes consistently across areas that naturally vary could indeed develop information that can improve systems of delivery and management. It appears still too early to show results on practice.

Recommendation 7: RWJF and the NCC should support PBRN networks in expanding the scope of their activities (as recommended under findings for per R2-4 above).

For example, researchers might work with a number of local health departments to detail and analyze different ways to encourage citizens to get flu vaccinations. Identifying and disseminating the most successful approaches in getting citizens immunized could have a big payback, as immunization is one of the most cost-effective interventions known. This focus might seem too service-specific for PHSSR but where such studies identify the conditions and factors associated with success and transferability, they seem appropriate topics. Where other, service-specific funding already exists, perhaps there is a still role for PHSSR leaders to seek to coordinate approaches to measurement and dissemination so as to foster more comparisons of public health interventions across different programmatic "silos."

In the case of PBRNs, their linkages to public health agencies or associations, their focus on providing clear summaries of research findings, their involvement of practitioners to choose useful projects—all these factors should help reduce dissemination problems. As already is being done by PBRN in areas such as technology, network analyses, and data collection and comparison (e.g., MPROVE), the networks could look for opportunities to examine similar projects in more than one health department both within the state and in other, perhaps nearby, states).

Finding 6: Getting research findings to the attention of public health officials and their professional staffs has been a substantial problem. Local health department employee access to research reports often appears limited.

The many responses on this topic in our LHD and SHD surveys strongly suggest that this continues to be an important issue. Public health officials, in our face-to-face interviews as well as in our surveys complained about difficulties in having easy-to-access, readable, understandable research findings. (A compounding problem is a shortage of useful products, per Finding 2 above.) Academic articles are not written for ease of access or rapid skimming. In addition, journal articles are often not free, requiring funding for subscriptions.

A subsidiary problem identified in our interviews and surveys is getting research findings to health agency personnel below the level of health department leadership. It appears that in some departments the research materials go to the head of the department only, so that further access depends on the director's subsequent distribution of that material to relevant staffs, rather than going directly to employees. Busy directors may overlook such material or lack time to screen it

and make such distribution. Employees need to know about the availability and content of such potentially useful materials.

The good news is that the NCCs are aware of this problem and have been taking helpful steps, such as pressing researchers for readable summaries, putting some findings in newsletters or blogs, and starting the *Frontiers* journal. At the time of our LHD and SHD surveys, however, *Frontier*s was still largely unknown to practitioners. Another post-survey mode of dissemination is the RE-ACT podcasts (Research-to-Action in Public Health Delivery). They are meant to support evidence-based practice for public health agencies and are hosted by Dr. Paul Halverson, a former SHD director.[9]

Recommendation 8: RWJF and the NCCs should consider additional ways to provide easy access to research findings.

RWJF and NCC should seek additional ways to get the research into the hands of health department, especially LHD employees. This would likely become considerably more effective if public health research addressed more problems more directly of use to employees of the LHDs.

Our survey respondents provided a number of suggestions for improvements, such as providing easier access to subscription-based publications and increasing dissemination by organizations such as NACCHO and APHA (perhaps with screening of the research and providing short synopses of products most likely to be useful). See the later sections on the LHD and SHD surveys for a number of such suggestions.

Beyond dissemination at the time that research findings are initially reported is how to maintain a repository of such information and to update it as information accumulates. PHSSR appears as yet to have done little here, despite initial aspirations to operate a clearinghouse—a more challenging enterprise than it sounds. At one time the RWJF website linked to products by topic area, but this no longer seems to be posted. The NCC for PHSSR website lists important research, and a bibliography is maintained based on staff literature searches. But what is needed is a compendium of information, not a list of publications. Somehow, a way is needed to help practitioners seeking good advice.

Recommendation 9: RWJF and the NCCs should generate more information on how PHSSR and PBRN products are used.

[9] See the PHSSR InsideTrack newsletter of February 2013, http://www.publichealthsystems.org/phssr-insidetrackfebruary-2013.aspx. The podcast home page is http://www.publichealthsystems.org/re-act-podcasts.aspx.

This could take the form of (i) encouraging funded PHSSR and PBRN recipients to follow-up on their research products to identify the effects the research has achieved or (ii) sponsoring periodic follow-ups and reporting on findings of uses of sponsored PHSSR. There is some precedent for the latter in the RWJF practice of having a technical writer interview researchers and summarize some projects after completion.

Informing RWJF and other interested parties of research results is in the self-interest of all parties. Being able to about to report PHSSR "success stories" is also important for a young field trying to establish itself. However, incomplete reporting about research impacts is endemic among grant recipients, particularly since much occurs after the end of a funded project and its final report. (Some lag time naturally occurs from the time the research is completed and when substantive use by the local or state health departments can be reasonably expected to occur). Information about actual use of findings if widely disseminated could help build demand for public health research by illustrating its utility and in turn increasing the likelihood of being able to get funding from the federal government, state governments, and foundations.

Finding 7: PHSSR has contributed to the buildup of public health research and number of public health researchers, but, thus far, to only is a small extent.

It was beyond the scope of our study to attempt any counting of the number of researchers in the PHSSR field. However, respondents from our surveys of both grantees and unsuccessful applicants indicated that that potential support had been important to them in remaining in the field.

Finding 8: PHSSR research seems to have neglected the high profile area of community wellness and illness prevention.

An important current public health issue is the role of public health agencies in prevention efforts. Other RWJF programs, CDC efforts, other foundations, and other nonprofit organizations are expending considerable resources in studying such topics as nutrition, obesity, tobacco use, need for exercise, etc. We found few PHSSR projects on such LHD efforts.

While a major part of prevention efforts are being done at the national level, should not PHSSR research help LHDs improve local community-focused efforts? LHDs can play a major role in tailoring such programs to their own community needs and conditions, such as (depending on the community) attempting to improve community nutrition, eating, exercising, and encouragement to their citizens in managing their personal chronic disease control efforts, including avoidance of specific health problems such as obesity, tobacco use, alcohol and drug abuse, avoidance of home accidents, and in general helping create an overall healthy community. Concerns have been

expressed about the robustness of community-based efforts funded with Stimulus Act monies, and there may be a good role here for researchers with PHSSR capabilities.

Recommendation 10: RWJF and NCC should consider focusing PHSSR efforts on community wellness and illness prevention.

Research that identifies ways that public health departments and their communities can address these issues would likely be highly beneficial to public health research, health departments, and communities. Such a focus might also allow PHSSR to tap into other funding sources than RWJF.

For example, PHSSR researchers might develop and evaluate better demonstrations than have been often been done to date or evaluate existing community-based efforts.

Finding 9: Few PHSSR products appear to provide information on the cost of programs or activities.

The tight economy has increasingly led to constraints on public agencies' spending. The PHSSR projects reviewed seldom appeared to provide information on the costs involved for public health departments, not even the cost of implementing proposed new processes or procedures or using new technologies. PHSSR has generated important studies on how spending constraints affect health outcomes and others are underway. But so far these have been primarily at the macro level. Medical effectiveness research routinely ignores the expense of treatment, but effective clinical care is socially expected to be covered by insurance, whereas most public health funding must be specifically appropriated, piece by piece. It seems nearly axiomatic that reporting an effective practice without indicating how expensive it would be for others to adopt is less than fully actionable in the current fiscal climate.

As one example, in a study of the value of workforce training for preparedness, there was no estimate for the costs of such training. As noted earlier, a very few cost-effectiveness analyses were found among those supported by PHSSR.

Recommendation 11: RWJF and MCC should encourage projects that directly address cost-savings research and/or inclusion in research of a component that provides estimates of the costs of activities promoted by the study findings.

A cost focus may be unfamiliar to many public health practitioners but expertise is not hard to add to a project. This includes, encouraging more cost-effectiveness and cost-benefit analyses. One of our state university interviewees was considering bringing in other non-health departments of the university, such as business and economics schools, to help expand the reach of their public health research. That seems a very feasible way to address a very important concern.

Finding 10: Applicants who were turned down for RWJF funding under PHSSR solicitations expressed a strong desire for helpful feedback.

Such information is evidently not currently being provided to unsuccessful applicants. This was the area in which unsuccessful applicants were most critical of the RWJF application process. 56 per cent of the unsuccessful applicants rated the proposal decision process as only fair or good. Almost all of those who provided an explanation cited lack of feedback as to the reason. Open-ended comments suggest some genuine bewilderment about just what constitutes PHSSR and where their ideas were lacking.

Recommendation 12: RWJF and NCC should consider providing unsuccessful applicants with information about why they were turned down.

It might also be helpful to restate the goals of PHSSR. Some of our survey respondents simply did not understand why their projects were not of the correct type. The breadth of the PHSSR definition and the field's research agenda may lend themselves to such confusion. In any event, encouraging improved submissions over time seems a good idea that need not be too costly if built into the review process from the start.

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Section 3: Categorization of PHSSR Grant Projects

Purpose

The purpose of this task was to comprehensively summarize each PHSSR grant made and categorize the grants on a number of dimensions, in order to provide RWJF a detailed view of the type of work being funded and how it may have changed over time. The dimensions used to categorize the grants included their purpose and breadth , type of grantee organization, amount, time period, evaluation methodology, and, importantly, whether the projects were designed to develop actionable information of practical use to decision makers and managers or whether they constituted descriptive work.

Major Findings

To assess the nature of work being done by PHSSR grantees, we examined and categorized the PHSSR studies that RWJF funded during 2004 through 2012, based upon study summaries, listings of products, and, when we could find them, actual products resulting from those grants. A key focus was whether funded projects were designed to provide information that could be directly useful to public health agencies. In all, 56 PHSSR research grants were identified, mainly completed projects. Grants to pay for administration or coordination were excluded, as were grants made to Public Health Practice-Based Research Networks (PBRNs). Key findings follow:

- A special staff search was needed to identify grants considered part of the PHSSR portfolio. We understand that the RWJF administrative tracking database has been modified from that in use during early 2012.
- The number of grants has grown over time, from one or two annually during the first two years to eight or ten in the last three years.
- Most awards are funded for slightly below $200,000.
- Two-thirds of awards have gone to universities, and only a single grant went to a public health agency (two percent of the total)
- Over three-quarters of grants were descriptive in nature. Only about one-sixth appeared to be actionable by health departments.
- Statistical correlation analyses and surveys appeared to be the primary technical methods used by most studies. Program or policy evaluations comprised only 16 percent of projects. Studies considering costs such as cost; cost-effectiveness and cost-benefit were seldom used (four percent of the studies).

Often, descriptive research is needed as a precursor to generating useful evidence about public health practice. However, PHSSR is meant to balance descriptive research with studies generating actionable research findings for use by practitioners and policy makers. The theme of "translating research into practice" has been a key element of PHSSR.

Approach and Methodology

A major objective of this work was to categorize PHSSR grants in order to provide RWJF a detailed view of the type of work being funded and how it may have changed over time. A particular focus was whether the projects were designed to develop actionable information of practical use to decision makers and managers or whether they constituted descriptive work. The latter may assess problems, generate hypotheses, or otherwise promote better evidence for public health in the future, but not immediately.

The distinction between "descriptive" and "actionable" research is often not clear-cut. Actionable research is likely to contain such elements as a focus on identifying procedures or factors contributing to making public health services more effective or efficient and the inclusion of conclusions, or direct recommendations, on those findings. Such findings might, for example, focus on service delivery practices, or on identifying better ways to organize improvements in public health organization, or on identifying innovative ways to finance public health efforts. Descriptive research, on the other hand, tends to focus on examining existing data or developing new data that describes the characteristics of public health efforts but without identification of the implications for public health agencies as to what such agencies might do with that information. This is not to say that descriptive studies, such as surveys of state and local health agencies to describe their workforce or other organization characteristics, are not useful. They certainly have their place. They can, for example, provide important needs assessments information that may, or may not, at some future time be acted on. We have proceeded on the assumption that both types of research are appropriate and that PHSSR should seek a "reasonable" balance between the two.

In our effort to characterize research as descriptive and actionable, we looked for products expected to provide information that local and state agencies could use in the near future and that public health agencies would find useful to themselves. This would include studies evaluating specific ways of delivering services or revamping agency policies, processes, or procedures but not ones that were of such a general nature that they would not provide guidance to individual agencies as to what they might do. We looked for studies that would identify "best" or "promising" practices. We looked for studies that involved analysis of the cost and/or the effectiveness of public health agencies service delivery practices, processes, or policies. We looked for expected products that would provide recommendations to local and state health agencies for improving their effectiveness, or efficiency, of their work. We looked for studies that provided recommendations to local, state, or federal officials, that were not highly general and without information that would likely lead to actions by the agencies—other than to ask for more money.

We were seeking products that would meet at least one of the above actionable characteristics. We did <u>not</u> in attempt to assess the quality of the technical research. This was out of our scope of work. Government officials have to make decisions on the information they are given regardless of

its quality. Our concern was with the likely usefulness of the study findings that would help public health agencies make program, processes, or policy choices.

This review was based on the reports available to us through such sources as the Robert Wood Johnson Foundation information system. However, it is certainly possible that other products that we were not able to identify might have included more products that were actionable. Our concern is not that PHSSR has funded studies that provide descriptive information, but that the balance between those types of studies and those that are actionable. Obtaining support from state and local health agencies can be very important for obtaining public health research funding from federal agencies and private foundations. Obtaining real support from local and state public health agencies is likely to depend to a considerable extent on the usefulness of the research work as perceived by these public health agencies.

We began by reviewing the project list in the December 2010 report issued by Altarum.[10] It covered projects funded from 2004 through 2010 and included the grant number, grantee organization name, project's funding status, funding period, and a brief statement of the grantee's goals and/or objectives. In addition to PHSSR research grants, the Altarum list included grants for program administration (for example, to the NCCs) and to Practice-Based Research Networks (PBRNs). To confirm that it contained all research projects through 2010 and extend our coverage into 2012, UI requested a complete list of PHSSR research grants from RWJF. Finding relevant grants and abstracting information on each appeared to take an expert staffer some time using the then available tracking systems.)

RWJF provided a complete list of all PHSSR grants made from 2004 through 2012, both completed and open projects. RWJF's list confirmed that the Altarum report had been complete for its years 2004 through 2010.

For the purpose of this chapter, we exclude grants that: (a) were solely for administration purposes, such as those grants relating to the formation and funding of the National Coordinating Center (NCC) for PHSSR; and (b) grants related to the Practice Based Research Networks (PBRNs), the focus of a different part of our assessment.

In addition to requesting the project lists, we asked RWJF to provide any materials that would describe the products produced to date by each grant. For completed projects, these included the final narrative report, the bibliography of products resulting from the grants, as well as any actual reports or other products resulting from the grants. For projects not yet complete, we requested (1) the grantees' latest annual narrative report; (2) the précis, an internal, summary document prepared by RWJF staff that includes the award amount, duration, recipient, and a short description of the

[10] Altarum Institute, "Public Health Systems and Services Research Portfolio," report to The Robert Wood Johnson Foundation, Draft of December 14, 2010.

intended research; and (3) any products thus far completed. RWJF provided the requested documents, if it had them in its current database, along with the original proposal for all PHSSR grants from 2004 through 2012.

Using the documents provided, we sought to distinguish projects that were descriptive from those that were actionable. Two people independently rated each research study as to whether the study products would provide information that would likely encourage specific actions by one or more local or state health departments or by a federal agency. Studies were considered descriptive if they profiled characteristics of populations or characterized practices, policies, or conditions without investigating the effect of those factors on outcomes. Projects were considered actionable if they measured the effects of policies or practices on health outcomes, health system performance, or other related outcomes providing evidence that particular policies or practices are preferable. This information might include specific recommendations or conclusions that local health departments, legislatures, or other entities involved in the public health system could take to improve system performance, system efficiency, and ultimately health outcomes.

It was easier to classify earlier projects than those that are still open because articles and other documents were available for earlier projects. For open projects that have not yet resulted in articles or other products, we relied on grantees' statements in proposals and annual reports to make a determination about the nature of the research and the likelihood that the project would produce actionable information.

Grant Characteristics

Number of grants by year

We examined 56 PHRSS grants made by RWFJ between 2004 and 2012. These do not include PBRN research or organization grants. As shown in Table 1, the Foundation gave more grants in more recent years, with the exception of 2009.

Table 1: Number of PHSSR grants by award year

Award Year	Number of Grants
2004	1 (2%)
2005	2 (4%)
2006	6 (11%)
2007	9 (16%)
2008	4 (7%)
2009	6 (11%)
2010	10 (18%)
2011	10 (18%)
2012	8 (14%)
Total	56 (101%*)

***Total does not equal 100% due to rounding.*

We had information on grant amounts for all 56 projects. These projects included two very large research grants to NACCHO, both exceeding $700,000, and the analysis in this section excludes those two outliers. For the remaining 54 projects, the funding ranged from $50,000 to $308, 968, with a mean of $175,300 and median of $198,880. The majority of the grants were between $190,000 and $200,000, as shown in Table 2.

Table 2: PHSSR grants by funding amount

Grant amount	Number of grants
$100,000 or less	6
>$100,000 to $150,000	8
>$150,000 to $190,000	4
>$190,000 to $200,000	31
$200,000 or greater	5
Total	54* (100%)

Note: This table excludes the two large outliers.

Type of grantee organization

Table 3 shows the distribution of grantees by type of organization. A large majority of grant recipients were researchers at academic institutions. Only one public health agency, a state health department, received one of these PHSSR grants.

Table 3: Grantee Type

Grant Type	Number of Grants
Universities	36 (64%)
Public health agencies	1 (2%)
Public health associations	4 (7%)
Think tanks	15 (27%)
Total	56 (100%)

Research categorized by actionability

A major part of this work was to assess the extent to which the overall portfolio of grants balanced descriptive research with more actionable research that provides information that could be directly useful to public health agencies (addressing the PHSSR theme of "translating research into practice"). Actionable research is likely to contain such elements as a focus on identifying procedures or factors contributing to making public health services more effective or efficient and the inclusion of conclusions, or direct recommendations, on those findings. Descriptive research, on the other hand, focuses on examining existing data or developing new data that describes the characteristics of public health efforts but without identification of the implications for public health agencies as to what such agencies might do with that information.

A number of the studies examined drew heavily from analysis of the data from the NACCHO, ASTHO, and NALBO surveys of local health departments. These surveys provide a large amount of data. These are a readily available and attractive source of data for describing and analyzing the characteristics of public health agencies and the trends of these over time. Such research, we have considered to be primarily descriptive in nature.

A large majority, or 82 percent, of the 56 projects we examined appeared to be descriptive in nature, while 18 percent of the projects could be characterized as actionable, as shown in Table 4. The projects that were early in the grant cycle were difficult to categorize because the researchers had not had time to publish reports or other products. For those cases, we based our classification on information provided in the proposal, précis, and interim reports, rather than on actual products or final reports to RWJF.

Table 4: Research Category

Actionable	10 (18%)
Descriptive	46 (82%)
Total	56 (100%)

The actionable projects provided findings that might be used at the local, state, or federal level. Below is a list of the information offered by each of the seven projects characterized as actionable:

- Changes in organization or structure of LHDs that might facilitate use of evidence-based public health practices
- Assess how LHDs can use GIS capacity to help planning
- Recommendations on state and local roles, surveillance and outbreak, regulation and inspection for food safety
- Examine the effects of national accreditation on LHD performance
- Identification of innovative and successful for serving diverse populations
- Return on investment (ROI) estimates for two tobacco control programs
- Cost-effectiveness estimates for varying screening methods for sexually transmitted diseases
- Develop specific recommendations on establishing a national accreditation system for local health departments
- A set of measures for state and local public health departments to assess and track their data system development
- Tools for local and state health departments to contend with and plan for budget cuts

A few projects that were characterized as descriptive in our analysis appeared in their proposals or their précis to be potentially actionable. For example, one précis promised that the research would provide a method for county health departments to determine the return on investment (ROI) for different bundles of programs. But because the two available articles resulting from the grant did

not include this information and because the grantee's reports to RWJF indicated that they had not completed the ROI tool, we concluded that this portion of the research had not been completed—and categorized the project as descriptive.

As shown in Table 5, the fraction of actionable projects was low for all but two grant years. In 2009, half of the six grants given provided information that health departments could put into practice. In 2005, one of the two grants given provided actionable information.

Table 5: Research actionability by year

Award Year	Research Grants by Type		Total
	Actionable	Descriptive	
2004	0	1 (100%)	1
2005	1 (50%)	1 (50%)	2
2006	1 (17%)	5 (83%)	6
2007	0	9 (100%)	9
2008	1 (25%)	3 (75%)	4
2009	3 (50%)	3 (50%)	6
2010	2 (20%)	8 (80%)	10
2011	1 (10%)	9 (90%)	10
2012	1 (12%)	7 (88%)	8
Total	10 (18%)	46 (82%)	56 (100%)

Research categorized by type of methodology

We examined the types of methodology used in the research by the categories shown in Table 6.

Table 6: Type of research methodology

Not a cost or program evaluation	45 (80%)
Program/policy evaluation	9 (16%)
Cost-benefit analysis	1 (2%)
Cost-effectiveness analysis	1 (2%)
Total	56 (100%)

The methods used by descriptive studies appear to be primarily statistical correlation analyses and surveys, though we did not systematically tally them. Most surveys were surveys of provider organizations, not surveys of the actual of potential customers.

Most of the studies examined did not include program evaluation procedures such as such rigorous designs as randomized controls or strong quasi-experimental designs, or even relatively simple pre vs. post comparisons such as interrupted time series designs. (We were generous in categorizing the nine studies as program evaluations as the term is used in the program evaluation community.)

We found only one study that could be labeled a "cost-effectiveness" analysis. That was the 2010 study (RWJF 67618), "Incremental Cost–Effectiveness of Introducing Partner Notification with Selective Screening for STD Control in Louisiana." We found one study that was a cost-benefit analysis, "Estimating the Public Health Return on Investment of Tobacco-Policy Changes in a Time of Reduced Funding for State Control Programs" (RWJF 76622). Another project proposed to determine the return on investment from various state and local public health activities, but the products and project reports available suggested that this part of the project had not been completed.

Section 4: Survey of State Health Departments (SHDs)

Purpose

This part of the assessment used a survey of state health department leaders to obtain information on the extent of knowledge and use of evidence-based research among practitioners and on the extent of impacts seen. The survey also sought suggestions for improvement, such as how research outputs could be made more useful to practitioners.

Major Findings

A substantial majority of state health department (SHD) respondent (83 percent) said they had seen evidence-based public health research studies in the past two years. Those who had seen such studies rated them as either somewhat or very understandable (98 percent) and somewhat or highly relevant to the work of their agency (90 percent).

About a third of the respondents said the studies originated from RWJF programs. Only about half of respondents (21) said their agency had used the findings from public health research studies. These respondents characterized how they used the findings, commonly, as for *informing* programs or policies, budgeting or funding decisions, and quality improvement processes (14 respondents or 29 percent). Only 7 respondents (15 percent) said they specifically used a PHSSR study to make direct changes in service delivery or organization of the agency.

A substantial majority of respondents think that improvements are needed to increase the dissemination (90 percent of respondents or 43 agencies) and usefulness (77 percent of respondents or 37 agencies) of research products. Respondents who thought improvements are needed provided suggestions. Most of the suggestions for improving dissemination and usefulness fell into 10 categories and some agencies provided multiple suggestions:

- Provide summaries of most relevant articles (16 state health departments, 33% of respondents)
- Create a central clearing house of reports (11, 23%)
- Research provides actionable or practice-based recommendations (11, 23%)
- Improve marketing or communication of articles (9, 19%)
- Make easier access to subscription based publications (8, 17%)
- Improve clarity/readability (4, 8%)
- Improve access to research (3, 6%)
- Show Return on Investment of suggested practice (3, 6%)
- Grade evidence of interventions (2, 4%)
- Provide broader context of research evidence (1, 2%)

Methodology

The Urban Institute developed an online survey questionnaire with input from the Association of State and Territorial Health Officials (ASTHO) and other key informants. The survey questionnaire contained skip patterns, thus some questions had more responses than others. The questionnaire had a total of 15 questions, 4 of which were open-ended and 11 close-ended. The Urban Institute guaranteed respondents anonymity.

ASTHO sent the electronic invitations to take the survey on February 6th, 2013 to a sample of 59 state health agencies (the 50 states, D.C., and 8 U.S. territories and freely-associated states). Only one response per state health department was allowed. ASTHO sent a single reminder on February 13th, 2013. The survey closed on March 8th, 2013 with a total of 48 completed surveys for an overall response rate of 81 percent. Thirty-four respondents identified themselves as representing a state, one as representing a territory, one from D.C., and 12 respondents chose not to identify themselves. We estimate about 44 respondents were states, resulting in an estimated state response of 88 percent.

Detailed Findings

Exposure to and understandability of public health research studies

A substantial majority of respondent (83 percent) said they had seen public health research studies in the past two years. Those who had seen public health studies tended to rate them as somewhat or very understandable (98 percent) and somewhat or highly relevant to the work of their agency (90 percent). Though a substantial majority of respondents indicated public health studies were somewhat or highly relevant to their agency, only half (52 percent) said their agencies used information from the studies. Appendix A to this section lists the research studies respondents reported using.

Table 1: Exposure to PHSSR style public health research studies

Over about the past two years, have you seen any public health research studies, including articles, reports, and presentations that provide evidence relevant to the improvement of public-health agency organization, financing, or delivery of services?		
Yes	**No**	**Total**
40 (83%)	8 (17%)	48(100%)

Note: We were strongly cautioned that many decision makers would not be familiar with the term PHSSR, so we embodied a definition in this question instead of using the term itself.

Table 2: Understandability of such research studies

Not understandable	Slightly understandable	Somewhat understandable	Very understandable	Total
0	1 (2%)	20 (50%)	19 (48%)	40 (100%)

Table 3: Relevancy of such public health research studies to work of the SHD

Not relevant	Only slightly relevant	Somewhat relevant	Highly relevant	Total
0 (0%)	4 (10%)	20 (50%)	16 (40%)	40 (100%)

Table 4: Agency has used information from such public health research studies

Yes	No	Total
21 (52%)	19 (48%)	40 (100%)

Use of research products

Respondents that said their agency had used information from evidence-based public health research studies were asked to specify how the information was used. Twenty-one agencies provided relevant responses to this open-ended question. Some respondents reported multiple uses of PHSSR studies, resulting in a total of 31 unique actions their agencies had taken to translate research into practice. These uses fell into roughly 9 categories, shown below in Table 5.

Fourteen respondents (29 percent of all responding agencies) said they used studies to *inform* decisions. These included programs or policies, budgeting or funding decisions, or quality improvement processes. Only 7 agencies (15 percent of all responding agencies) said they used the PHSSR study to make a specific change. These respondents said the PHSSR study directly led to changes in service delivery (2 agencies), the organization of the agencies (3 agencies) or staff training (2 agencies). Listed below are examples of specific reported uses of PHSSR studies (for the full list of uses see Appendix B to this section):

- "Incorporated the results of the studies into state plans for specific diseases/conditions, the overall State Health Plan, specific program interventions, health education materials, training for local health depts. and others."
- "We have used these and other similar studies to design the steps for our quality improvement plan."
- "We have changed the method of interacting with specific groups to identify the best way to get high risk individuals tested and into treatment if positive."
- "To assist in developing a method for SCID testing at the State of CT Public Health Lab. We also used the study to make decisions about the use of strategies to achieve our goals; for general understanding of topic areas; and lessons learned."
- "We used the studies identified (and others) in developing a state Healthy Homes strategic plan."

Table 5: Ways that state health departments reported using such research products

Has your agency used any information from any of these studies (such as to change specific practices)? If yes, please identify how your agency has used the information	
Informed policy or program development	9
Informed budgeting/funding decisions	5
Informed quality improvement	5
Led to changes in organization of the agency	3
Led to service delivery changes	2
Led to staff training	2
Encouraged accreditation or used in meeting accreditation requirements	2
Informed performance management	2
Informed advocacy efforts	1
TOTAL unique actions	31

Readership of journals

Table 6 below displays the results when respondents were asked to select which journals from a list of 11 they had used in the past year to stay current on evidence about public health. The most used publication is The Morbidity and Mortality Weekly Report from The Center for Disease Control (39 of 48 or 81 percent). The next closest journal in usage is the American Journal of Public Health (AJPH) with 32 of 48 (67 percent) respondents saying they have used it in the past year. The least used journals are The Journal of Community Health, Journal of Health Services Research Policy and Frontiers in Public Health Services and Systems Research which were each used by 6 percent or less of respondents.

Table 6: Journals used in the past year

Name of Journal	Used	Not Used
Morbidity and Mortality Weekly Report (MMWR) (CDC)	39 (81%)	9 (19%)
American Journal of Public Health (AJPH)	32 (67%)	16 (33%)
Journal of Public Health Management & Practice	28 (58%)	20 (42%)
Public Health Reports	24 (50%)	24 (50%)
Health Affairs	24 (50%)	24 (50%)
Preventing Chronic Disease (CDC)	13 (27%)	35 (73%)
American Journal of Preventive Medicine (AJPM)	13 (27%)	35 (73%)
Journal of Community Health	3 (6%)	45 (94%)
Journal of Health Services Research Policy	3 (6%)	45 (94%)
Frontiers in Public Health Services and Systems Research	0 (0%)	48 (100%)
Other (See Appendix C for enumeration)	8 (17%)	40 (83%)

Note: There were 48 respondents to this question.

Use of public health research studies originating from Robert Wood Johnson Foundation supported efforts

Respondents were asked two questions to gauge if any public health research reports they had seen came from Robert Wood Johnson Foundation efforts to accelerate the production and use of evidence for public health system improvement. In the first question, seen in Table 7, a third of the respondents (30 percent) said the reports originated from RWJF programs but a majority of respondents (60 percent) answered they did not know whether the studies they saw originated from RWJF programs.

Since explaining PHSSR to practitioner respondents is difficult, respondents were also asked if they had ever seen either of two PHSSR studies that we expected to receive major attention, because of their subject. Table 8 provides the results of this question and shows that over 40 percent had seen either of the reports, a higher percentage than those in Table 7.

Table 7: Did public health research seen by SHDs originate from RWJF programs?

Have any of these studies come from Robert Wood Johnson Foundation-supported efforts to accelerate the production and use of evidence for public health system improvement (such as its programs on Public Health Services and System Research (PHSSR) and Practice-Based Research Networks (PBRNs))?			
Yes	**No**	**Don't know whether the studies seen were part of any of these programs**	**Total**
12 (30%)	4 (10%)	24 (60%)	40 (100%)

Table 8: Exposure to major PHSSR studies

Have you ever seen or heard about either of these articles on the effects of public health funding on public health outcomes? 1. Erwin PC, Greene SB, Mays GP, et al. The association of changes in local health department resources with changes in state-level health outcomes. *Am J Public Health*. 2011;101(4):609-15 2. Mays GP, Smith SA. Evidence links increases in public health spending to declines in preventable deaths. *Health Aff*. 2011;30(8):1585-93.)		
Yes	**No**	**Total**
21 (44%)	27 (56%)	40 (100%)

Improving dissemination and utility of public health research

A substantial majority of SHD respondents think improvements are needed to improve the dissemination (43 agencies or 90 percent) and usefulness (37 agencies or 77 percent) of research products. Those who said improvements are needed in the dissemination or usefulness of products were asked to suggest improvements in open-ended questions. There were 42 organizations that responded with relevant suggestions. Responses tended to be well developed and insightful. Some respondents provided multiple suggestions, resulting in a total of 77 unique suggestions for improving dissemination and usefulness. Respondents' suggestions fell into roughly 10 categories, as displayed below in Table 10.

The most common suggestion was to provide summaries of high-value or particularly relevant articles (16 agencies). Respondents providing this suggestion tended to remark that they receive many articles but do not have time to read them all or do not know which articles to prioritize. Respondents also tended to suggest creating an online central clearing house or weekly digest of reports (11 agencies) and providing actionable or practice-based recommendations in research products (11 agencies). Listed below are examples of suggestions that are representatives of the most common responses. A full list of respondents' suggestions is provided in Appendix D to this section.

- "We do not have access to professional journals at our health department. Professional memberships are discouraged, and we don't subscribe to an internet-based library. We love the free information available on the CDC website. It is frustrating when we need access to recent peer-reviewed journals and we don't have it. Free on-line access to relevant public health journals would be very helpful."
- "A clearinghouse or 'one stop shopping' resource which catalogs these studies."
- "There needs to be a connection between decision makers and research—to help draw the connection between research results and how to make them useful for current events/action"
- "An online report (weekly or monthly) with a summary of the article and coverage of the response to the report. For an example, the AMA publishes a daily morning report, it is a good example. "
- "We all need to show both the ROI (including both the cost avoidance, the financial benefit to society of lives saved--what is a single baby worth in $ to society over its lifetime-far more than the investment in reducing morality but how do we quantify) for primary prevention and the cost of not doing it. We all want people to be healthy, well and live long but this is business. What is our business case? We need research into the value and benefit of primary prevention."
- "I have used research materials to advocate for the creation of new programs, engaging in public discussion on important public health topics (vaccine safety), defend funding decisions and prioritization. But often I have to connect the dots between the research findings and why they are relevant to current activities. Using organizations such as ASTHO to help with building and defining those connections would be helpful in connecting research into a valuable tool in terms of how to make/guide decisions."
- "My biggest concern is how few interventions have passed the evidence-based test in the Community Guide. We need better funding of this type of effort and also need to have rigorous processes of identifying best practices that both provide guidance and acknowledge the limits of current knowledge."

Table 9: Improving dissemination and usefulness of public health research

	Yes	**No**
Do you think improvements are desirable in the dissemination of research products, so as to make them more accessible?	43 (90%)	5 (10%)
Do you think improvements are needed to make research evidence more useful to your agency?	37 (77%)	11 (23%)

Note: There were 48 respondents for this question.

Table 10: Suggestions for improving dissemination and usefulness of public health research

Provide summaries of most relevant articles	16
Create central clearing house of reports	11
Research provides actionable or practice-based recommendations	11
Improve marketing or communication of articles	9
Make easier access to subscription based publications	8
Improve clarity/readability	4
Improve access to research	3
Show Return on Investment of suggested practice	3
Grade evidence of interventions	2
Provide broader context of research evidence	1
Too specific to classify (See Appendix D for enumeration)	9
TOTAL unique suggestions	77

Appendix A: Research studies reported used by SHDs

Health Affairs May 2011 Millstein
Local PH organization - UNC SCHOOL OF GOVERNMENT; Accreditation - UNC SCHOOL OF PH
State generated comparative analysis of expenditures by local health districts on a per capita basis.
Organization of public health agencies; role of public health agencies and health reform.
• J.D. Gunzenhauser, Z.P. Eggena, J.E. Fielding, K.N. Smith, D.M. Jacobson, and N.Bazini-Barakat. • The Quality Improvement Experience in a High-Performing Local Health Department: Los Angeles County. Journal of Public Health Management Practice, 2010, 16(1), 39?48.S.M. Gillen, J. McKeever, K.F. Edwards, and L.Thielen. • Promoting Quality Improvement and Achieving Measurable Change: The Lead States Initiative. Journal Public Health Management Practice, 2010, 16(1), 55?60.
The study is a local ongoing study of public health needs in western North Dakota associated with oil boom. This information has resulted in major strategic adjustments in healthcare and public health in the state and the allocation of funding from the legislature.
economics of prevention; quality improvement
Articles on Lean, and accreditation have influenced our work and direction.
TFAH's reports; Prevention Institute's report re. innovative financing.
We rely on compilations of research studies such as those put together by the Community Guide to preventive services, as well as CDC and other federal funders who incorporate research findings into their cooperative agreement requirements with states. Good examples include the CDC recommended components for state tobacco control programs, evidence based best practices for HIV Prevention Programs and the Community Guide recommendations in a number of areas.
Specific HIV interventions have changed to include only evidenced based interventions that have shown to reduce the number of new HIV positive cases. Interventions are age and gender appropriate as well as evaluations conducted at the end of the intervention to document continuous improvement in behavior modification.
Not research studies per se, rather the use of consultants to bring the expertise to the table and apply current concepts of organizational structure and behavior to our existing structure. It should also be stated that the preparation process (the journey)-so called for accreditation has also been very helpful in helping us think about organizational structure.
Department-wide Quality Improvement Plan
Obesity, immunization, infant mortality, family planning, workforce development
QI Culture Planning Workshop facilitated by Jack Moran; chronic disease integration recommendations from NACDD & CDC
Public Health Management and Practice issue on QI in Public Health - January/February 2012
Priority Setting Exercise
Implementing routine testing for severe combined immunodeficiency within Wisconsin's newborn screening program. Baker MW, Laessig RH, Katcher ML, Routes JM, Gorssman WJ, Verbsky J, Kurtycz DF, Brokopp CD.Topic: Quality Improvement, Health Improvement Planning

Healthy Homes(e.g., RI Dept. of Public Health, AHRQ Technical Assistance Project: Feasibility of Environmental Interventions for Asthma; Medical Foundation, Healthy Homes Needs and Resource Assessment Report--New England; CDC, Developing a Healthy Homes Program).

Appendix B: How SHDs reported using PHSSR products

Responses from SHDs:	**Category of response:**
Modeling prevention in public health	Informed policy or program development
Advocacy and Introspection	Informed advocacy efforts
Set Priorities of State and Federally mandated tasks for health care issues in preparation for possible decrease in funding.	Informed policy or program development
Initiation of billing practices and quality improvement measures	Informed policy or program development; Informed quality improvement
Incorporated the results of the studies into state plans for specific diseases/conditions, the overall State Health Plan, specific program interventions, health education materials, training for local health depts. and others	Informed policy or program development; Led to staff training
Policy development for local health department future funding, accreditation, shared services, etc	Informed policy or program development; Informed budgeting/funding decisions; Encouraged accreditation or used in meeting accreditation requirements
We used the studies identified (and others) in developing a state Healthy Homes strategic plan.	Informed policy or program development
We have realigned our strategies to help meet the immediate and long term needs in the state. Both sides of the isle realize the importance of worksite wellness and school wellness. By aligning with these perceived / real needs we position public health positively for legislative activity versus an opponent.	Informed policy or program development
We develop RFPs for funding in programs like tobacco control, obesity prevention, HIV prevention, etc. This funding goes to local health	Informed policy or program

departments, health care organizations and community based providers in our state. We also use the information to develop state policies, regulations and legislative proposals.	development; Informed budgeting/funding decisions
We have used these and other similar studies to design the steps for our quality improvement plan.	Informed quality improvement
We have begun strategic planning and implemented performance improvement initiative.	Informed quality improvement
Used to argue for prevention funds from Gov/legislature; instituted department-wide QI process	Informed quality improvement; Informed budgeting/funding decisions
Identified areas for Quality Improvement through meetings with DPH Branch Chiefs and Managers. Each branch is to select a project to apply the principles of Quality Improvement. The laboratory will be holding regular QA meetings with managers and supervisors to address improving Corrective Action Reports, improving data entry processes and updating standard operating procedures.	Informed quality improvement
Strategic planning, budget prep (ROI arguments), accreditation	Informed budgeting/funding decisions; Informed policy or program development; Encouraged accreditation or used in meeting accreditation requirements
We applied for a state innovation planning grant.	Informed budgeting/funding decisions
To assist in developing a method for SCID testing at the State of CT Public Health Lab. To make decisions about the use of strategies to achieve our goals; for general understanding of topic areas; lessons learned	Informed performance management; Led to service delivery changes
Obtaining guidance in the organization of the Health Department and its role in the delivery of services.	Led to changes in organization of the department
Performance management planning & implementation; used to inform realignment of bureau programs & staff.	Led to changes in organization of the department; Informed performance management

Have changed the method of interacting with specific groups to identify the best way to get high risk individuals tested and into treatment if positive.	Led to service delivery changes
We have taken the information and realigned the organization to be more appropriate to meet the needs of our strategic direction.	Led to changes in organization of the department
Educate staff	Led to staff training

Appendix C: Journals used in the past year - "Other"

Other Journal:
WHO Environmental Health outcomes in Asia-Pacific. Pacific Islanders Chronic Disease Morbidity/Mortality.
JAMA, Pediatrics, Council of State Government reports, Indian Nation
NEJM, JAMA *(1 other respondent listed the same two journals)*
Managed Healthcare Executive; Governing.
Not Journals but ASTHO policy papers that reference them and CDC materials and research studies
Public Health Reports, Governing, PLOS Medicine
On line reporters

Appendix D: Suggestions for improving dissemination and usefulness of research

Suggestions from SHDs	**Category of suggestion**
Provide alerts, fact sheets, compilations by specific topic area, webinars, summary results rather than having to always read entire articles	Provide summaries of most relevant articles
Direct to State Health Official email of relevant reports.	Provide summaries of most relevant articles
Having talking point, brief fact sheets	Provide summaries of most relevant articles
Summary of relevant articles sent by list serve, with links to actual articles.	Provide summaries of most relevant articles
It would be helpful if valuable information in journal articles could be pushed out to the field. It is difficult to find time in the day to find useful journal articles.	Provide summaries of most relevant articles
See the AMA on line news. Format is the extraction of relevant articles, and media coverage of those articles.	Provide summaries of most relevant articles
A monthly list of no more than 5 priority research articles of importance to improving the practice of public health in the US from ASTHO would be helpful.	Provide summaries of most relevant articles
Should be summarized in a format useful for policy decision makers.	Provide summaries of most relevant articles
Talking points to use with elected officials and other policy makers	Provide summaries of most relevant articles
Preparation of summaries of research findings by leading public health officials and scholars.	Provide summaries of most relevant articles
Brief, brief, summaries	Provide summaries of most relevant articles
Whatever works. We get tons of e-mail reports and can only read so many. Make yours stand out somehow.	Provide summaries of most relevant articles
Providing research summaries online *(2 other respondents gave very similar suggestions)*	Provide summaries of most relevant articles; Central clearing house of

	reports
An online report (?weekly, monthly?) with a summary of the article and coverage of the response to the report. For an example, the AMA publishes a daily morning report, it is a good example	Provide summaries of most relevant articles; Central clearing house of reports
A clearinghouse or "one stop shopping" resource which catalogs these studies...something like the Cochrane Collaborative. *(2 other respondents gave a very similar suggestion)*	Central clearing house of reports
A no cost or limited cost print and electronic digest, similar to the clinical notes put out by many specialties or the medical letter. It has to be well written and not just the abstracts. Look at what the CDC does with its sidebars in the MMWR.	Central clearing house of reports
Readily accessible. In the past, relevant articles that were published were distributed via list-serve as a .pdf	Central clearing house of reports
Something similar to the Epi-X system that provides an ongoing update of research articles as well as a library/repository of research summaries.	Central clearing house of reports
Development of repository for evidence-based PH administrative practices, for easier reference. Robust description of the context, re likelihood of transferability.	Central clearing house of reports
Compendiums of evidence-based best practices are quite useful, e.g., CDC's Community Guide.	Central clearing house of reports
There needs to be an abstract publication on a weekly basis focused on public health and public health agencies.	Central clearing house of reports; Provide summaries of most relevant articles
Examples of how people have successfully used the study results	Research provides actionable or practice-based recommendations
Greater emphasis on translation of research into practice; examples of successful implementation	Research provides actionable or practice-based recommendations
Translation of research reports into action recommendations through national organization review and comment.	Research provides actionable or practice-based recommendations
Articles that are practice-oriented; high level summaries	Research provides actionable or practice-based recommendations; Provide summaries of articles
Need help translating research to practice, policy & systems change	Research provides actionable or practice-based

	recommendations
There needs to be a connection between decision makers and research - to help draw the connection between research results and how to make them useful for current events/action	Research provides actionable or practice-based recommendations
I believe the most important improvement would be a stronger focus on research topics that provide practical input on the core responsibilities of public health.	Research provides actionable or practice-based recommendations
Some improvements are carried out because we have funding to do so, not necessarily because we have clear evidence that they are effective. We should strive to make all of our program planning and implementation based on evidence, and pass on those activities with limited evidence of effectiveness. Other suggestions include translation of scientific findings to implementation at the population level and better estimates of implementation cost and associated outcomes.	Research provides actionable or practice-based recommendations
Again, more PH system research is needed. We also rely on webinars and other information from ASTHO and NACHHO, however, some of the recent information has not been that helpful. For example, the information on return on investment with QI provided by ASTHO was a potpourri. We found it hard to transfer this to our work or advocacy.	Research provides actionable or practice-based recommendations
Providing practical guides to apply the research depending on the audience.	Research provides actionable or practice-based recommendations
More translational research.	Research provides actionable or practice-based recommendations
Make it more practical and less academic and less totally monetarily driven.	Research provides actionable or practice-based recommendations
Use of public health organizations to vet and disseminate article links.	Improved marketing or communication of articles
Pushing out the materials more actively and having them more focused and targeted to relevant areas. Review at all SHO and Deputy conference calls.	Improved marketing or communication of articles
Mechanism to increase awareness of and access to research would be helpful. I've not heard of the Erwin or Mays papers, but am interested.	Improved marketing or communication of articles
Links to important articles highlighted in the ASTHO e-newsletter by topic may be one way to highlight critical research that may benefit states.	Improved marketing or communication of articles
Notification of research as it occurs and how it pertains to our work	Improved marketing or communication of articles
Use existing vehicles such as the Community Guide with notifications	Improved marketing or

when contact is updated.	communication of articles
Improved communication with mainstream media outlet reporters who routinely publish findings from health care related studies (e.g., published in NEJM, JAMA, Nature)but rarely--by comparison--for public health related studies.	Improved marketing or communication of articles
Marketing them more so that we know they exist	Improved marketing or communication of articles
The need to purchase multiple journals to read only a very few articles is a problem for public health agencies. Some of us can get electronic access through medical school libraries but many can't.	Make easier access to subscription based publications
Public domain publications. We cannot afford to pay for subscriptions to journals. Some type of "club" for articles review targeting high level management at Public health agencies, not only program based personnel.	Make easier access to subscription based publications
Access to more journals, e.g. J.Clin. Micro.	Make easier access to subscription based publications
Group subscriptions to on-line publications; more access to peer-review journals via public health organizations, such as ASTHO, CSTE, etc.	Make easier access to subscription based publications
Free access; easier access (online)	Make easier access to subscription based publications
Availability to the journals when budgets are tights, selected articles shared with state and local health jurisdictions shared resource by working with state and local national organizations (ASTHO and NACCHO)	Make easier access to subscription based publications
We do not have access to professional journals at our health department. Professional memberships are discouraged, and we don't subscribe to an internet-based library. We love the free information available on the CDC website. It is frustrating when we need access to recent peer-reviewed journals and we don't have it. Free on-line access to relevant public health journals would be very helpful.	Make easier access to subscription based publications
Broader dissemination through various list serves; access to articles even if the organization/individual does not hold the subscription.	Make easier access to subscription based publications; Improved marketing or communication of articles
Research products must include details of the content, context, and resources needed before they can be assessable or implemented as planned. Programs and practices must be adapted to meet the particular challenges of an organization such as budget or union constraints. Health Departments must be able to contribute to the planning of the research products, if they are going to be involved in the utilization or implementation process.	Improve clarity/readability
Ensuring that the materials are relevant and presented in such a way that	Improve clarity/readability

they can be woven into the work that we do.	
To each report with policy implications, add the "soundbite" that makes it easy to have policymakers understand.	Improve clarity/readability
Connect relevancy to varied public health sector	Improve clarity/readability
1. Internal review and clear policy for dissemination and discussion of new EB practice.2. Wider intra-agency access to a publications	Improved access to research
It would be helpful to have the information readily available on certain websites.	Improved access to research
Easier access - contact Communication officers within the different departments so that you can get an idea of the research and environment each agency is dealing with and then you could better offer new ideas/research/products.	Improved access to research
We all need to show both the ROI (including both the cost avoidance, the financial benefit to society of lives saved--what is a single baby worth in $ to society over its lifetime-far more than the investment in reducing morality but how do we quantify) for primary prevention and the cost of not doing it. We all want people to be healthy, well and live long but this is business. What is our business case? We need research into the value and benefit of primary prevention.	Show ROI of suggested practice
Since public health focuses on long-term outcomes, there needs to be a better link made between current activities and long-term outcomes and cost savings. To me that means some modeling for outcomes.	Show ROI of suggested practice
Research that highlights the impact of public health on quality of life, life expectancy, and most importantly, direct savings (ROI) is always helpful when we look for sources of funding for infrastructure or program development.	Show ROI of suggested practice
My biggest concern is how few interventions have passed the evidence-based test in the Community Guide. We need better funding of this type of effort and also need to have rigorous processes of identifying best practices that both provide guidance and acknowledge the limits of current knowledge.	Grade evidence of interventions
Efforts like the Community Guide to grade the evidence on interventions suggested by research need to be expanded I implementation guides need to be developed for those areas with highly graded evidence based interventions. Learning collaboratives for states working through implementation issues.	Grade evidence of interventions
The in depth specifics of the system studied are critical to possible adoption or adaption. The broader context of the system and its functioning.	Broader context of research evidence
Relevant studies specific to regional and sub-regional target population in morbidity rate. As such the leading causes of Pacific Islands morbidities in tropical challenged environment.	Too specific to classify
Public health reports had a section called "local acts" which was really focused on initiatives at the LHD level. something like that for states would be great.	Too specific to classify
Outcomes on chronic diseases, How does a state lab impact our people	Too specific to classify

and research or evidence based info to prove that they are crucial to our work Leadership. How do we measure the quality of a strong leadership organization with metrics ie as cooperatively, collaboration, partnership role modeling, communicators??	
Disseminate through ASTHO	Too specific to classify
Because we function differently from other DPH programs, examples of laboratory specific improvements would be helpful.	Too specific to classify
Have a dissemination plan .The dissemination plan should account for barriers such as budget and union constraints. The dissemination plan should address questions or problems the agency wants addressed.	Too specific to classify
I have used research materials to advocate for the creation of new programs, engaging in public discussion on important public health topics (vaccine safety), defend funding decisions and prioritization. But often I have to connect the dots between the research findings and why they are relevant to current activities. Using organizations such as ASTHO to help with building and defining those connections would be helpful in connecting research into a valuable tool in terms of how to make/guide decisions.	Too specific to classify
The information cannot simply be more money equals better public health. ROI is often more important to decision makers than more money equals better public health. Real data-driven programs need to be provided with ROI data. ROI would have to be total cost (state/federal) funds as well as programmatic/administrative costs.	Too specific to classify

Section 5: Survey of Local Health Departments (LHDs)

Purpose

The survey of local health departments sought to obtain information on the extent to which local health department officials are aware of public health research, how relevant or useful such research has been to their practice, and what improvements they suggest for better dissemination and increasing the usefulness of the research.

Major Findings

We surveyed a representative sample of 437 local health departments, using the listing maintained by the National Association of County and City Health Organizations (NACCHO). We received 156 responses, a 36 percent response rate.

Almost all respondents reported having seen at least one such public health research study in the past two years and found what they saw to be understandable. These were not necessarily RWJF-supported studies, but based on discussion with knowledgeable informants, we believe the respondents would understand them to be of a PHSSR nature, that is, to supply systematic evidence about public health structure, financing, or organization.

The survey generated the following key findings:

- A large majority of respondents indicated that public health studies were relevant to their agency.
- However, fewer than half of respondents said their agencies actually used information from such studies.
- Only 17 percent of the reported uses cited by respondents appeared to have clearly resulted in actual changes to policy or service delivery.
- A very high share (86%) provided at least one open-ended suggestion for either improving dissemination and/or usefulness of the public health research.

Suggestions for improvements in *dissemination* mainly fell into one of seven categories:

- Creating a central clearinghouse of reports
- Increasing dissemination efforts by public health organizations like NACCHO and APHA
- Improving notification or communication of articles
- Providing easier access to subscription-based publications or otherwise reducing the cost of access to public health research
- Offering a subscription e-mail list of relevant articles
- Sending relevant articles directly to LHD agency directors
- Creating a catalog of webinars explaining articles or reports of implementation of findings

Some of the suggestions for improving *usefulness* were too specific to categorize, but the remainder fell into one of the following eight categories:

- Providing summaries of the most relevant articles
- Translating research into actionable or practice-based recommendations
- Improving clarity or readability
- Conducting more practice-based research
- Conducting more cost-efficiency studies
- Providing training workshops or other assistance (e.g. staffing, funding, tools, pre-made forms) to assist health departments in implementing recommendations
- Increasing awareness of public health issues and research among general public and elected officials/local policymakers
- Making research more relevant to small or rural communities

Because we believe the responses contain considerable additional information that might be of interest to many researchers, local health department officials, and research funders, we have included the responses, edited to preserve anonymity, in appendices to this section.

Methodology

The survey was administered via short online questionnaire developed by the Urban Institute with input from the National Association of County and City Health Officials (NACCHO) and other key informants. NACCHO randomly drew a sample of 500 LHDs to receive an electronic survey. The sample included LHDs from 5 jurisdiction population categories: less than 25,000; 25,000 to 49,999; 50,000 to 99,999; 100,000 – 499,999; and 500,000 and above. We analyzed the responses to the survey questions by jurisdiction type; in only a few cases, noted in the text, did answers vary substantially by jurisdiction size. Following standard NACCHO practice, the survey was emailed to the agency chief executive or deputy executive. The wording of questions appears in the tables below. (We were uniformly advised against using the term PHSSR early in the survey questions. It does not yet have wide currency among practitioners. Everyone, in contrast, is said to understand evidence-based public health and research contributing to it.)

Using a cover letter provided by Robert Wood Johnson Foundation to boost credibility, the Urban Institute sent the survey invitations by email on November 26, 2012. A series of up to seven additional reminder letters was sent to non-respondents, the last on February 13, 2013. The email addresses of 63 respondents did not work, so that successful requests went to 437 LHDs. We received 156 responses, including eight partially completed surveys, a response rate of 36 percent. Table 1 includes response rates by jurisdiction size.

Table 1: Survey response rate by LHD jurisdiction size

	Jurisdiction Size of LHD					
	<25,000	25,000-49,999	50,000-99,999	100,000-499,999	500,000+	Total
Initially requested	75	75	142	142	66	500
Dropped/failed e-mails	15	9	19	13	7	63
Successfully requested	60	66	123	129	59	437
Questionnaires completed	15	27	36	51	27	156*
Percent completed	25%	41%	29%	40%	46%	36%

**Includes eight partially completed surveys.*

Detailed Findings

The understandability and relevancy of public health research studies

A substantial majority of respondent (86 percent) said they had seen public health research studies in the past two years, as shown in Table 2. Those who had seen public health studies tended to rate them as somewhat or very understandable (91 percent) and somewhat or highly relevant to the work of their agency (84 percent), as shown in Table 3 and Table 4, respectively. Respondents from the largest jurisdictions, those with populations over 500,000, were most likely to find the research relevant to them, while smaller jurisdictions least likely, though the differences were small. Of the 13 respondents from the smallest jurisdictions, those with 25,000 or fewer residents, 77 percent reported finding the public health research they had read in the last two years somewhat or highly relevant, compared to 92 percent of the 25 respondents from the jurisdictions with populations over 500,000.

Table 2: Exposure to public health research

Over about the past two years, have you seen any public health research studies—including articles, reports, and presentations—that provide evidence relevant to the improvement of public-health agency organization, financing, or delivery of services?		
Yes	**No**	**Total**
134 (86%)	22 (14%)	156 (100%)

Note: we were strongly advised not to use the term PHSSR to frame the survey's focus. Thus, respondents likely included both public health research studies that came from PHSSR grants of RWJF and similar work from other sources, including PHSSR-like studies sponsored by RWJF.

Table 3: Understandability of such public health research

Overall, how would you rate the understandability of these studies?				
Not understandable	**Slightly understandable**	**Somewhat understandable**	**Very understandable**	**Total**
0	12 (9%)	72 (54%)	49 (37%)	133 (100%)

Note: One respondent did not answer this question.

Table 4: Relevancy of such public health studies to the work of the LHD

Overall, how would you rate the relevance of these studies on the work of your agency?				
Not relevant	**Only slightly relevant**	**Somewhat relevant**	**Highly relevant**	**Total**
1 (1%)	20 (15%)	76 (57%)	37 (27%)	134 (100%)

Usefulness of the identified public health research

Although a substantial majority of respondents indicated that public health studies were somewhat or highly relevant to their agency, Table 5 shows that fewer than half (40 percent) said their agencies used information from the studies. Interestingly, both the smallest and the largest jurisdictions were more likely to report using the information from the studies: 62 percent of 13 respondents from the smallest jurisdictions reported using the information from PHSSR studies and 76 percent of the 25 respondents from the largest jurisdictions said the same.

Table 5: Agency has used information from such public health research studies

Has your agency used any information from any of these studies (such as to change specific practices)?			
Yes (both seen and used)	**No (seen but not used)**	**No (research not seen)**	**Total**
62 (40%)	71 (46%)	22 (14%)	155 (100%)

Note: One additional respondent did not answer this question.

Of the 62 respondents who indicated that their agency had used the information from public health research studies, 59 respondents identified a total of 74 actions their agencies had taken to translate the research into practice. These fell into roughly 16 categories, shown below in Table 6. The category "Informed policy or program development" was reported by 25 percent of the 59 LHDs. The respondents did not provide more specific information to indicate to how or to what extent the research had affected policy or program development. The remainder of the uses identified were scattered over the other categories. Only 17 percent of the reported actions appeared to have clearly resulted in actual changes to policy or service delivery.

Table 6: Ways that local health departments have used public health research products

Has your agency used any information from any of these studies (such as to change specific practices)? If yes, please identify how your agency has used the information.	Number (% of responding agencies)
Informed policy or program development	15 (25%
Informed budgeting/funding decisions	8 (14%)
Led to service delivery changes	7 (12%)
Encouraged new/improved existing partnerships	7 (12%)
Informed continuous quality improvement process	5 (8%)
Informed service delivery changes	5 (8%)
Encouraged accreditation or used in meeting accreditation requirements	3 (5%)
Informed advocacy efforts	3 (5%)
Informed public health campaigns	3 (5%)
Informed staffing considerations	3 (4%)
Led to policy changes	3 (4%)
Informed setting of policy priorities	2 (3%)
Informed neighborhood strategy	1 (2%)
Will lead to building improvements	1 (2%)
Educated stakeholders	1 (2%)
Too specific for category	7 (12%)

Respondents who reported having seen public health research were also asked separately if they had ever used research evidence in advocating for their own budgetary funding. Among the 104 respondents, six out of ten respondents said they had used the research evidence in this way.

Table 7 displays the results when respondents were asked to select from a list of 11 journals which they have used in the past year to stay current on evidence about public health. Notably, the Morbidity and Mortality Weekly Report from the Centers for Disease Control is used by many more respondents (125 of 156 or 80 percent) than the other journals. The next closest journal is the American Journal of Public Health (AJPH) with 77 of 156 (49 percent) respondents saying they have used it in the past year. The Journal of Community Health, Journal of Health Services Research Policy and Frontiers in Public Health Services and Systems Research were all used by five percent or less of respondents.

Table 7: Journals used in the past year

Name of Journal	Used	Not Used
Morbidity and Mortality Weekly Report (MMWR) (CDC)	125 (80%)	31 (20%)
American Journal of Public Health (AJPH)	77 (49%)	79 (51%)
Public Health Reports	69 (44%)	87 (56%)
Journal of Public Health Management & Practice	54 (35%)	102 (65%)
Preventing Chronic Disease (CDC)	37 (24%)	119 (76%)
Other (See Appendix A for enumeration)	28 (18%)	128 (82%)
Health Affairs	22 (14%)	134 (86%)
American Journal of Preventive Medicine (AJPM)	21 (13%)	135 (87%)
Journal of Community Health	8 (5%)	148 (95%)
Journal of Health Services Research Policy	5 (3%)	151 (97%)
Frontiers in Public Health Services and Systems Research	3 (2%)	153 (98%)

Use of evidence from public health research studies funded by the Robert Wood Johnson Foundation-grants

Respondents were asked two questions to gauge if any public health research reports they had seen came from Robert Wood Johnson Foundation efforts to accelerate the production and use of evidence for public health system improvement. In the first question, as seen in Table 8, a third of the respondents (32 percent) said the reports originated from RWJF programs but a majority of respondents (58 percent) answered they did not know whether the studies they saw originated from RWJF programs.

Table 8: Did such public health research seen by LHDs originate from RWJF programs

Have any of these studies come from Robert Wood Johnson Foundation-supported efforts to accelerate the production and use of evidence for public health system improvement (such as its programs on Public Health Services and System Research (PHSSR) and Practice-Based Research Networks (PBRNs))?			
Yes	**No**	**Don't know whether the studies seen were part of any of these programs**	**Total**
41 (32%)	13 (10%)	74 (58%)	128 (100%)

Note: Six respondents did not answer this question.

Explaining PHSSR to practitioner respondents is difficult. Therefore, respondents were also asked if they had ever seen either of two leading PHSSR studies that we expected to receive major attention. Table 9 provides the results of this question and shows that a third of the respondents (32 percent) had seen at least one of the reports.

Table 9: Exposure to major PHSSR studies

Have you ever seen or heard about either of these articles on the effects of public health funding on public health outcomes? 1. Erwin PC, Greene SB, Mays GP, et al. The association of changes in local health department resources with changes in state-level health outcomes. Am J Public Health. 2011;101(4):609-15 **2.** Mays GP, Smith SA. Evidence links increases in public health spending to declines in preventable deaths. Health Affairs. 2011; 30(8):1585-93.		
Yes	**No**	**Total**
48 (32%)	101(68%)	149

Improving dissemination and utility of public health research evidence

A substantial majority of LHD respondents thought improvements are needed to improve the dissemination and usefulness of research products. As Table 10 shows, 83 percent of respondents would like to see improvements in the dissemination of public health research. LHDs from the smallest jurisdictions were slightly more satisfied with dissemination compared to the average, and LHDs from larger jurisdictions were slightly less satisfied. Of the respondents from places with populations of less than 25,000, 71 percent thought dissemination could be approved, compared to 91 percent of LHDs from jurisdictions with populations exceeding 500,000. As Table 10 also shows, three-quarters of respondents think improvements are needed to make the research more useful to local health departments.

Table 10: Improving dissemination and usefulness of public health research

	Yes	**No**
Do you think improvements are desirable in the dissemination of research products, so as to make them more accessible?	123 (83%)	26 (17%)
Do you think improvements are needed to make research evidence more useful to your agency?	110 (74%)	39 (26%)

Of the 137 respondents who felt that dissemination or usefulness of research could be improved, 134 local health departments (or 86% of all respondents) provided specific suggestions for dissemination. Some provided more than one suggestion, for a total of 114 suggestions addressing dissemination and 127 suggestion addressing usefulness. These are categorized in Tables 11 and 12 below. The most common suggestions for improving dissemination encouraged improved access to subscription-based publications, mainly by reducing the cost or making them free. Here are a few examples (a full list can be found in Appendix B):

- "Often when I am trying to find information, the studies are only available at a cost of subscription.... I am exploring a work around but it would be helpful if LHD's had easier access."
- "Access to university electronic library systems. Can't afford all the journals that would like to."

- "With declining resources at the local level it is very difficult to subscribe to multiple journals to obtain the latest of public health research."

Table 11: Suggestions for improving dissemination of public health research products

Make easier access to subscription-based publications	24 (21%)
Create central clearinghouse of reports	20 (18%)
Increase dissemination efforts by public health organizations like NACCHO and APHA	17 (15%)
Offer a subscription e-mail list of relevant articles	16 (14%)
Improve notification or communication of articles	9 (8%)
Send relevant articles directly to LHD agency directors	9 (8%)
Create catalog of webinars explaining articles or reports of implementation of findings	7 (6%)
Too specific to categorize	12 (11%)

Of the 137 respondents who felt that dissemination or usefulness of research could be improved, 102 local health departments (or 65% of all respondents) provided specific suggestions for how the public health research might be made more useful. Some provided more than one suggestion, for a total of 127 suggestions, which are categorized in Table 12 below. The most common suggestions centered on providing recommendations or guidance for how the research might be translated into practice by health department. The second most common suggestion was that the research focus be more firmly rooted in practice. A few examples follow, and a full list of the suggestions can be found in Appendix C.

- "For research to be applicable, it must answer questions generated from practitioners. Research conducted in the context of a purely academic question will not find an easy niche for application."
- "My poor rural county leadership is not interested in "Ivory Tower" research. How about some "rubber meets the road" research?"
- "As a local health officer, I would like to see research applicable to typical programs and services offered at the local level: Healthy Start, WIC, STD, HIV, TB, dental, health education, swimming pool health and safety, epidemiology and communicable disease programs for example."
- "Much of the research that I read about is very academic and not very practical to health department service provision."
- "More practice. Research needs to be aligned with city and county level interests and struggles, rather than those who work in an academic office."

Table 12: Suggestions for improving usefulness of public health research products

Provide summaries of most relevant articles	28 (27%)
Translate research into actionable or practice-based recommendations	26 (25%)
Conduct more practice-based research	18 (18%)
Make research more relevant to small or rural communities	12 (12%)
Provide training workshops or other assistance (e.g. staffing, funding, tools, pre-made forms) to assist health departments in implementing recommendations	8 (8%)
Conduct more cost-efficiency studies	7 (7%)
Improve clarity/readability	7 (7%)
Increase awareness of PH issues and research among general public and elected officials/local policymakers	5 (5%)
Too specific to categorize	16 (16%)

Appendix A
Journals used in the past year: "Other"

Other Journal:
HRSA home visiting models such as Nurse family partnership and healthy families America, Carrera model for teen pregnancy prevention. we received funding for all 3 models
NEJM, JAMA, Science
Florida Specific Reports and Surveys
JAMA, NEJM
JAMA
Journal of American Planning Association
Monthly publications by the American Public Health Association. Public Health related articles in the ACP Journal and JAMA (not frequent.)
New England Journal of Medicine
NACCHO updates
National Medical Association Journal Journal of Health Care Underserved and Vulnerable Populations
Journal of Primary Care and Community Health
Newspaper articles from Google searches
NACCHO articles
articles provided by CDC and groups such as the Immunization Action Coalition.
NACCHO
Journal of Environmental Health
Journal of Public Health Management & Practice
Online E-newsletters from American Diabetes Association, NACCHO, Vital Signs from CDC, Bureau of Injury Prevention, etc.
NACCHO reports
AHRQ
NC IOM reports. NC Medical Journal which is published by NCIOM.
journal of environmental health, NACCHO news, NALBOH Journal
NACCHO website
NACCHO Exchange reports

Appendix B: Suggestions for improving dissemination of public health research

Please note that the answers included in Appendix B are the verbatim responses to questions requesting suggestions for improving dissemination. If respondents provided a suggestion that in fact addressed usefulness, it is listed in this appendix. However, for the purpose of the counts included in Tables 11 and 12 above, the comment would be categorized as a usefulness suggestion.

8a. What improvement do you suggest?	**Suggestion 1**
Public health, especially at the local level, has no effective voice and is being forgotten by CDC and by health care reform. CDC should enable local public health agencies to directly apply for grants and cooperative agreements and not have to submit applications through their state health agency. CDC should spearhead efforts to make existing data available to local and state public health agencies, especially Medicare and Medicaid data.	Too specific to categorize
Articles and studies that explore the dichotomy that exists between Public Health funding and health outcomes vs. the categorical disease-based funding that still predominates would help.	Too specific to categorize
Studies on how to increase effectiveness of rural local health depts....much of the research is on big (Metro, state) LHD's or lumps so many together less relevant to smaller jurisdictions despite smaller ones being the majority of LHD's in US. Case studies might be helpful. Emphasis on effective organizational tools. Decrease descriptive research; less useful at the local practice level. Research and disseminate novel ways to fund general chronic disease primary prevention for LHDs(not disease or risk factor specific funding like tobacco or diabetes, but general prevention funding that could be used for more upstream approaches, on more levels of the Spectrum of Prevention, on social determinants of health). HiAP authority and tools for LHD's and for state PH agencies.	Too specific to categorize
Dissemination through more local channels	Too specific to classify
Link evidence based practices to the Prevention Agenda and provide examples of practices/programs that are scalable from small to large populations.	Too specific to classify
Wider dissemination of available topics to public health workers, not just those signed up to list serves.	Too specific to classify
The savings that can be obtained from preventive health and health promotion should be brought to the local level. I see savings in terms of states but not locally. My counties are poor and rural and they aren't impressed with "savings" when they don't spend much on health care to begin with. The net effect would be that they would have to spend more than they already do to save money that they don't spend anyway.	Too specific to classify

Have research articles referenced during contract negotiations and have them easily accessible on the DHS Website. Incorporate them more into our daily activities through formalizing their use (accreditation work helps in this, but need to find a way to have research support and validate the current work we are doing by incorporating accreditation and the 140 Reviews for LHD's).	Too specific to classify
The [state] university has been instrumental in helping local public health to learn how to find evidence based studies and materials and it would be helpful if that work could continue. We have to learn to find and read and use such research studies.	Too specific to classify
I think it is hard to split time and read everything we need and it would be nice to get just a short update from our State officials or our [state health department] Executive Director.	Too specific to classify
Quantify FTE reductions to lost productivity and all-hazard preparedness	Too specific to classify
Publications presented at [state] Health Commissioner Association's bi-annual meetings.	Too specific to classify
An information link through organizations like [State] Health Officers Association, [State] Association of Health Boards, or other Regional Health Groups.	Too specific to classify
Easy translation of research finding to be usable for community based programming	Research translated into actionable or practice-based recommendations
The most helpful is trainings or meetings specifically to translate research into practice.	Research translated into actionable or practice-based recommendations
More outreach to local Board of Health more practical research for local health department	Research translated into actionable or practice-based recommendations
Public health funding as it relates to outcomes. Right-sizing public health workforce to the population size of a jurisdiction or region. Translating data into easy to read documents and marketing tools.	Research translated into actionable or practice-based recommendations; Improved clarity/ Readability
Form a committee of public health practitioners that choses one article of merit each month and send electronic copies to the entire universe.	Provide summaries of most relevant articles
Cannot "over-disseminate." Better web and email dissemination that not only provides summaries of the results, but enable greater access to the published manuscripts. The journals still require subscription for this type of access.	Provide summaries of most relevant articles; Make easier access to subscription based publications

Some way of making what they learning from them more concise, some newsletters have tried to do this, but I still find I don't have the time to read them.	Provide summaries of most relevant articles
I don't have time to review and search through journals. It would be nice to have an entity do a review and research and send out links to articles/research pertinent to current issues/trends in Public Health - possibly by category.	Provide summaries of most relevant articles
There are numerous excellent policy and resource materials related to public health practice improvement. Also, there are numerous distribution lists that send out the information. Strengthening systems for creating a executive brief type listing summarize key findings and then link the reader to the full articles would helpful. Front-line public health practitioners can easily reach information overload.	Provide summaries of most relevant articles
It would be helpful if products were summarized with hyperlinks included in a quarterly publication and disseminated electronically.	Provide summaries of most relevant articles
Perhaps a quarterly summary of new research applicable to local health departments would be a good step. Reviewing articles is very time consuming for smaller departments.	Provide summaries of most relevant articles
Summarize results and include recommendations to make the results actionable by the implementing agency.	Provide summaries of most relevant articles; Research translated into actionable or practice-based recommendations
In a small rural health department where the director has many job functions including division manager and field inspections there is little time to read. A recommended reading list or recommended top two journals would be helpful and maximize efficiency of reading time.	Provide summaries of most relevant articles
It would be helpful for local public health practitioners to have a monthly digest of important articles. Also, I would appreciate essays and articles regarding the future of public health and public health agencies, structure for local public health agencies, and future roles for local public health agencies.	Provide summaries of most relevant articles
Provide a digest of links to reports related to the same topic area and send them out once a month all together. I receive literally thousands of emails over the course of a year and cannot always read and respond to information received on a daily basis so it goes by and then I do not go back to it to read. I have very little time in my day to read the latest information or research so a digest and a summary/abstract of findings/recommendations in one place once a month I believe would be helpful to me.	Provide summaries of most relevant articles; Central clearing house of reports
Briefs	Provide summaries of most relevant articles

Better summarization in language that is broadly understood by professionals and laypersons. One page summaries that describe the problem, potential barriers, and possible solutions.	Provide summaries of most relevant articles; Improved clarity/ readability
The improvement should be on disseminating the research in a way that is not overwhelming to decision makers and citizens and somehow there needs to be a way to easily identify "quackery" from other promising practices or other evidence based research. Both decision makers and community members will find these "out of the norm" findings from some internet site and claim that it is legitimate.	Provide summaries of most relevant articles
Summaries of key points. Relevancy to frontier health departments.	Provide summaries of most relevant articles
Cost is often prohibitive, electronic access at reduced costs would enhance public health professional access.	Make easier access to subscription based publications
For most of us we do not have the means to purchase these research articles and often look for ways to receive low cost accessibility to receive and review these articles. We also need better partnerships with academic setting for awareness of their research studies.	Make easier access to subscription based publications; Improved notification or communication of articles
Open access to complete articles	Make easier access to subscription based publications
We usually gather info by seeing references in a journal or newsletter or hearing about them at a meeting but it is easy to get busy and not keep up with all the reading one would like to do or the meetings one would like to attend. Perhaps a monthly news alert via email (subscription) summarizing available/new PH research of note, something like IOM News, would be helpful in keeping articles of interest at the top of the list. Of course, this would require someone or some organization to summarize and distribute. Perhaps this already exists? Another issue is that if one does not have a subscription to a particular journal than full text articles may not be available without charge.	Make easier access to subscription based publications; Central clearing house of reports
To have more of the journal articles available "free" in journals like Frontiers	Make easier access to subscription based publications
Access to university electronic library systems. Can't afford all the journals that would like to.	Make easier access to subscription based publications
I more likely to read publications on line than anything else. Email list subscriptions work well to follow a topic of interest and stay updated. I do not use Twitter but I think it is a similar concept. Access to electronic journals is very valuable.	Make easier access to subscription based publications; Email list subscription

No cost of low cost subscriptions for local health departments; more in-depth support and resources for the accreditation process; no cost webinars that can be cataloged for use at convenient times; perhaps a collaborative relationship with the National Institute of Medicine/National Libraries of Medicine.	Make easier access to subscription based publications; Cataloged webinars
Remove fees and make accessible online (3)	Make easier access to subscription based publications
Often when I am trying to find information, the studies are only available at a cost of subscription. I am exploring a work around but it would be helpful if LHD's had easier access. (3)	Make easier access to subscription based publications
Make it more accessible to smaller health depts.	Make easier access to subscription based publications
Affordability of journals	Make easier access to subscription based publications
Don't hide them in a journal	Make easier access to subscription based publications
Better outreach in journals and other means to those that control budget decisions.	Make easier access to subscription based publications
Given the current budget, they have to be provided for free and have to be written in a practical manner.	Make easier access to subscription based publications; Research translated into actionable or practice-based recommendations
Increase the knowledge of the articles. Increase access to the articles. Educate on the relevance of the article to what is happening in my jurisdiction.	Make easier access to subscription based publications; Research translated into actionable or practice-based recommendations
Improvements in practical applications of research to small and medium sized, rural health departments would be helpful. With declining resources at the local level it is very difficult to subscribe to multiple journals to obtain the latest of public health research. It is also very difficult to find the time to sift through the research to find the information that is relevant to practice.	Make easier access to subscription based publications; Research translated into actionable or practice-based recommendations
Make journals and research available free of charge and ask local health departments to subscribe to the RSS feeds.	Make easier access to subscription based

	publications
Regular "key reference list" to Big Cities NACCHO group. How about a "journal club" discussion of these key articles as part of the Big Cities calls?	Increased dissemination efforts by NACCHO or APHA
You might be doing just fine. NACCHO could play a role. I did hear about one of the two cited articles in "real time" through my networks. Somehow I was too busy to notice an entire IOM report on PH funding and learned about it at NACCHO annual mtg.	Increased dissemination efforts by NACCHO or APHA
Email delivery by organizations such as NACCHO, APHA, etc. (2)	Increased dissemination efforts by NACCHO or APHA
Sharing availability of research through national, state, and local associations of public health.	Increased dissemination efforts by NACCHO or APHA
Integrate with other professional associations.	Increased dissemination efforts by NACCHO or APHA
Not sure -- we are inundated with so many emails and publications that it becomes hard to sort them out. Maybe a centralized search page on a public health website such as NACCHO.	Increased dissemination efforts by NACCHO or APHA
Make them available through State Health Departments or State Public Health Organizations at annual conferences.	Increased dissemination efforts by NACCHO or APHA
Better dissemination other than through journal articles to get the information to the local level. Penetration as a result of journal articles will take years. Working through NACCHO, hopefully research could be more effectively "demonstrated" to LHD's through webinars, other educational sessions. We need to be able to learn at "home" so to speak since travel is so restricted.	Increased dissemination efforts by NACCHO or APHA; Cataloged webinars
Through state based agencies PH agencies and/or state advocacy groups such as state APHA affiliates or state health officer associations	Increased dissemination efforts by NACCHO or APHA
Improvement in communication strategies to increase awareness	Improved notification or communication of articles

Ensuring that the title of articles resonate with local health department leadership. Working with trade associations to ensure that local health department directors understand the relevance of understanding evidence based public health and using evidence for advocacy and decision making.	Improved notification or communication of articles
More information on location/availability	Improved notification or communication of articles
Publish reports in medical and business journals	Improved notification or communication of articles
Perhaps some advanced notice to watch for articles or a periodic listing of research by topic disseminated.	Improved notification or communication of articles
E-mail notification of published articles	Improved notification or communication of articles
Local media such as TV and newspaper could be used to disseminate good research data; however this needs to be done using non-technical language.	Improved notification or communication of articles
Outreach via electronic media	Improved notification or communication of articles
I think that the information should be disseminated in a variety of settings through conferences, written materials, and emails.	Improved notification or communication of articles
Increase awareness.	Improved notification or communication of articles
A more systematic approach. Information needs to be in formats that are conducive to busy professionals. The reports need to get their point across in an easy to understand and implementable manner. The reports I see are full of unnecessary jargon and difficult to read. Get to the point. No one cares about all the other "stuff". We have serious issues that need serious attention. We need fast results. We need a better marketing strategy for our priorities. The academic nature of the presentation is not going to impress decision-makers and funders. Ask what you want, make your case, be accountable and make good on your promises. Do it in a timely manner. This is not rocket science or brain surgery, but for some reason we want to make it seem that way.	Improved clarity/readability; Research translated into actionable or practice-based recommendations
Create articles that are concise and relevant to day to day Public Health Practice.	Improved clarity/readability; Research translated into actionable or practice-based recommendations

Make them more understandable to the lay person (2)	Improved clarity/readability
To make them easily understood by any one seeing the research, an abstract of relevant data without the statistics would be useful.	Improved clarity/readability
Perhaps like CDC now does, sending a link out fairly regularly to the latest research information available.	Email list subscription
Group-list distributions, distributions to State and local DOH and health officers.	Email list subscription; Articles sent directly to LHD agency directors
Practitioners are so amazingly busy and overworked. Either getting info out at CME or state meetings or by email with some incentive.	Email list subscription
Listserv providing information such as titles and brief summaries, no more than one paragraph, on the research	Email list subscription
Open access repositories within a specified period of publication. Dissemination via listservs of local public health agencies and associations. Policy briefs for elected officials and administrators. Enhanced media publicity of significant research findings.	Email list subscription; Central clearing house of reports
Making research available in email updates really does help	Email list subscription
There may already be a "List Serve" that public health agencies could join to be notified of new published research findings or reports.	Email list subscription
Widespread dissemination of an index, perhaps monthly or quarterly, of article keywords/topics; OR, of a PDF of tables of contents of, e.g., the publications listed earlier in this survey.	Central clearing house of reports
Provide a catalog of the relevant publications all of the state level public health associations to share electronically with their membership	Central clearing house of reports
Some sort of online centralized clearinghouse/library which categorizes and organizes PH literature in an easily accessed and user-friendly manner. National Library of Medicine seems like the best repository if the catalog/tool were properly developed with the several types of potential end-users fully engaged in the development. Once the right tool was in place, monthly updates on new articles based on type (research, clinical, management, etc.) could be made available to any interested stakeholder. The bottom line is that most of us are simply so busy, that we simply do not have the time to find and read many articles that would be valuable to us. We must have a good way to quickly get to the heart of a topic and find the best articles and feed that information to PH stakeholders on a regular basis. MedScape does a pretty good job of this primarily for more clinically related articles.	Central clearing house of reports
RWJ could send out a monthly update highlighting articles with links to free content?	Central clearing house of reports
The sheer volume of articles makes it difficult to find relevant ones. Compile an annual summary and link to articles by subject regardless of source.	Central clearing house of reports; Provide summaries of

	most relevant articles
Not sure. Email is taking over my time. It is very hard to glean important information out of the gobs of email received every day. Having the information published in multiple journals may help some.	Central clearing house of reports
The best information I receive is through a digest of briefs that comes from the American Nurses Association.	Central clearing house of reports
Streamline. There are so many emails and communications, one could read 24 hours a day, which is not possible	Central clearing house of reports
A central source	Central clearing house of reports
Consolidating information and or indexing topics. Providing links to the abstracts related to the research findings. Provide articles where local health departments have successfully used the research in a practical application and the how it worked with lessons learned, etc.	Central clearing house of reports; Research translated into actionable or practice-based recommendations
In an ideal setting, it would be awesome to read a couple of journals each month. But the reality is that all public health workers are working harder with fewer resources. A database of reliable research that can be easily accessed and searched would be helpful.	Central clearing house of reports
One place with all evidenced-based research relating to public health	Central clearing house of reports
Quarterly updates on what other states and other LPHA's are doing and what success they have had and what barriers	Central clearing house of reports
Online access, webinars, and archive executive summaries or abstracts of articles available electronically	Cataloged webinars; Provide summaries of most relevant articles
Incorporation of these topics in ASTHO, NACCHO, and Rural Health communications as well as at regional and national meetings and webinars for those of us with severely limited travel budgets.	Cataloged webinars
Webinars. Sometimes we know the research but need to know the actual implementation.	Cataloged webinars
Webinars explaining the findings (4)	Cataloged webinars
More information coming directly to the e-mail of Public Health Directors ---making sure that the subject of the research is well highlighted.	Articles sent directly to LHD agency directors
Email with journal articles directly to local public health agency directors.	Articles sent directly to LHD agency directors
If they cost money, we are probably not going to use them. Your best bet is to get an email list of all the Health Directors in each state (state Departments of Health can provide this) and email material directly to each health director.	Articles sent directly to LHD agency directors; Make easier access to subscription based publications

It would be great if Public Health Directors could subscribe to a monthly email with a list of relevant articles with links to the articles. Having to search for research or getting info from miscellaneous sources is not efficient.	Articles sent directly to LHD agency directors; Email list subscription
"Pushing" these articles out via State Health Departments, NACCHO, APHA or directly to local health departments as you did this survey. Certainly reminding annually of the availability of such content may encourage additional review and use.	Articles sent directly to LHD agency directors; Increased dissemination efforts by NACCHO or APHA
A more deliberate dissemination to agencies that would benefit from the findings.	Articles sent directly to LHD agency directors
Summaries of reports sent to key local public health officials and to Public Health Director Organizations. We are bombarded with new information. The more concise the information the more likely it will be used. Most grants and governmental contracts require the use of evidence based programing therefore the ease of access is vital. Often the use of NACCHO materials is helpful to access proven projects.	Articles sent directly to LHD agency directors; Provide summaries of most relevant articles
Send research results directly to local health department administrators. Present research at state-level public health conferences (many health departments do not allow travel out-of-state. Submit research to State-level public health associations to dissemination to members.	Articles sent directly to LHD agency directors

Appendix C: Suggestions for improving usefulness of public health research

Please note that the answers included in Appendix C are the verbatim responses to questions requesting suggestions for improving usefulness. If respondents provided a suggestion that in fact addressed dissemination, it is listed in this appendix. However, for the purpose of the counts included in Tables 11 and 12 above, the comment would be categorized as a dissemination suggestion.

Suggestion	**Category 1**
Add to the models the tools and procedures to use to replicate evidence based models	Translate research into actionable or practice-based recommendations
Practical implementation examples (4)	Translate research into actionable or practice-based recommendations
I would suggest more practical articles with thought given to implementation	Translate research into actionable or practice-based recommendations
Clearer defined initiatives, goals and outcome measures for specific projects - make this easier to "sell" to local legislators and funding sources, and provide a clear path to implementation in times of fewer staff to do the work.	Translate research into actionable or practice-based recommendations; Provide training workshops or other assistance (e.g. staffing, funding, tools, pre-made forms) to assist health departments in implementing recommendations
Direct information when it has been applied a practical operation of a local HD. What has worked and why?	Translate research into actionable or practice-based recommendations
Yes, suggested applications to LPH would be very helpful from someone who understands a particular states infrastructure and limitations.	Translate research into actionable or practice-based recommendations
How can we help all of the staff understand research and apply it to their work that they do now. So, can you figure out how to break down the research and tell us the practical applications of that research.	Translate research into actionable or practice-based

	recommendations
Don't just tell us the results, but tell us how to apply the results in meaningful ways.	Translate research into actionable or practice-based recommendations
How we can incorporate the changes within our existing responsibilities/requirements	Translate research into actionable or practice-based recommendations
Continue to look for ways to make research findings more understandable and usable to local health department staff. Many don't have the background to understand complicated research nor need to. They need to understand what works and how to utilize it.	Translate research into actionable or practice-based recommendations
Recommendations tend to be theoretical and not based on "on the ground" reality. That reality is that we are underfunded, understaffed and governed by conservative board of supervisors who consider any progressive recommendations to be socialistic. Unfortunately, much of rural United Sates operates under the same cloud of non-progressiveness.	Translate research into actionable or practice-based recommendations
Recommendation on implementing strategies by incorporating into our local systems would be very useful. In other words the "how to do it chapter."	Translate research into actionable or practice-based recommendations
Indicate practicality of implementing the changes.	Translate research into actionable or practice-based recommendations
The question is not whether the information might be useful; the question is how to make the right information available to an end-user in an efficient, user-friendly fashion.	Translate research into actionable or practice-based recommendations
Distinguishing the nature of essential services funding from that of clinical safety net would help eliminate the apples to oranges comparisons that much of the research data invites.	Too specific to categorize
Dissemination of relevant research results is critical. They do a very good job at for the County Health Rankings. I would like to see the rankings by nationwide, not just county by county within a state. Being number one in Louisiana does not mean the same thing as being number one in Vermont. There are core articles and core publications. Those should be highlighted much as similar article are in Medscape as either most read or most relevant. Overkill in publications, just as in most of the media, is not useful. Perhaps a group can get the top ten articles and distribute them to interested parties by internet (similar to the Medscape model.)	Too specific to categorize; Provide summaries of most relevant articles

Better understanding of how research can guide the money and not the other way around. Seems like the money guides what we do and it is always about what is a priority according to the research.	Too specific to categorize
An evidence-based research directory or database cross-referenced to a common measurement set, i.e., Healthy People 2020 goals with evidence based interventions that apply to the different standards.	Too specific to categorize
Utilization of both written and pictographic descriptions of the evidence.	Too specific to categorize
Disease cluster studies specifically juvenile cancers are hard to find.	Too specific to categorize
Would like City or census tract specific data/information. Research findings are generally national, county and state level.	Too specific to categorize
Develop quantified best practice models that are part of the accreditation process.	Too specific to categorize
Not sure.....something related to state public health agencies doing more "pass through" of federal funding to local health departments	Too specific to categorize
Case studies. Make the research understandable for all levels of staff.	Too specific to categorize; Improve clarity/ readability
As a local public health department with an affiliated Federally Qualified Health Center, more research on this blended model would be helpful in funding considerations, business operations, and strategic planning.	Too specific to categorize
Unfortunately, our funding is becoming ever more "siloed." If we can begin to figure out more specifics around the connections between increased funding for public health and increased health in the community -- and then push that out to the public health community -- that would be a start. Are people healthier in communities with higher public health funding because of an improved safety net for personal health services, or because of better policy related to funding for health promotion/prevention activities?	Too specific to categorize
Our agency does not have a subscription to a library to obtain these reports. It would be easier if they are emailed out to PH departments for review and possible implementation	Send relevant articles directly to LHD agency directors
The question is not whether the information might be useful, the question is how to make the right information available to an end-user in an efficient, user-friendly fashion.	Translate research into actionable or practice-based recommendations

Funding for a small rural health department limits application of research in some respects. I have found that division managers are busy with their routine work and supervisory activities that taking on an additional project or implementing change requires that a person be hired to oversee the project or implement the change.	Provide training workshops or other assistance (e.g. staffing, funding, tools, pre-made forms) to assist health departments in implementing recommendations; Make research more relevant to small and rural communities
Depends on the topic and the delivery vehicle for the information. Research filtered through organizations/newsletters/journal discussions usually contains explanation and often example and, as such, is easier to understand for the non-researcher than research studies directly from journals. However, while accessible and useful are a good thing, taking the step to use and implement is much bigger. This is where organizations like the NC Center for Public Health Quality become invaluable in helping the motivated leader rise above the challenges of everyday firefighting to work toward change. The NC Center for PH Quality has not only provided us with training and tools but encouragement and energy to implement quality improvement initiatives within our Department. However, working toward the establishment a QI culture is perhaps more straightforward than tying funding to policy since local health departments are often discouraged from advocacy for funding and/or policy development.	Provide training workshops or other assistance (e.g. staffing, funding, tools, pre-made forms) to assist health departments in implementing recommendations
We can read the report - does not mean we know how to implement a change. More training/implementation workshops (and not ones that cost lots of money - health depts do not have lots of money.) Also, it is difficult for lots of the smaller, more rural county health depts to travel to major metropolitan areas to attend trainings & conferences. How about a grant (Federal $$, RWJ applies) where someone travels around to each county health dept to provide TA on how to implement the latest research findings, specific to each HDs local issues, structure & funding.	Provide training workshops or other assistance (e.g. staffing, funding, tools, pre-made forms) to assist health departments in implementing recommendations
We are very short-staffed and any pre-made forms, tools, algorithims, etc.	Provide training workshops or other assistance (e.g. staffing, funding, tools, pre-made forms) to assist health departments in implementing recommendations

Research is only as good as its findings if implemented even if it's just piloted in some agencies. A lot of research may be done but it is not put to use. More on hands research findings should be made public and put to use at any level that may benefit from the findings.	Provide training workshops or other assistance (e.g. staffing, funding, tools, pre-made forms) to assist health departments in implementing recommendations
LHD's are short staffed and in Wisconsin, we have lost a lot of experienced public health workers. So for lack of better words, "spoon feeding" information to established public health workers and supporting those new to the field would be very helpful. It is not often that we have the time to look for studies that support our work and any techniques that could help infuse this information into the public health world would be advantageous.	Provide summaries of most relevant articles
Make available brochures, research briefs, study newsletters and other concise materials about research projects and findings. Make it possible to attend conferences/seminars/workshops on findings.	Provide summaries of most relevant articles
Would have a "talking points" summary that could help influence policymakers and to motivate PH leaders to read full content of key articles/publications.	Provide summaries of most relevant articles
Summary	Provide summaries of most relevant articles
Include the evidence-base practice or an analysis of what resources are necessary to implement the change(s) and whether or not they are equally appropriate in both urban and rural settings.	Provide summaries of most relevant articles; Translate research into actionable or practice-based recommendations
I need a synthesis of the best evidence and suggestions for how to best use the evidence at a local setting - possibly through learning from other LHDs who have implemented.	Provide summaries of most relevant articles; Translate research into actionable or practice-based recommendations
You have to have the time to read the material to know if it can be useful to the agency.	Provide summaries of most relevant articles
Providing a "translation" of the studies/articles so that non-public health professionals can easily understand and interpret the studies.	Provide summaries of most relevant articles

A summary without the statistics of what works.	Provide summaries of most relevant articles
Share the information in brief form with a link to the full study and examples of where it's been implemented beyond the site involved with the research. You seldom hear about how the "best practice or evidence based practice" is implemented in other health departments or communities.	Provide summaries of most relevant articles; Provide training workshops or other assistance (e.g. staffing, funding, tools, pre-made forms) to assist health departments in implementing recommendations
Ease of access. Brevity of summaries. Once an evidence based program is identified more detailed research will be accessed.	Provide summaries of most relevant articles; Generally improve and reduce cost of access to public health research and findings
I simply do not have the funding or the time to subscribe to or read numerous journals to find relevant information. If I don't find the information easily applicable to improving how the department can function or provide services I feel I am wasting the taxpayer's time.	Provide summaries of most relevant articles; Translate research into actionable or practice-based recommendations
Easier way to communicate the results and understand the material.	Provide summaries of most relevant articles
As this research comes out, use a panel of health department leaders to review and translate as an add-on to the article that can stand alone if interest or time is limited.	Provide summaries of most relevant articles
More research needs to be done and reported at the local health department level.	Offer subscription e-mail list of relevant articles
Sent the research in a single email or in a single mailing	Offer subscription e-mail list of relevant articles
More geared to smaller agencies, with smaller staff and resources.	Make research more relevant to small or rural communities
Make a correlation of the items in the article to rural public health. Global perspectives, although important, are not as useful when living in rural Iowa.	Make research more relevant to small or rural communities

Demographic breakdown in regional application of "evidence" and "outcomes" should include differentiation of rural vs. urban vs. inner city	Make research more relevant to small or rural communities
Relevancy to frontier health departments	Make research more relevant to small or rural communities
Provide results in a way that is relevant to very rural communities with minimal funding.	Make research more relevant to small or rural communities
Would like to see more focus on rural public health issues. It is very difficult to impact small communities with few resources.	Make research more relevant to small or rural communities
Make it more relevant to small communities.	Make research more relevant to small or rural communities
Speaking to the rural and very small public health departments would be helpful.	Make research more relevant to small or rural communities
More rural public health research. More research on combined (health and human services) vs. independent agencies and work on prevention projects. Particularly in the case of MCH program I find that public health expends the dollars for prevention work but the benefit is seem also by reduced use of human services programs i.e. Child Protective Services. Yet the links are made between programs, and it's difficult to justify the cost when the savings are realized by a separate program. This becomes crucial in a tight budget climate.	Make research more relevant to small or rural communities; Conduct more cost-efficiency studies
More data that is valuable to small health depts.	Make research more relevant to small or rural communities
More research is needed in small to medium sized rural health departments. Often, research is conducted in large, urban settings, thus the findings are not as applicable to a smaller, more rural practice setting.	Make research more relevant to small or rural communities
Outreach to public health professional organizations to increase awareness	Increase dissemination efforts by public health organizations like NACCHO and APHA
These quarterly reports need to get to the local's front line staff. It all plays a very definite role in how decisions are made and where funding can be used effectively.	Increase dissemination efforts by public health organizations like NACCHO and APHA
I suggest that the information be given to State health Departments and NACCHO for distribution to local health agencies	Increase dissemination efforts

	by public health organizations like NACCHO and APHA
Reaching out to publications that policy and decision-makers read. There are association publications (i.e. from orgs such as NACO) that need to cover this type of information. How can health "push" these results in an understandable way to these publications?	Increase dissemination efforts by public health organizations like NACCHO and APHA
The general public knows little about public health. I have personally, with the help of independent study students at the University of Connecticut Public Health Department gotten articles in weekly throw-away papers about public health and have involved the local health director in contributing to the articles and identifying himself or herself as the population's local health department in such article. If we do not have a constituency we have no one to call for increases in the legislature and resulting increases in the State public health department budget to provide more local funding	Increase awareness of PH issues and research among general public and elected officials/local policymakers
Target elected officials and general public	Increase awareness of PH issues and research among general public and elected officials/local policymakers
More marketing of these materials to reach a larger audience.	Increase awareness of PH issues and research among general public and elected officials/local policymakers
I wonder if most articles are created with the concept of improving public health practice or is it for other goals. Concise and relevant.....these are the needs.	Improve clarity/readability; Translate research into actionable or practice-based recommendations
More access, lower cost, sharing of information.	Generally improve and reduce cost of access to public health research and findings
It should be easy to access and meaningful for field use.	Generally improve and reduce cost of access to public health research and findings; Translate research into

	actionable or practice-based recommendations
I would think it is more internal on who has access or allowed access.	Generally improve and reduce cost of access to public health research and findings
First, accessibility and dissemination of the said information and then the opportunity to secure funds to apply/implement new recommendations. In addition to having political will you must have funding to initiate and sustain most changes.	Generally improve and reduce cost of access to public health research and findings; Provide training workshops or other assistance (e.g. staffing, funding, tools, pre-made forms) to assist health departments in implementing recommendations
E-mail or website access to the research.	Create central clearinghouse of reports
Place all evidence based practices in one place; does the Community Guide contain all evidence based practices? Researchers should strive to not only publish, but to also get their results to a place such as the Community Guide.	Create central clearinghouse of reports; Too specific to categorize
For research to be applicable, it must answer questions generated from practitioners. Research conducted in the context of a purely academic question will not find an easy niche for application.	Conduct more practice-based research
Research needs to be more "down to earth" and easily understood.	Conduct more practice-based research; Improve clarity/ Readability
My poor rural county leadership is not interested in "Ivory Tower" research. How about some "rubber meets the road" research?	Conduct more practice-based research; Make research more relevant to small and rural communities

Research could be geared toward smaller local health departments, their functionality and part in public health governance.	Conduct more practice-based research
Funding for projects that would improve public health practice is needed. Funding for PH has remained steady but needs have increased.	Conduct more practice-based research
Practical tools and training for implementation. The opportunity to participate in pilot programs to test ideas/tools/research in the field.	Conduct more practice-based research; Translate research into actionable or practice-based recommendations
More applicable to local government. Engage local policy makers	Conduct more practice-based research; Increase awareness of PH issues and research among general public and elected officials/local policymakers
I'm very involved in our state's PBRN and related studies, so I'm a believer in the need for better public health systems research. But most of the research in this area depends either on mining of databases or on survey research. Neither of these approaches is very good at handling the complicated local stories that explain the way local public health departments interact with and affect their communities. We need systematic qualitative studies (to compliment the quantitative ones) using methods such as Grounded Theory. (For a good example, see the popular book Good To Great, which used this method to better understand the characteristics of successful and unsuccessful corporations. There are also some studies from the '70's or 80's using this method in health care -- I believe Pat Mullens was one of the authors.) I think the reason public health systems research has not used such methods is that they're more expensive than sending out a survey or mining state databases. But I seriously doubt we'll learn much of value to me as a local public health manager until we use methods of this sort. There is some propaganda value in overview studies like the Glen Mays articles on public health spending and health status, but they are in their nature a bit vague and don't really address state and local decision makers' concerns in my experience. So we use them, but I don't think such findings are a major influence and they certainly don't help us figure out how to do public health better at the community level.	Conduct more practice-based research

As a local health officer, I would like to see research applicable to typical programs and services offered at the local level: Healthy Start, WIC, STD, HIV, TB, dental, health education, swimming pool health and safety, epidemiology and communicable disease programs for example.	Conduct more practice-based research
Given the diversity of local public health agencies, research needs to be applicable to rural vs. metro agencies and population served.	Conduct more practice-based research
I think asking local health departments what they need is an important aspect of public health research. That is one of the benefits that I think were derived in Florida from the practice based research network	Conduct more practice-based research
Apply to the local level	Conduct more practice-based research
Much of the research that I read about is very academic and not very practical to health department service provision.	Conduct more practice-based research
Continue efforts to link academia to practice. Academic public health centers are a good model.	Conduct more practice-based research
More practice - needs to align with city and county level interests and struggles rather than those who work in an academic office.	Conduct more practice-based research
Universities should compile local interests/needs and then look for matching research articles to share with practice. We really don't have the time or resources to do so to the degree we would like.	Conduct more practice-based research
Most local health work on shoestring budgets. No/low cost ways improve services are what we are looking for	Conduct more cost-efficiency studies
More work like the Glen Mays publication	Conduct more cost-efficiency studies
There is always a need for better and more credible ROI evidence for PH interventions.	Conduct more cost-efficiency studies
To make them practical for departments with little to no extra money to make improvements	Conduct more cost-efficiency studies
I use research showing the effects of public health dollars on health outcomes. More research should be done on ways to generate revenue for public health and stabilize very unstable budgets.	Conduct more cost-efficiency studies

Section 6: Practice-Based Research Networks (PBRNs)

Purpose

The primary purposes of our review of PBRNs were to: (a) examine the extent to which networks had provided products that have been disseminated and used; (b) obtain information on the extent to which this effort has affected the number of public health researchers; (c) identify progress information as to network sustainability; (d) obtain information on how well the network concept is working; and (e) obtain the network partners' suggestions for network improvements.

PBRNs are a potentially important innovation in the design and conduct of Public Health Services and Systems Research (PHSSR), adapting an approach used effectively for studying clinical innovations. Each network is typically comprised of representatives (partners) from research institutions (primarily university public health departments), a state health department, one or more local health departments, and other public health organizations such as the state public health association.

Starting in 2008, 12 Public Health PBRNs have received funding for start-up planning, then additional monies for approved study projects. In addition to the 12 core PBRNs, over time a like number of affiliated PBRNs have joined in conference calls, webinars and other such in-kind assistance. The affiliates may also compete for some research grants. The National Coordinating Center (NCC) for Public Health PBRNs oversees the program, funded by RWJF.

Public Health PBRN Program consists of 12 research networks (core PBRNs) comprised of "local and state governmental public health agencies, community partners, and collaborating academic research institutions … in Colorado, Connecticut, Florida, Kentucky, Massachusetts, Minnesota, Nebraska, New York, North Carolina, Ohio, Washington, and Wisconsin." An initial wave of PBRNs began in December 2008 and a second wave in January 2010. In addition 12 other PBRNs have begun to participate in the program as "affiliate members … in California, Georgia, Iowa, Kansas, Maryland, Missouri, New Hampshire, New Jersey, South Carolina, Tennessee, Texas and Vermont." More affiliates, we understand, have been added,

We used three data collection procedures for the review of PBRNs: (1) The primary procedure was a survey of network participants; (2) on-site visits to three of the 12 core networks; and (3) a brief review of the websites of the networks. Each is discussed below.

Major Findings from Survey of Network Partners

The following observations are the key findings from our survey of active PBRN participants identified by the NCC. In addition to tabulating the views of 69 survey respondents, our

assessment draws upon our interviews in three states and a scan of the websites of both core and affiliate networks.

- About two-thirds of respondents believed local health agencies are aware of the research done by the network.
- A similar proportion (63 percent) believed that the work of their network has increased interest in public health research among agencies not in the network.
- Fewer respondents (about a quarter) believed the work of the network affected the amount of public health research done by those not involved in the network in their state.
- About half of the respondents believed public health research in their state has become somewhat or a great deal more useful because of the network.
- Two-thirds of network members believed PBRN research is being used by their own agency. Far fewer (34 percent of respondents) believed it is being used by agencies outside of the network. But few provided substantive examples of use to support their belief.
- A high percent of respondents from core agencies (81 percent) reported being either very or somewhat satisfied with the way the network was operating as compared to only 64 percent of affiliate respondents.
- A very high percent (81 percent) of respondents provided suggestions for improving their network. The category of improvement most cited by most respondents (by 3 percent) was to increase the level of participations (though specific ways to accomplish the improvements were rare).
- Well over half of the respondents reported not having obtained funding or promises of funding beyond 2012 other than RWJF funds from the National Coordinating Center (60 percent of respondents from the first core networks, 71 percent of Core II respondents and 88 percent of affiliate respondents).
- More than half (58 percent) of respondents were not confident that their network will be operating in 2015 in the absence of NCC funding. This includes 19 percent who thought continued operation was very unlikely without such funding. Only six percent reported such funding was very likely.

PBRN members affiliated with academic institutions were more positive in rating their networks in some, but not all, areas. Academics were more likely to report that: the network had increased interest in public health research by agencies not involved in the network; public health research had become more useful because of the work of the network; and that their networks were likely or very likely to still be operating in 2015 without further NCC funds.

A caveat: participants' responses at least to some extent can be considered self-assessments. Their views of the utility of their PHSSR work seem to differ somewhat from the views of public health agency leaders. The latter generally had a less positive view about the general usefulness of studies on evidence-based public health. The other surveys are described in other sections of this assessment.

Survey Methodology

The Urban Institute developed a questionnaire that was distributed electronically to 107 individuals representing the 12 Core and 12 Affiliate Practice-Based Research Networks. The questionnaire had 18 questions, 8 of which were open-ended and 10 close-ended. Some questions asked respondents to explain a particular response to a previous question, thus were not asked of all respondents. As a result, some questions had more responses than others.

We sent electronic invitations to take the survey on August 31, 2012 to all network participants on a list provided to us by the National Coordinating Center for Public Health Practice-Based Research Networks. These included the PIs as well as those representing the other network partners. Six reminders were sent, the last on October, 31, 2012. UI closed the survey on November 15, 2012 with a total of 69 responses (including 4 partial responses) for an overall response rate of 64 percent. Core PBRN members had a higher response rate (70 percent) than affiliate members (55 percent).

Detailed Survey Findings

This section summarizes the responses to both the closed-ended and open-ended questions. Most questions asked respondents to rate "the extent to which" something occurred, with four response categories. The number and percent of responses in each category are shown in tables for each question. In analyzing responses to each question, ratings of "a great deal" or "somewhat" were grouped as positive responses (the equivalent of "yes" responses). Ratings of "a little" were combined with "not at all" ratings. Responses are reported here by type of respondent (such as core and affiliate network, or academic and non-academic) only where there appear to be notable differences among types of respondent. Given the small sample sizes involved in the survey, we did not address the statistical significance of differences, but instead looked for substantial differences in percentage points (10 percentage points or more) to identify variation in perspective across types of respondent.

Most of the tabulations shown are based on combinig

Open-ended responses were grouped into categories addressing the same or very similar topics for analysis. Examples of responses in different categories are provided to illustrate the types of response falling within each. In reporting these responses, modifications were sometimes made for clarification, to delete extraneous material, or to protect confidentiality (for example by deleting the name of an agency, person or initiative).

Awareness of network research by local health agencies

Table 1: To what extent do you believe local public health agencies throughout your state are, thus far, aware of the research work being done by your network?						
Respondent Type	A great deal	Somewhat	A little	Not at all	Don't know	Total
All	18 (27%)	25 (37%)	22 (32%)	2 (3%)	1 (2%)	68 (100%)
Core	13 (28%)	22 (48%)	10 (22%)	0 (0%)	1 (2%)	46 (100%)
Affiliate	5 (23%)	3 (14%)	12 (55%)	2 (9%)	0 (0%)	22 (100%)

Almost two-thirds (64 percent) of respondents believe that local public health agencies are "somewhat" or "a great deal" aware of the network's research. However, respondents from affiliate networks believed there was considerably less awareness of their network's research than core network respondents. Almost two-thirds of affiliate respondents (64 percent) reported there was little or no awareness of network research, compared to 22 percent of core network respondents. This can be at least partly explained by the fact that the affiliates have been in place for a shorter period of times and have received considerably less funding support for their work...

Increased interest in Public Health Research

Table 2: To what extent, thus far, do you believe the work of your network has increased the interest in public health research in the state among local or state health agencies in your state that are not themselves involved in the network?						
Respondent Type	A great deal	Somewhat	A little	Not at all	Don't know	Total
All	11 (16%)	32 (47%)	21 (30%)	1 (1%)	4 (6%)	69 (100%)
Academic	6 (22%)	15 (56%)	5 (19%)	0 (0%)	1 (4%)	27 (100%)
Non-academic	5 (12%)	17 (41%)	16 (38%)	1 (2%)	3 (7%)	42 (100%)

The vast majority (94 percent) of PBRN respondents believed that interest in public health research had increased among agencies outside of the network due to the work of the network. About 63 percent felt it had increased somewhat or a great deal.

Respondents from academic institutions had a more positive perception of the network's effects on interest in public health research than those from other organizations. Over three-quarters (78 percent) of academic respondents felt the network had increased interest somewhat or a great deal, compared to 53 percent of non-academic respondents. Conversely, 40 percent of respondents

from non-academic institutions felt the network had increased interest a little or not at all, compared to 19 percent of those from academic institutions.

Amount of public health research by non-network researchers

Table 3: To what extent, thus far, do you believe the work of your network affected the amount of public health research done in your state by researchers who are not themselves involved in the network?

Respondent Type	A great deal	Somewhat	A little	Not at all	Don't know	Total
All	1 (2%)	14 (21%)	19 (28%)	13 (19%)	21 (31%)	68 (100%)
Core	1 (2%)	13 (28%)	12 (26%)	9 (20%)	11 (24%)	46 (100%)
Affiliate	0 (0%)	1 (5%)	7 (32%)	4 (18%)	10 (46%)	22 (100%)

Less than a quarter of PBRN respondents felt the work of their network affected the amount of public health research done by non-network researchers in their state. Almost one-third of them did not know if it had an effect. Respondents from core networks were more likely to believe their network affected the amount of public health research somewhat or a great deal (30 percent) than those from affiliate networks (5 percent). A considerably higher proportion of affiliate respondents replied "don't know" (46 percent) than core respondents (24 percent). Respondents from academic institutions gave similar ratings to those from non-academic institutions.

Open-ended responses on amount of research

Respondents who replied "a great deal" or "somewhat" were asked to indicate why they believed that. Fifteen respondents provided an answer, but most of them did not provide examples that supported their belief. Several responses appear to refer to research done by those who were involved in the network, such as "the grant funding has provided us with resources to conduct more research than was previously conducted." A few comments referred to increased interest in research rather than increased amounts of research. For example: "We've had several researchers from other universities express an interest in collaborating with us on PHSSR projects."

Only four of the 15 open-ended responses (shown below) were considered to address the question, and those responses were not very specific. Three of these indicated that practitioners or local health departments had become involved in network research, which they seem to have considered to be researchers who were not a formal part of the network:

- I am aware of 1-2 research projects.
- Practitioners and new researchers have become more involved in the PBRN work.

- The PBRN has fostered several studies involving local health departments that would not have happened otherwise.
- [State name] has never had such a coordinated network of academicians working on PH research. Most research was based on surveillance, prevention, care and amelioration activities.

Usefulness of Public Health Research

Table 4: To what extent do you believe that public health research in your state has become more useful to public health officials, thus far, because of the work of the network?

Respondent Type	A great deal	Somewhat	A little	Not at all	Don't know	Total
All	13 (19%)	22 (32%)	22 (32%)	3 (4%)	8 (12%)	68 (100%)
Core	8 (17%)	18 (39%)	16 (35%)	2 (4%)	2 (4%0	46 (100%)
Affiliate	5 (23%)	4 (18%)	6 (27%)	1 (5%)	6 (27%)	22 (100%0)
Academic	7 (27%)	9 (35%)	6 (23%)	1 (4%)	3 (12%)	26 (100%)
Non-Academic	6 (14%)	13 (31%)	16 (38%)	2 (5%)	5 (12%)	42 (100%)

About half of the respondents believed public health research in their state was "a great deal" or "somewhat" more useful because of the work of the network. About 12 percent of respondents did not know if it was more useful, and few (four percent) felt it was "not at all" more useful.

A larger proportion of respondents from core networks believed research had become a great deal or considerably more useful than those from affiliate networks (56 percent compared to 41 percent). A larger percentage of affiliate respondents did not know if research had become more useful (27 percent compared to 4 percent of core network respondents). None of the respondents from Round 1 networks felt research had become a great deal more useful, compared to 29 percent of Round II respondents (not shown in table).

Respondents affiliated with academic institutions had more positive views about the network's effects on usefulness of research, compared with non-academic respondents. About 62 percent of academic respondents felt research had become a great deal or somewhat more useful, compared to 45 percent of those from non-academic institutions.

Open-ended Responses on Usefulness of Public Health Research

Respondents who indicated public health research had become "a great deal" or "somewhat" more useful were asked to indicate why they believed that. Twenty-six respondents provided a total of 27 responses that could be interpreted as a reason for their belief. The reasons provided fall

within the three categories shown in Table 4-A. Seven other respondents provided answers that were non-responsive or could not be interpreted. Examples of responses under each category are provided after the table.

Table4-A: Reasons Research had become more Useful	
Reason Category	**N**
Research topics are useful/relevant to practice or related to efforts underway	12 (46%)
Respondent is aware of use or questions were asked/assistance requested	8 (31%)
Practitioners were involved in network or in identifying research needs	7 (27%)
Total	27 (100%)

Examples of Why Public Health Research Had Become More Useful

Topics are relevant to practice or related to efforts underway

- PBRN activities have given policymakers data that can be used to improve system function and have also given participating agencies data that can be used by policymakers to argue for increased/stable funding.
- We have tried to connect our research findings with other initiatives underway in the state, for example the development of a performance management system (and selection of performance measures) for our local public health system.
- Accreditation readiness and examination of funding issues.

Respondent aware of use/practitioners had asked questions or for assistance related to the research

- We often get inquiries from public health officials on our products.
- The state is very interested in our research and is contracting with us to do TA for related issues

Practitioners involved in the network or in identifying research needs

- The PBRN research agenda was set by the practice community, and specifically by local government public health officials and other key personnel in that sector. Thus the areas of study have high relevance and immediacy.
- Topics have been driven by LHDs, and have already influenced attitudes and policy.

Use of network research by agencies outside the network

Table 5: To what extent do you believe the work of your network has been actually used by local or state public health agencies in your state, agencies that are, thus far, not themselves involved in the network?

Respondent Type	A great deal	Somewhat	A little	Not at all	Don't know	Total
All	7 (10%)	16 (24%)	16 (24%)	15 (22%)	14 (21%)	68 (100%)
Core	5 (11%0	16 (35%)	14 (30%)	4 (9%)	7 (15%)	46 (100%)
Affiliate	2 (9%)	0 (0%)	2 (9%)	11 (50%)	7 (32%)	22 (100%)
Academic	4 (15%)	4 (15%)	6 (23%)	9 (35%)	3 (12%)	26 (100%)
Non-Academic	3 (7%)	12 (29%)	10 (24%)	6 (14%)	11 (26%)	42 (100%)

About a third (34 percent) of respondents believed the work of their network has been used "a great deal" or "somewhat" by agencies outside of the network. Twenty percent of respondents did not know if work of the network was used by others, and 22 percent felt it was not used at all.

Respondents from affiliate networks had more negative perceptions than those from core networks. (Affiliates are both newer networks and have had considerably less funding support for their work.) Half of affiliate respondents responded "not at all," compared with nine percent of respondents from core networks. Only 9 percent of affiliate respondents felt the work was used somewhat or a great deal, compared with about 46 percent of core respondents.

Respondents affiliated with academic institutions also had a more negative perspective about use of network research outside of the network than non-academic respondents. Over half (58 percent) of academic respondents felt research was used a little or not at all, compared to 38 percent of non-academic respondents. A larger proportion of non-academic respondents did not know the extent of use of network products (26 percent compared to 12 percent of academic respondents).

Open-ended Responses on Use of Research by Agencies Outside the Network

Respondents who indicated network products were used by local or state agencies outside of the network were asked to explain why they believed this, and to provide examples of how the network's research affected the activities or operations of local or state public health agencies.

Unfortunately, many responses did not address the question. Some indicated research was used, or could be used, but did not identify the nature of the use. Some respondents stated that products had been disseminated, or that interest was had been expressed by state or local agencies, or commented about the usefulness or expected use of the research, but did not provide examples of use. For example: "results have been broadly disseminated and used to influence policy and practice." A few respondents gave examples of use by partner agencies rather than agencies outside of the network.

Table 5-A summarizes the open-ended responses that identified specific ways network products were used. Responses were grouped into four main use categories: (1) Use for informational purposes (including to inform a specific process or activity), planning or priority setting; (2) Use in cooperative plans or service sharing agreements; (3) Uses related to Quality Improvement (QI) or accreditation; and (4) "Other" which includes examples not sufficiently specific to classify as well as specific uses that do not fit within the other categories. A fifth, and highly desirable use – to directly modify practice – is shown but was not reported by any respondents.

Respondents provided examples of eight different uses by state agencies in seven different states, and seven examples of different uses by local health agencies in six different states. Open-ended responses were interpreted "leniently" in the sense that examples were counted even if they were not specific about the nature of the use. Table 5-A shows the number of uses by different local or state agencies, not the number of respondents reporting a use. Thus, if two respondents in a particular network report the same use, one use was counted. Responses provided in the different categories are shown following the table.

Table 5-A: Uses of Network Research by Agencies Outside the Network

Use Category	# of uses by LHDs	# of uses by SHDs
Directly modify practice	0	0
Informational/inform specific process or activity; planning or priority setting	2 (29%)	4 (50%)
Used in cooperative plans/service sharing	2 (29%)	0
QI or accreditation- related use	3 (43%)	2 (25%)
Other/unclear/too specific to classify	0	2 (25%)
Total	7 (100%)	8 (100%)

Examples of Use of Network Research by Agencies Outside the Network

Inform specific process or activity & planning or priority setting

- Two respondents from one network reported that its work was used to inform the state health department's development of a health district incentive grant program. [SHD]
- Research on variation in practices related to communicable diseases was used to help set priorities as part of a statewide "Agenda for Change" effort. This effort included prioritizing diseases for which there should not be significant variation in response, and to prioritize types of response. [SHD]
- Another respondent from this network noted that the network's communicable disease study led the statewide task group to "better define CD investigations. " [SHD]
- Research on LHD capacity was useful to state health agencies for planning and policy consideration. [SHD]

- Some agencies have used the results [of QI studies] to determine potential training needs of public health workforce. [LHD]
- Some LHDs have used findings from a statewide survey conducted by the network to compare themselves to state averages or comparable municipalities. [LHD]

Use in Cooperative plans/service sharing

- Network research on planning for cross-jurisdictional service sharing has been used by a number of municipalities involved in developing such agreements.
- The network's H1Ni project resulted in improved COOP plans across jurisdictions

QI or accreditation-related use

- Research on essential services has reinforced state efforts to move toward accreditation, and the state is more aggressively promoting accreditation for all LHDs. [SHD]
- After study of LHD uptake of QI initiatives, the state did a QI training. [SHD]
- Interest in QI and accreditation readiness has increased substantially with our research on those issues and *we are being asked to provide technical assistance* to support the efforts." [LHD]
- I believe that as a result of the research that has been completed, local health departments as a whole have begun looking more at the operations of their agency. They have also begun work around QI and accreditation. [LHD]
- The PBRN's quality improvement training helped LHDs with accreditation readiness.

Other/Too specific to classify

- Two respondents associated with one network cited use of its research to revise the state's reporting system for local health departments. One said: "One of the PBRN studies also yielded data indicating a need to revise the statewide reporting requirement for local health departments, and this is now being addressed (a concrete example of a positive outcome.)"
- Findings regarding H1N1 vaccine update were used by the state's preparedness and response office.

Use of network research by own agency

Table 6: Has your own agency used any of the research thus far produced? (Asked only of those representing a local or state public health agency)		
Respondent Type	Yes	No
All (N = 33) Includes more than one respondents from the same SHD or LHD in some states)	22 (67%)	11 (33%)
Responses from different agencies (N = 27)	17 (63%)	10 (37%)
Different Local Health Departments (N = 15)	8 (53%)	7 (47%)
Different State Health Departments (N = 12)	9 (75%)	3 (25%)

Thirty-three persons representing a local or state health agency were asked if their own agency had used any of the research produced thus far. The majority of respondents reported that network research produced had been used by their own agency. Since there were multiple respondents from the same state or local health department among the respondents, the responses were also tabulated in terms of responses from different agencies (one "yes" counted per state or local health department in such cases). State health departments were considerably more likely to report use of research products in their own agency than local health departments (75 percent compared to 53 percent).

Open-ended Responses on Uses of Network Research by Own Agency

Those who said "yes" were asked to describe how the research information was used. Nineteen of the 22 "yes" respondents (which includes multiple respondents from the same agency in a few cases) described one or more ways their agency used the research. Table 6-A summarizes the types of use reported by local and state agencies, respectively.

- 8 examples of use were provided by 7 local health department (LHD) representatives from 5 different LHDs.
- 16 examples of use were provided by 12 state health department (SHD) representatives from seven different SHDs

Table 6-A: Uses of Network Research by Own Agency		
Use Category	**LHD**	**SHD**
Directly modify practice	0	1 (6%)
Informational/inform specific process or activity	3 (38%)	8 (50%)
Planning	0	5 (31%)
Advocacy/testimony	2 (25%)	0
Other/too specific to classify	3 (38%)	2 (13%)
Total	8 (100%)	16 (100%)

The open-ended responses describing the uses in each of the above categories are shown below and identified by SHD or LHD, respectively. In a small number of cases a single response included examples of two different types of uses. Those responses are shown under the respective categories, with the portion of the response relevant to the respective category shown in italics.

Examples of Agency's Own Use of Network Research

Directly modify practice

- We are currently conducting an assessment of our recent integration of HIV/AIDS and STD field services. The results have been helpful to SHD staff in *managing the integration* and planning next steps. [SHD]

Informational/Inform specific process or activity

- Findings were used to inform a work group that is developing performance measures for a performance management system for local health departments. [SHD]
- Inform the department's Quality Control Council and prioritize its efforts. [SHD]
- Findings were incorporated into planning for state regionalization efforts. [SHD]
- Findings from survey of public health officials were used to develop a discussion guide to assist local elected officials considering changes to public health governance or organization. [SHD]
- Findings are being used to better understand the "culture" toward QI, available QI tools, and for the department's readiness to move forward on accreditation. [SHD]
- Findings about the impact of accreditation on local health departments were used in drafting documents supporting retention of those requirements. [SHD]
- Using findings of local QI survey to identify training needs of local health departments. [SHD]
- Preliminary findings have provided important feedback about the processes and impact of integrating HIV-AIDS and STD services programmatic data to the state health department. [SHD]

- Data from report on workforce attitudes regarding Smoke Free Workplace Law was used to inform policy discussions about prohibiting tobacco use in city grounds and buildings. [LHD]
- QI training was used for "better understanding of QI." [LHD]
- It was used for educational/awareness purposes. Reports were disseminated and discussed in a meeting of county health departments. [LHD]

Planning

- Findings were incorporated into planning for state regionalization efforts. [SHD]
- We are using findings of quality improvement study results for the state agency in state strategic planning work. [SHD]
- Findings from H1N1 research were used for planning. [SHD]
- To inform planning for technical assistance. [SHD]
- The results [of assessment of integration of field services] have been helpful to SHD staff in managing the integration and *planning next steps*. [SHD]

Advocacy/Testimony

- Results of survey of workforce attitudes regarding Smoke Free Workplace Law was used in testifying to City Council. [LHD]

- Communicable disease study was used to advocate for standardization of communicable disease investigation across jurisdictions. [LHD]

"Other" Responses

- Findings are providing a foundation for developing an electronic communication system between the state and local health departments using a standard platform. [SHD]
- Findings increased awareness of strengths and weaknesses to combining programs and increased sensitivity of leadership. [SHD]

- An hour-long training on elimination of unconscious bias was provided to department leadership. Just-in-time training was provided to interview teams, and recommended as part of the interview team process. A video training was developed and made available to interview teams. [LHD]
- Workforce survey results were used to engage an adjacent health director in discussions on cross-jurisdictional sharing arrangements. [LHD]
- Research findings (on essential services funding) reinforce practices. [LHD]

Satisfaction with Network Operation

Table 7: How satisfied are you with the way your state network is operating?					
Respondent Type	Very satisfied	Somewhat Satisfied	Somewhat Unsatisfied	Very Unsatisfied	Total
All	16 (25%)	34 (52%)	15 (23%)	0	65 (100%)
Core	10 (23%)	25 (58%)	8 (18%)	0	43 (100%)
Affiliate	6 (23%)	9 (41%)	7 (32%)	0	22 (100%)

Three-quarters of respondents reported being somewhat or very satisfied with the way their network is operating, although more were "somewhat" satisfied. No respondents reported being very unsatisfied, but 23 percent reported being somewhat unsatisfied. Affiliate PBRN respondents most commonly gave this response.

No Round 1 respondents reported being very satisfied, compared to over one third of Round 2 respondents. One quarter of Round 1 respondents were "somewhat unsatisfied," versus 15 percent of Round 2 respondents (not shown in a table). Satisfaction ratings of academic respondents and those affiliated with non-academic institutions were very similar (not shown).

Respondents from the same network did not always provide the same ratings. For example, one state with seven respondents had three "very satisfied," three "somewhat satisfied," and one "somewhat unsatisfied" rating. Two states with five respondents each had three "somewhat satisfied" and two "somewhat unsatisfied" ratings. Thus it appears that satisfaction ratings were affected by individual expectations or experiences in addition to actual operation. For example, one "somewhat unsatisfied" respondent commented "so far, not very relevant to my area of practice."

Open-ended Responses on Network Improvements

Regardless of the rating provided, all respondents were asked what improvements they would like to see in their state's network. Fifty-three respondents (81 percent) identified one or more improvements they would like to see in their state's network, for a total of 77 suggested improvements. Responses are grouped into four main categories in Table 7-A. The most common improvement suggested was more participants or more participation/involvement.

Table 7-A: Suggested improvements to network

Improvement Category	**N**
More participants (of one or more types)/more involvement or support (by existing or new participants)	27 (35%)
Funding/diverse funding/funding for staff or general support	20 (26%)
Better/more communication, collaboration or dissemination	14 (18%)
More research/projects	6 (8%)
Other/too specific to classify	10 (13%)
Total	77 (100%)

Since some responses were brief, or not entirely clear in wording, or were multi-part, judgment was used in determining the appropriate category or categories in which a response was counted. For example, the response "more collaborative partners" was counted under the "more participants" category, although it could be argued that it might have been a request for partners to be more collaborative. (Many of the improvements suggested identified a problem that needed correction rather than a specific way to alleviate the problem.) Below are examples of the responses provided within each of the above categories. Since some respondents specified the type of additional participants desired, examples are shown for different types, although they were not tabulated separately for analysis.

Examples of Specific Suggested Network Improvements

More participants/more involvement or support

By researchers/academics

- Going forward, I would like to engage more academic partners from more diverse disciplines.
- More interest and involvement from research partners.
- Stronger presence of academic partner.
- Sustaining the involvement of academic researchers and getting them to commit to serve as PIs on small studies, with limited resources, is a continuing struggle, as well as enticing doctoral students into the field, and this "leanness" on the research side of the equation threatens the long term viability of the PBRN.
- I would like to see more researchers doing PBRN research. Right now we have one main researcher and a couple of graduate research assistants. We need to bring more researchers in.

More participants/more involvement or support by state and local agencies/practitioners

- Deeper engagement with practitioners.
- More involvement from all districts in the state.
- Stronger commitment to PHSSR from more LHDs in the state.
- Continued expansion to include active participation by all LHDs.
- More involvement of state and CHDs in supporting research.

More participants/more involvement or support

In general or multiple types of participants

- We need to continue to "grow" our PBRN, involving both more researchers and more members of the practice community.
- Participation from all members.
- Need to involve more people from each participating organization
- We would like to expand our partnership to include other PRBNs (e.g., primary care-based) and possibly other state agencies (e.g., demographer, state auditor) or other interested parties.

Funding/diverse funding/general support

- It's really held together through the volunteer efforts of a few, and the research has not been prolific. Would like to be able to hire someone to run the network and build its capacity.
- We have still not been able to generate the additional funds needed to support adequate staff time to manage the activities, communications, networking and dissemination this is really necessary for our PBRN.
- Everyone involved is interested but can't do much more than they're already doing without funding to cover it.
- We have been struggling to obtain additional funds to keep our momentum going. At the moment it feels like our network is really operating because of one person (me) who really wants to see it work.
- Stable funding and sufficient to cover basic infrastructure needs. A person with some percent of time dedicated to building the network would be a tremendous help; there is a great deal of interest in building more practice-based research, but most public health practitioners do not have this built into their budgets.
- PBRN leadership is stretched. Loss of resources means that PBRN activities have become more ad hoc.
- We need funding to keep the work going. Without dedicated resources (dollars, people) we simply can't do the research we need. Even with adequate research resources, it's always a struggle to get very busy practitioners to contribute in a consistent and significant way.

Better or more communication/collaboration/dissemination

- Better communication regarding research and outcomes. Verbal reports at monthly meetings aren't "sticky" and melt into other messages received that month.
- While the researchers get what they need, it does not seem like the work is filtering down to the local level.

- More communication and collaboration between academic researchers and public health agencies. Academicians are looking for large datasets, while local health departments are looking for answers to very specific public health questions.
- Increased publicity about what is going on with the network.
- More face to face meetings. I know funding does not allow for this to the extent it is needed.

More research/projects

- The ability of network members to devote more time to projects would potentially be useful
- More opportunities for partnership projects
- More grant proposals going forward that take advantage of the network – e.g., CER, D&I

Other/too specific to classify

- We need to develop and nurture a culture within our public health networks for using and valuing data and research.
- Needs to be more focused on the practice of public health and less academic.
- I would like to see members from state and local health departments initiate research topics rather than wait for academics to do so.
- More clearly defined roles of members, and a clearly articulated plan for future work, collaborations and funding.
- Move from affiliate to full status.

Open-ended Responses: Additional Assistance from NCC

Survey respondents were asked to identify the additional assistance from the NCC at University of Kentucky they would most like to have. Thirty-five respondents identified one or more types of assistance desired, for a total of 48 types of assistance. Comments indicating the NCC should continue doing what it is doing, or that it has been helpful, were not counted as types of additional assistance needed, nor were comments about the PBRNs in general (such as "I would love for us to return to an emphasis on locally relevant work that is driven by practitioner interests and needs").

Responses are grouped into six categories in Table 8. The most common type of assistance desired was funding (sometimes expressed as "resources"), mentioned by 19 respondents (41 percent of assistance needs identified). Other types of assistance were typically identified by fewer than 10 respondents. Six respondents identified activities that would bring PBRNs together and/or be

helpful to multiple PBRNs (13 percent of types of assistance desired). This is included as a separate category here since it is assumed it was intended to assist the respondent's network as well as others.

Table 8: Additional Assistance most Wanted from NCCC	
Assistance Category	**N**
Funding/resources	19 (41%)
Research-related (identify topics, attract researchers)	7 (15%0
Sustainability	4 (7%)
Build/expand/strengthen the network	3 (2%)
Cross-PBRN assistance/interaction	6 (13%)
Other/too specific to classify	7 (15%)
Total	48 (100%)

Examples of Additional Assistance Desired from NCCC

Funding/resources

- Continue to connect statewide networks to potential resources.
- Financial, so we can hire dedicated staff.
- Funding to be able to formally develop a network (from an affiliate).
- Many responses simply said "funding" or "funding opportunities" or "resources"

Research-related

- Some thoughts on strategic planning on research topics and thinking to 2015 in a strategic manner so we are not just chasing any funding, but go after funding that works within the vision of our network. (Also counted under funding)
- How to get the academic researchers to the table.

- Assistance in identifying researchers.
- Sharing of practical ideas for studies that do not require substantial new expenditures.

Sustainability

- Assist with long-term sustainability
- Tips on long term sustainability

Build/expand/strengthen network

- Technical assistance on PBRN development, especially how to approach diverse interests in state and get consensus on collaborative research priorities. (Also counted under research-related).
- Team building, growing the network

Cross-PBRN assistance/interaction

- Consider having an annual meeting of PBRNs that is driven and lead by the PBRNs, with NCC support and participation. I think the PBRNs relish the opportunity to meet in person and discuss their work and progress and challenges, and at this juncture in our development, and given the lack of continued funding for PBRN infrastructure, a PBRN driven meeting could be a step toward long term sustainability, focusing on these issues and prompting the PBRNs to take charge.
- Supporting the collaboration of PBRN networks to work on a small set of selected research priorities (such as what the MPROVE study is doing) would help increase sample size/power, as well as increase the applicability of results nationally.
- Organizing theme and special issues for peer-reviewed journals, and coordinating panel presentations at national meetings. This support is very, very helpful for national dissemination.
- As our research agenda becomes more concrete, we would greatly benefit from sharing ideas, emerging tools, and policy translation strategies with other PBRNs. (From an affiliate).
- The Quick Strike funding is generally a good thing, though I'd like to see some evaluation of the perceived effectiveness of this. It has helped to engage several local researchers, but it's not yet clear if this has really helped to support and promote the Network.

Other/Too specific to classify

- Budgeting
- Guidance on additional best practices from other PBRNs
- We would appreciate guidance and advice on establishing our governance structure.

Continued Operation of Network

Table 9: How confident are you that your network will still be operating in 2015 if no more NCC funds are available?					
Respondent Type	Very likely	Likely	Unlikely	Very Unlikely	Total
All	4 (6%)	23 (36%)	25 (39%)	12 (19%)	65 (100%)
Academic	4 (15%)	12 (46%)	20 (53%)	7 (18%)	38 (100%)
Non-Academic	0 (0%)	11 (29%)	9 (43%)	3 (14%)	22 (100%)

More than half (58 percent) of respondents are not confident that their network will be operating in 2015 in the absence of NCC funding. Nineteen percent think continued operation is very unlikely without such funding. Respondents affiliated with academic institutions have a rosier perspective on continued operation, with nearly two-thirds of them (62 percent) believing continued operation is likely or very likely (compared with 29 percent of non-academic respondents).

Open-ended Responses on Continued Operation

Respondents who answered "very likely" or "likely" were asked to explain their response. Twenty-seven respondents provided one or more reasons, for a total of 36 responses. These were sorted into the five categories shown in Table 9-A. Even though these respondents were optimistic about continued operation, many expressed intentions to try to do so, rather than concrete evidence of the ability to do so.

Table 9-A: Reasons Continued Operation is Likely	
Assistance Category	**N**
Relationships/commitment/support	13 (36%)
Expect to pursue/obtain funding	11 (31%)
Level of interest/value of research	4 (11%)
Have or seeking lead organization/strength of lead org	4 (11%)
Other/not specific	4 (11%)
Total	36 (100%)

The most common reasons for belief in continued operation are the strength of current relationships, commitment or support, followed by a belief in the ability to raise funding to support continued operations. Note that the latter category did not include indications that funds had been raised, but addressed the intention to seek funding for future operations. Smaller proportions of respondents fell within three other categories (the level of interest in, or the value of, the research done; having or seeking a lead organization to continue the work; and other/non-specific response). Illustrative examples of responses in the respective categories are shown below.

Examples of Reasons Why Continued Operation is Likely

Relationships/commitment/support

- While some partners may drop away, there have been close working relationships build during the period of the grant. Our organization is dedicated to keeping PH research moving forward in the state and [commitment] from 2 major public health schools, we are confident it will continue.
- I feel that the members of the Network are dedicated to continuing with research and pursuing other funding types and sources.
- I'm hopeful that the relationships developed will provide sustainability to the network and that periodic meetings and joint projects could continue with the research projects supported with other funding.
- Because the commitment from the key stakeholders within our PBRN network is strong.
- We have a track record of developing and sustaining collaborative relationships – the network partners have been committed to this for 18 years and I don't see that changing.

Expect to pursue/obtain funding

- With accreditation coming up, and the ACA likely to be fully implemented in the next few years, funding will be available to continue such efforts.
- We are currently investigating other grant opportunities and feel we can be competitive
- We believe we will be able to sustain funding level through additional sources other than RWJF.
- The infrastructure we have established and the commitment of [state] public health to the approach have been outstanding. We believe this infrastructure will result in other sources of funding, but have been disappointed to date that this funding has not been obtained (also counted under relationships/commitment/support).

Level of interest/value of research

- Interest and support, particularly from state agency, as well as timely focus of the research.
- There is sufficient interest and support from both the school of public health and the state health department to sustain some limited activities.

Have or seeking lead organization/strength of lead organization

- Our organizational structure may allow us to sustain the PBRN long term, being lodged within a statewide member organization with a track record of obtaining diverse funding for myriad public health infrastructure building initiatives and a staff that is adept at seeking and securing grant funding.
- We have moved to institutionalize the network outside of the original lead agency, to an entity where it will attract a broader membership.

Other/not specific

- The network has been existing without NCC funding (from an Affiliate)
- I expect this network to do everything we can to continue our work.

Future Funding Status of Networks

Table 10: Has your network obtained funding or promises of funding beyond 2012 other than RWJF funds from the National Coordinating Center at University of Kentucky?

	No	Yes, from a different source	Yes, from another part of the Robert Wood Johnson Foundation	Yes, from both another part of RWJF and a different source	Yes Totals	Total
Core I	3 (60%)		1	1	2 (40%)	5 (100%)
Core II	5 (71%)	1	1		2 (29%)	7 (100%)
Affiliate	8 (88%)			1	1 (11%)	9 (100%)
Total	16 (76%)	1	2	2	5	21 (100%)

Respondents were asked if their network had obtained funding beyond 2012, and the source of that funding. To better assess the status of networks with continued funding, the tabulation above

condenses answers to one per network (in cases where there were multiple respondents from the same network). In three states, different respondents provided different answers. In a Core Round I network, 4 respondents said no and one said yes; this was counted above as a "no." Two Round II networks also had a mixture of responses, both were counted as "no" above because the more senior respondents who were most likely to know the status of funding (such as practice and research co-PIs) gave "no" respondents.

Overall, three-quarters of the networks reported they had not received funding beyond 2012. Affiliates were less successful in obtaining funding than core networks (88 percent of affiliates had not obtained funding, compared with 67 percent of core networks). Of the five networks that obtained funding, only one was from a different source, two received funding from another part of RWJF, and two received funding from more than one source, including another part of RWJF and a different source.

On-Site Interviews with Networks

Methodology

UI conducted one-to-two day site visits with three of the twelve core PBRN networks during the latter part of 2012. Interviews of approximately 90 minutes in length were conducted with 23 persons across the three sites. The mix of respondents varied somewhat by site, but included such individuals as the research and practice co-PIs, other researchers involved in network research, the network coordinator, local collaborators (such as LHD staff), and LHD Association representatives. In some cases, a small number of LHD and SHD personnel who were not directly involved in the network were interviewed. Most interviews were conducted with a single individual. A few were conducted with two respondents. Interviews addressed such topics as the network's research and researchers, dissemination and use of products, network operation and prospects for continuation, satisfaction with the NCC and services needed, challenges addressed, and recommendations.

Major Findings from On-Site Interviews

The networks visited had not yet had major impacts on the number of researchers in the field, although some noted moving from "zero" to a few researchers was an accomplishment. PBRNs primarily rely on faculty and graduate students in health-related fields. They generally had not tried to engage professionals from the social sciences or other fields, or researchers outside of academic settings. However, some researchers expressed considerable interest in bringing into network activities faculty and students, from other parts of the university, such as from economics and business administration departments.

- The small staff size (sometimes combined with part-time nature of some staff) of some LHDs, particularly in rural areas, is sometimes a barrier to their participation in PBRN research. Multiple requests for data from LHDs for network research can be seen as a burden by LHDs. Additionally, some LHDs may be concerned about potential repercussions of participation in research (including provision of data for research projects), such as identification of practices that might reveal shortcomings, or concerns that they are being "rated" against other LHDs.
- The PBRNs generally have not focused on studies of service delivery, such as to test variations in delivery of a particular service to identify potential "best practices," or to identify cost savings.
- Few examples of use of research, particularly use by LHDs, were provided. Some examples of state-level use, such as improvements to a state's system for data-collection from LHDs and development of an electronic data/case management system and use of survey findings to help improve program implementation were cited by different networks.

- Some networks have found it effective to work with the LHD Association in their state to disseminate research findings to practitioners. In some cases other potential avenues of dissemination, such as a separate PBRN website, or posting products on the Association website, were not yet in use.
- Some network members pointed out the need to provide short, actionable findings and/or tools to facilitate practitioner use of research. PBRN staff felt that LHD and SHD staff were not likely to seek research findings in "first tier" academic journals, and some LHDs may have limited access to such publications (or to funding to pay for subscriptions).
- Networks have found the assistance provided by NCC to be helpful, particularly feedback on proposals or articles. NCC's role in helping to "connect" PBRN members, assisting them in finding research topics and researcher, and helping them identify funding opportunities were mentioned as important on-going roles for NCC.

The following sections further discuss these and other findings.

Dissemination of research findings

Site visits indicated that PBRNs may not have placed much emphasis on finding different or potentially more effective, ways to disseminate research findings. For example, the Association director in one state indicated they had not thought of posting PBRN research products on its website, but indicated that would be appropriate to do so. This director also indicated that research briefs could be sent to all LHD staff, not just directors. However, those approaches to broaden dissemination were not in use at the time of the site visit.

Two of the three PBRNs visited did not have a separate PBRN website. In a state where the PBRN was housed in the SHD, the PBRN coordinator indicated there were internal barriers to setting up a PBRN website on the state's system, and state policy precluded them creating an external website. Some research products were accessible through the lead academic researcher's webpage. However, in order to find these products, one would have to know the name of the research co-PI and his university affiliation. While that webpage contained some of the products, it had not been updated recently so did not include a full set of products.

Two PBRNs visited used the Association of LHDs as a key element in disseminating PBRN research findings within their state.

- In one of these states, the Association itself was the lead PBRN agency. Researchers made presentations on research products at regular Association meetings (in addition to presentations at Keeneland or other national meetings). The Association newsletter included articles providing updates on PBRN research, and its website had a page for the PBRN, accessible by clicking on the "other initiatives" link. The page had a brief description of final research reports, which could be accessed from this page. The website

also has a link to a tutorial film for LHDs developed to help them use a health data on-line resource developed by the Association.

- In a state where the PBRN was housed in the SHD, the state Association's Executive Director was a member of the PBRN steering committee. The Association distributed research briefs to directors of LHDs and local Boards of Health on behalf of the SHD. However, it was not known whether LHD executives distributed them to their staff. At the annual Association conference, a block of time was allocated to enable the researchers to discuss the goals and objectives of the PBRN with LHD staff.

The following recommendations related to dissemination were made by some of the respondents interviewed.

Provide feedback to health departments in the form of fact-sheets and briefs on research findings. Academic and practice members in one state felt that fact sheets, briefs, and presentations to practitioners would be of greater potential value than journal articles. Findings from one research project (a survey on how state staff who provide HIV and STD services were responding to the integration of those services) were presented to field supervisors in a PowerPoint presentation to help them improve the implementation of the integrated service model.

Use more innovative, interactive technology to disseminate findings. The research partner in another state suggested using more innovative technology to disseminate findings, such as an internet based platform that would facilitate interaction and enable readers to ask questions, such as a chat room. He commented that "they shouldn't just send information out and that's it." He also felt that webinars make sense as a dissemination mechanism, but their drawback is that they are one-time mechanisms.

Research products should suggest action. Leaders and staff of LHDs and SHDs are very busy and are more likely to read research products that suggest practical applications. One LHD executive commented: "Don't do research for sake of research; you need to be able to do something with it."

Research and researchers

Researchers affiliated with academic institutions appeared to primarily focus on recruiting researchers, including graduate students, from schools of public health or closely related university departments. One mechanism used to increase the number of researchers conducting PHHSR research is to involve graduate students in formal or informal roles in their networks. In one PBRN, two graduate students in the public health program assisted the lead researcher with

PBRN research on an on-going basis. In another state, the university-based researchers engaged a group of students in conducting the qualitative evaluation of open-ended responses to the survey conducted by the PBRN and preparing a brief based on the findings.

The PBRNs visited had generally not involved researchers outside of university faculty and students, with the exception of one that had a social scientist from a nonprofit community research organization. When asked about the possibility of seeking researchers from social science fields within or outside of the university, the research co-PI for one network was open to the possibility, and felt that bringing in multi-disciplinary expertise would be consistent with the RWJF philosophy. However, the researcher had not thought of doing so previously. A practice partner indicated that a potential challenge to seeking researchers in other fields is not having contacts in academic departments not related to public health, which would hinder identifying such researchers. This may be more of a challenge for non-academic PBRN members, such as SHD officials, who may not be located in the same community as the universities and may not be familiar with faculty members in non-health related fields.

Some researchers and LHD officials also expressed interest in the possibility of involving non-PhD students who need to perform shorter "capstone" projects (such as for Masters' of Public Health programs). Such projects often have a committee that includes a community representative, which could be a LHD staff member. Such students could be used to help LHDs conduct PBRN research, such as on projects involving LHD data collection and analysis. This would also increase interest in PHSSR research on the part of students outside of PhD programs.

Some PBRN commented on challenges developing and conducting PHSSR research.

- One practice partner commented that "although the goal is for practice to drive research, translating a research idea into a practical, researchable, fundable project is the challenge of PBRNs -- going from 'what I want to know,' to a project. Finding capable and interested researchers is another challenge for networks, as is keeping practitioners involved."
- Another practice partner said that one role of the PBRNs is to educate the practice community on the types of research that are relevant to them but also challenging to a researcher. Researchers generally don't have a close relationship with practice community. Networks have to continually identify research relevant to the practice community that is also of interest to researchers. Making connections and fostering communication between researchers and practitioners so they can begin to understand each other is an important role for the networks.

- Partners at another PBRN commented that because of the deep divide between the research world and the world of practice, the NY PBRN considered it a success to have local health departments involved in research at all.

- Another challenge in keeping practitioners engaged in what may be a lengthy research project is that they are very busy (and sometimes do not have adequate staffing). Having someone to act as convener and to administer the network is needed to keep practitioners involved.

Use of research

Few examples of use of research were provided on site visits. In one state, the creation of an electronic data/case management system was developed as a result of network research. As the researchers were developing research questions related to integration of HIV and STD services, it became clear that the information they were seeking was not available in electronic form. Records were kept in paper form in state-run STD and HIV field offices. Within 15 months, the state health department had created, tested, and implemented its Program Management Application (PMA) to consistently track case work across the state.

Another component of the research was a survey addressing how state staff who provide HIV and STD services were responding to the integration. The findings—on the job-related confidence, staff buy-in, job stress and satisfaction—were presented to the field supervisors in a PowerPoint presentation to help them improve the implementation of the integrated service model.

In another state, network leaders indicated that at least 30 LHDs have used the "health equity index" (HEI) available on the Association's website. This was considered to be a "huge" example of use of PBRN products. That state also modified the type of data required from LHDs, which was considered to be a concrete result of the PBRN's work.

Some caveats related to use of research were raised during site visits. One respondent pointed out that one of key challenges facing PBRNs is conveying research findings to policy makers. Another pointed out that multiple studies may be needed to build a case for legislative change, which lengthens the research process. Practitioners affiliated with another network felt that PBRN research is more likely to bring about incremental change in culture or practice than wider policy change.

Network operation and continuation

In general there appeared to be good coordination and communication among the key partners in the networks visited. However, network operation and research is not the primary role or focus of any of the key participants. Thus turnover or changes in work responsibilities of key members or researchers can be detrimental to network operations, at least in the short run.

PBRN respondents expressed concerns about the impending end of RWJF funding. Some funding is felt to be important to help maintain the administrative/coordination aspects of the networks as well as supporting research.

NCC assistance

The PBRN sites visited felt positively about the work of the NCC and the assistance provided. Some respondents provided suggestions regarding the role of the NCC.

- One academic respondent that one of the most valuable contributions from the Center is comments on proposals they have submitted. This researcher also mentioned sending a copy of an article that had been rejected for publication to get suggestions for improvement and for other publications to submit it. This kind of feedback was considered to be an important on-going role for the NCC. Another key role is to monitor funding opportunities and facilitate collaboration on proposals, which this researchers felt the NCC was trying to do.

- One researcher commented that an important role of the NCC is serving as a "bridge" to link networks and researchers doing similar work. This is sometimes done even before such assistance is sought.

- Another site felt that NCC should put more effort into facilitating cross-network dialog, and promoting better connectivity across projects. This would help networks avoid reinventing the wheel, for example by helping them share data collection instruments.

- Some researchers felt that NCC's website could use improvement in format and content. One suggestion was to organize material in it into concept areas.

- NCCC should continue to look for and publicize funding opportunities. Some respondents suggested NCC take a more active role in that as PBRNs are facing the issue of long-term sustainability and funding.

Websites of Public Health Practice-Based Research Networks (PBRNs)

As part of understanding PBRN activities and outputs for public health improvement, we examined the availability of their websites that they have included online. PBRN websites have the potential to be important platforms for dissemination of information to public health actors in a jurisdiction who are interested in evidence for improvement but not directly involved in PBRN affairs. The websites might also show the productivity of the PBRNs through the extent of posted products, findings, or suggestions for improvement. As another indicator of dissemination and productivity, we also examined the website of the National Coordinating Center (NCC) for Public Health PBRNs[11] and located other indicators of network productivity for comparison's sake.

Methodology

To determine the availability of, and ease of access of core and affiliate PBRN websites, we first performed Google searches for each PBRN in early June 2013. We first identified whether the network had a website devoted to the networks activities and if so to assess the ease of finding information on the networks activities and products. However, it was not within our scope of work to do more than take a brief look at the websites and not critique them in any detail.

To find PBRN websites and assess how easy they are to locate, we used a number of basic *search strings* that an interested searcher would likely use, starting with "[state name] public health network, and if not found to "[state name] public health research network". We recorded whether the network's website appeared in the search results. The selected searches seemed likely entries for a somewhat informed searcher to use for finding the network's website. We also searched using the strings "[state name] PBRN" and "[state name] practice based research network". It seems unlikely, however, that searchers not involved in network affairs would know to use these latter terms.

Next we sought to identify from the website the products developed by each network. We looked for identification of activities and products and, also, whether the site provided a link to those products, thereby providing more convenient access to them.

Major Findings from Assessment of Websites

Major findings from this assessment as of June 7, 2013 were that:

- Nine of the 12 "core" PBRNs had active websites (all but Florida, Nebraska and New York).
- Two of the 12 "affiliate" PBRNs had active websites (Georgia and Missouri). (Affiliate networks, which lack significant funding from the NCC, understandably have less incentive to create stand-alone websites.)

[11] NCC program homepage (http://www.publichealthsystems.org/pbrn.aspx).

- Nine of the 11 websites we found contained information on products. Seven contained links to download products.
- All together, the sites fall well short of displaying the information evidently produced by PBRNs.

Failure to find a website using such searches does not mean the PBRN has not posted information on the internet under some other aegis. Rather, non-appearance strongly suggests that there is not a PBRN dedicated website. In any event, not appearing this way through Googling shows that a network's dissemination efforts likely need improvement. The web is the first place that most people today will likely look.

Results by Network

Table 1 summarizes website and product accessibility by PBRNs located in the named states. With the exception of Wisconsin, core network websites were found quickly using the above methodology. Note that assessing the content of the materials was beyond the scope of this task.

The home pages of eight of the nine core PBRN websites (all except Wisconsin) provided basic information such as the purpose/goals of the network, a definition of a PBRN, the partners and organizations within the network, and network lead contact information. All core websites also had very visible descriptions of current projects. However, only seven core websites contained links to download and view research products.

Table 1. Summary of PBRN Websites found

Core Practice-Based Research Networks			
State	**Website for PBRN**	**Identifies products**	**Contains links to products**
1. Colorado	✓	✓	✓
2. Connecticut	✓	✓	✓
3. Florida			
4. Kentucky	✓	✓	
5. Massachusetts	✓	✓	
6. Minnesota	✓	✓	✓
7. Nebraska			
8. New York			
9. North Carolina	✓	✓	✓
10. Ohio	✓	✓	✓
11. Washington	✓	✓	✓
12. Wisconsin	✓	✓	✓
Affiliate Practice-Based Research Networks			
1. California			
2. Georgia	✓	✓	✓
3. Iowa			
4. Kansas			
5. Maryland			
6. Missouri	✓		
7. New Hampshire			
8. New Jersey			
9. South Carolina			
10. Tennessee			
11. Texas			
12. Vermont			

Results for the NCC website

The National Coordinating Center's website (http://www.publichealthsystems.org/pbrn.aspx) had a clear description of what are, and who participates in, Public Health PBRNs. The website, as of early June 2013, also contained links to 6 of 12 core PBRN network websites and one affiliate network website. However, as mentioned above, 9 of 12 core PBRNs had websites and 2 of 12 affiliate PBRNs had websites. The NCC website did not list the websites of the core PBRNs in Colorado, Kentucky and Minnesota nor the website of the Missouri affiliate PBRN. We saw no obvious rationale for omitting these PBRN websites.

Discussion

The internet sites evidently do not include all of the information generated by PBRNs. Counts of products were provided by NCC director Glen Mays at an adjunct meeting to the 2013 Keeneland

conference in Lexington, KY. As of April 2013, PBRNs had produced "21 Journal articles published or in press in 2012-13" and "72 scientific presentations at national meetings" as well as "policy briefings provided to more than a dozen federal agencies."[12]

Including products from earlier stages of PBRN operations during December 2008-2011 would expand these numbers by an unknown but positive amount. The expansion would not be proportionate to the number of years included, for two reasons. First, the number of PBRNs has increased over time. Second, all analytical products necessarily appear only after some amount of lag time after operations begin.

The websites examined fall short of any such level of production, however estimated. Again, this shortfall suggests a need for paying more attention to translation and dissemination.

[12] See website "Public Health PBRN Review-April 2013" (http://www.publichealthsystems.org/public-health-pbrn-reviewapril-2013.aspx), linking to Glen Mays. "Vital Statistics: The State of the Public Health PBRN Program," Public Health PBRN 2013 Grantee Meeting. Lexington, KY. Apr. 2013. Available at: http://works.bepress.com/glen_mays/88

Section 7: Survey of Successful PHSSR Applicants

Purpose

Our survey of PHSSR grant recipients sought to hear about their experience and obtain suggestions for improvement in processes for grant applications and management of projects. We focused on those receiving substantial grants in 2009 through 12. The survey excluded PBRN awards and "mini" grants made to young investigators.

Major Findings

This survey was sent to all 24 PHSSR recipients awarded grants in 2010, 2011, and 2012, and we received 20 responses, an 83 percent response rate. The survey generated the following findings:

- Overall, the recipients were happy with instructions and proposal.
- Three-quarters of the grants have resulted in at least one product, and 60 percent of the 15 projects with at least one product have had the products disseminated to local health departments.
- One in five respondents reported no dissemination. All but one respondent said they could not have conducted research without RWJF grant.
- All but one of the respondents are still undertaking public health systems and services research, and a large majority indicated that the RWJF program played an important role in encouraging the grantees and other PHSSR researchers in the field. The most commonly cited explanation was that RWJF is one of few funding sources for this type of research.

Suggestions for improving the grants process included:

- Separating the research and dissemination requirements,
- Focusing research on more innovative topics,
- Shorting the application,
- Increasing the award size to support multi-state projects with larger sample size and statistical power, and
- Allowing a longer time between the CFP announcement and proposal submission

Respondents also provided detailed suggestions for improving interest in field. These included:

- Increasing RWJF funding and encourage funding sources beyond RWJF,
- Linking research organizations with smaller health departments,
- Identifying areas where PHSSR topics overlap with health care services research so that researchers can write PHSSR “modules” into proposals to federal funders such as the National Institutes of Health and the National Science Foundation, and
- Making particularly rigorous or innovative work available for other researchers to use as an example.

Methodology

This survey was sent to all 24 recipients awarded sizeable grants in 2010, 2011, and 2012 under PHSSR calls for proposals (CFPs). The "mini" grants for young researchers are not included, nor the PBRN awards. We omitted earlier and later grant cycles as likely to have low response rate or incomplete experience. The National Network of Public Health Institutes administered the CFP for these three years and provided us complete lists of grantees for the 2010, 2011, and 2012 awards. The initial survey was sent on December 18, 2012, followed by six reminders, the last of which was sent on February 13, 2013. The e-mail addresses for all 24 grantees were current. We received 20 responses, an 83 percent response rate. We received responses from five grantees for the 2010 awards, nine grantees for the 2011 awards, and six grantees for the 2012 awards. All 20 respondents confirmed that they had indeed received at least one award from RWJF's PHSSR program.

Detailed Findings

Proposal instructions

None of the respondents found fault with the proposal instructions for their rounds of grants. All 20 respondents rated the instructions "excellent" or "good," as shown in Table 1.

Table 1: Usefulness of proposal instructions

Excellent	Good	Fair	Poor	Total
7 (35%)	13 (65%)	0	0	20 (100%)

A majority of the respondents (60 percent) found that the proposal required considerable effort but that the requests were reasonable, and almost all the other respondents rated the requirements as not onerous, or "reasonable," as shown Table 2.

Table 2: Effort required for completing proposal instructions

Reasonable	Required considerable effort but requests were reasonable	Required somewhat more effort than appears needed	Required considerably more effort than appears needed	Total
7 (35%)	12 (60%)	1 (5%)	0	20 (100%)

Handling of proposal decision

In contrast to the unsuccessful applicants, who were critical of RWJF's handling of the proposal, all the grantees were satisfied with how the decision-making process was handled. As shown in Table 3, all respondents rated RWJF's handling of the proposal as "excellent" or "good."

Table 3: Rating of the way the proposal decision was handled

Excellent	Good	Fair	Poor	Total
10 (50%)	10 (50%)	0	0	20 (100%)

Research products, dissemination, and use of research by health agencies

Fifteen, or 75 percent of respondents, reported at least one product. Among those without at least one research product, several respondents explained that their grant was too recent to have a product. Among the 31 products from these 15 projects, 25 percent were published articles, 45 percent were unpublished articles or research reports, 20 percent were research briefs, and the remaining 15 percent were presentations, as shown in Table 4. The five projects that reported having no products were either from the 2012 grant year (3 respondents) or the 2011 grant year (2 respondents).

Table 4: Aggregate Numbers of Products from PHSSR grants

Published articles	Unpublished articles or research reports	Research briefs	Presentation material, such as PowerPoints	Total number of products
5 (25%)	9 (45%)	4 (20%)	13 (15%)	31*

** Five projects had no products, four projects had one, six projects had two, three projects had three, and two projects had four.*

Not all of the projects could claim credit for at least one research products, although several respondents explained that this was because their grant was too recent to have resulted in a product. Fifteen, or 75 percent of respondents, reported at least one product. Among the 31 products that have resulted from these 15 projects, 25 percent were published articles, 45 percent were unpublished articles or research reports, 20 percent were research briefs, and the remaining 15 percent were presentations, as shown in Table 4. The five projects that reported having no products were from the 2012 grant year (3 respondents) and 2011 grant year (2 respondents).

Table 4: Products resulting from PHSSR grants

Published articles	Unpublished articles or research reports	Research briefs	Presentation material, such as PowerPoints	Total number of products
5 (25%)	9 (45%)	4 (20%)	13 (15%)	31*

**Five projects had no products, four projects had one product, six projects had two products, three projects had three products, and two projects had four products.*

In addition to these products, respondents also noted that they published or otherwise produced their research findings in the form of policy briefs, tools for public health practice, and webinars. One researcher indicated that she had used the RWJF-funded findings for subsequent grant proposals.

These products appear to have been disseminated to local health departments to a moderate degree. Of the 15 respondents who reported at least one product, nine researchers, or 60 percent, could confirm that their products were disseminated to local health departments. The remaining 40 percent of respondents were split evenly between those who said their products were not shared with local health departments and those who did not know.

Table 5: Dissemination of products

Was product disseminated to health departments?			
Yes	**No**	**Don't know**	**Total**
9 (60%)	3 (20%)	3 (20%)	15 (100%)

Use of the PHSSR grantees' work by local health departments or state health agencies does not appear to be large. Fewer than half of respondents reported that their work had been used by agencies, even a little (Table 6). This share seems low, especially for self-reported information.

Table 6: Use of PHSRR research by local and state health agencies

To what extent has your work, thus far, been used by local or state public health agencies in your state?					
A great deal	**Somewhat**	**A little**	**Not at all**	**Don't know**	**Total**
1 (5%)	6 (30%)	2 (10%)	5 (25%)	6 (30%)	20 (100%)

Note: This analysis includes all 20 respondents, who all answered the question; it is possible to affect an agency's work before creating a formal product.

The seven respondents who said their work had been used "a great deal" or "somewhat" were asked to elaborate, and six volunteered an explanation. In most cases, the researchers equated use of the research with sharing it, either with health agencies or with other researchers. A few comments indicated that the work was not only shared but also used to inform practices or policies. The following comments explained "use":

- "Original report of research was used and cited by members of state legislature when considering changes to state laws affecting local public health agency organization and governance. Report and other materials are presently being used by local health departments and county government officials to make decisions about whether and how to make changes in local public health agency organization and governance."
- "Preliminary results from the study have been shared with local partners, as well as internally at the state health department. The program area that participated in the intervention is working with us to incorporate study findings into their Legislative Report, as well as in the development of the next iteration of the intervention. In addition, study findings are being applied to another program area that is exploring how to incorporate QI activities into an initiative that they will be rolling out with local public health in the near future."

- "Results from our study of local health department CHA-CHIP processes and progress to data have been shared with the health departments to inform them about what other health departments are doing and have been used by the research team to inform and guide a parallel project designed to provide support and technical assistance to local health departments with the CHA-CHIP process."
- "The work has been requested by researchers… who are doing work in a related area. I don't know the specifics regarding how it has been used."
- "We received excellent feedback from LHD and Area Agency on Aging stakeholders about the importance of coordinating public health services and systems from seniors. As part of [our state's] developing PBRN, there is interest in using the instruments developed by the project as local public health system self-assessments. Additional products are under peer review."
- "Materials have been shared with state and local health departments."

Current and future public health systems and services research

All but one respondent said they could not have conducted their research without the RWJF grant, as shown in Table 7. All but one are still undertaking public health systems and services research, as shown in Table 8. All the researchers who are still active in the PHSSR field expect to remain in field.

Table 7: Ability to conduct proposed project

Do you think you could have conducted this research without the RWJF grant?			
Yes	**No**	**Don't know**	**Total**
0	19 (95%)	1 (5%)	20 (100%)

Table 8: Continued PHSSR work

Are you still undertaking any public health systems and services research?		
Yes	**No**	**Total**
19 (95%)	1 (5%)	20 (100%)

Table 9 and Table 10 show that respondents feel RWJF plays an important role in the field. All respondents who said they expected to remain in the field said that the foundation played a positive role in encouraging them to stay in the field "somewhat" or "to a strong degree." The most commonly cited explanation for this rating was that RWJF is one of few funding sources for this type of research. A complete list of explanations for how RWJF encouraged grantees to remain in the field can be found in Appendix A. Three-quarters of all 20 respondents said they felt the foundation encouraged other researchers to enter or remain in the field; the last quarter of respondents indicated they were uncertain as to the role played by the PHSSR grant program.

Table 9: Role of RWJF in encouraging PHSSR grantees to remain in field

Has RWJF's Public Health Systems and Services Research program played a positive role in encouraging you to remain in the field?				
To a strong degree	**Somewhat**	**To a small degree**	**Not at all**	**Total**
15 (79%)	4 (21%)	0	0	19 (100%)

Note: Only respondents who indicated they were still undertaking public health systems and services research responded to this question were asked this question. All 19 responded.

Table 10: Role of RWJF in encouraging other researchers to enter or remain in PHSSR field

To what extent do you think RWJF's PHSSR grants have played a role in encouraging other researchers to enter or remain in the field of public health research?				
To a strong degree	**Somewhat**	**Not much**	**Don't know**	**Total**
10 (50%)	5 (25%)	0 (0%)	5 (25%)	20 (100%)

As shown in Table 11, all 19 respondents who indicated that they were still undertaking PHSSR research expect to remain in the field.

Table 11: Future PHSSR work

Do you expect to continue to do work in public health systems and services research?		
Yes	**No**	**Total**
19 (100%)	0 (0%)	19 (100%)

Note: Only respondents who indicated they were still undertaking public health systems and services research responded to this question were asked this question. All 19 responded.

Suggestions for improving PHSSR grants process

Suggestions for improving grants processes included (1) separating the research and dissemination requirements, (2) focusing research on more innovative topics, (3) having a shorter application, (4) increasing the award size to support multi-state projects with larger sample size and statistical power, and (5) allowing a longer time between CFP announcement and proposal submission to allow better projects to be constructed and avoid the appearance that funding is "wired" to go to particular researchers. One respondent echoed the unsuccessful applicants in requesting feedback on turn-down projects: "While I am currently funded on a PHSSR project, I have previously submitted several unsuccessful projects to RWJF. The lack of feedback of any kind for an unsuccessful project is problematic. It is difficult for an investigator to know what if anything they might do to increase their chances of being successful the next time."

Here are a few examples; Appendix B provides a complete listing.

- "The grants require researchers to do non-publication-based dissemination. This will hinder many researchers from applying as such dissemination can hinder or block academic publication. The dissemination process needs to be separated from the research process as each process requires very different skill sets. As in business, marketing is

separate from R&D. Comparative advantages should be exploited by using the best people to do each task."

- "The more work we do examining PHSSR research questions related to local public health jurisdictions, the more we realize that small sample sizes within states can be a limiting factor in being able to use rigorous methods. Yet the awards are often not large enough to support multi-state projects, unless one state takes the lead and the other partner states are willing to play a more minor role and receive substantially less financial support. Collaborative projects that involve multiple health agencies across states, as well as other partner organizations, are crucial to increasing sample size and statistical power for this work."
- "The time frame between announcement and deadline for submission has gotten prohibitively short. It's difficult to develop a research team and write a strong proposal in the time allotted. The short time frames makes it look like the funding is "wired" to go to someone."

Suggestions for improving interest in public health systems and services research

Fewer than half of the 20 respondents had suggestions for increasing interest in PHSSR, as shown in Table 12. All seven grantees who said they had suggestions, provided one, and a complete list follows below. The suggestions for improving interest in the PHSSR field included increasing RWJF funding and encouraging funding sources beyond RWJF; linking research organizations with smaller health departments; identifying areas where PHSSR topics overlap with health care services research so that researchers can write PHSSR modules into proposals for federal grants, such as from the National Institutes of Health; and making particularly rigorous or innovative work available for other researchers to use as an example.

Table 12: Suggestions for increasing interest in PHSSR

Do you have suggestions for increasing researchers' interest in public health systems and services research?		
Yes	**No**	**Total**
8 (42%)	11 (58%)	19 (100%)

**One respondent did not answer this question.*

Many specific suggestions were provided:

- "Separate the research process from the dissemination process. Improve data sources. I think the fundamental issue is that there does not appear to be funding apart from RWJF. Many researchers may be hesitant to invest in an area where there are not other clear funding sources available to finance a research program. RWJF should encourage other funders to support this area of research."
- "I think the PBRN concept is very helpful and should be continued. I also suggest RWJF linking some of its research communities with smaller health departments, particularly those located in rural and Tribal communities. These public health departments are often

exceptionally well-versed in connecting with policy makers and sharing findings from PHSSR would help to bolster their ability to communicate the value of PH. PHSSR needs to reach across all political aisles to be viewed as a credible resource. Bottom line: PH needs PHSSR to identify where resources are most effective (continue building the evidence-base) and the findings need to be used to articulate the impact PH makes to the economic viability of communities."

- "Find and teach students/colleagues about the areas of public health systems research that overlap with health care services research (but clearly remains in the public health agency realm) so that we can start writing public health services "modules" and aims into National Institutes of Health, National Science Foundation, and Agency for Healthcare Research and Quality proposals."
- "There needs to be federal funding for research. In the ideal world, there would be a National Institute for PHSSR. We also need strong doctoral programs that will prepare PHSSR researchers."
- "Junior researchers need to see examples or have encouragement that it is possible to build a respected career in this field."
- "Funding is always an issue. I appreciate that RWJF offered larger grants in the last PHSSR cycle. This will help. $200,000 is helpful and at the same time limits the amount of work that can be done."
- "Find ways to highlight particularly rigorous, innovative papers, especially promoting junior investigators, and find linkages with other related areas of translational research."
- "Increase opportunities for researchers to publish and present. Once people see the products of PHSSR, they will be interested."

APPENDIX A

Explanations for those who answered "to a strong degree" or "somewhat to the question: Has RWJF's Public Health Systems and Services Research program played a positive role in encouraging you to remain in the field?

"To a strong degree"

- I would not have done any work in this area without the funding by RWJF. My work is working its way through the publication process (which is slow) and after publication I will be able to obtain additional funding to continue work in this area.
- The [State] Health Institute has a well-established commitment to strengthening the public health system in our state. Research to understand what is currently happening, and where our strengths and weaknesses exist, are essential to our work in this area.
- PHSSR is a growing field and there are lots of risks associated with spending time in more uncertain research areas. If grant funding was not available, I would not be inclined to take the risk of pursuing complex PHSSR questions.
- RWJF is one of the only funding sources to support PHSSR projects. Without this support, we would not be able to examine critical PH systems issues, particularly for Tribal health departments. Given the health disparities experienced by Tribal communities, I am grateful for the opportunity to examine how Tribal public health departments are structured and to identify opportunities to enhance the overall Tribal public health system. It is also illuminating to learn that the delivery of public health services are more closely aligned than different when comparing like size communities and geographic areas. Likewise, I look forward to future RWJF support to examine how the IOM recommendation to identify a minimum package of public health services that all public health departments should provide will evolve to include all health departments (including Tribal and rural).
- The RWJF provides both financial support to pay for salaries and travel to national conferences, as well as technical assistance (through NNPHI), which would have been unavailable to us without RWJF program support.
- It has allowed me to commit at least a portion of my career to practice-based research. My projects would not have been possible without this funding - NIH and AHRQ, CDC, other foundations are just beginning to see the importance of this type of research on public health agencies and their system partners.
- There are few funding agencies contributing to funding PHSSR projects in spite of the fact that research is badly needed in this field to improve PH systems. I am certain that if funding were not available from RWJF for research in this field, my research team would have to move completely away from researching PHSSR.
- The RWJF PHSSR grant program continues to be one of the few sources of grant funding for topics relevant to local and state health departments.
- As a new faculty member developing a research agenda is very important. The ability to secure RWJ PHSSR funding really solidifies the direction my research will take in the future. It's

much better to continually build on existing research than carve into new territory. The support of the RWJ Foundation has allowed me to gain early research success in the PHSSR field so I plan to continue down this research path.

- The Keeneland Conference as well as the National Coordinating Center for PHSSR have both been helpful in stimulating ideas, supporting a network and supporting research. The new online journal, Frontiers, is helpful for learning about research early in its process. NNPHI staff members (and in particular, Nikki Rider) have provided useful feedback and have helped with connections.
- Outside assistance permits me to assemble the multi-disciplinary team needed to conduct the research. Goals of the RWJF PHSSR program are closely aligned with the type of research that is needed to inform practice in my state.
- These are very uncertain funding times, particularly to less senior investigators. The PHSSR program has supported work that will hopefully lead to useful products for dissemination to local health departments upon completion of the project, as well as provide a source of data to use as a foundation for future grant proposals in related areas.
- By supporting conferences like Keeneland and the AcademyHealth post-conference meeting, RWJ has provided a targeted forum to discuss PHSSR issues.
- RWJF has done a great job of field building - providing funding and supporting interest in PHSSR. Without the initial funding opportunity, I would not have been able to do this work. I am just in my first funded PHSSR project, and we are only six months in, but the process has gone well so far. I am concerned about future opportunities and whether in their attempt to bring in new researchers if RWJF will continue to fund previously funded researchers. There doesn't seem to be anyone else out there supporting this type of research.

"Somewhat"

- The grant provided funding for a project that otherwise would not have been pursued. Also, I'm looking forward to meeting and networking with other PHSSR grantees as well as the program office.
- I have only just been funded so my engagement with the program office has been very limited to this point.
- It has allowed me to work with others interested in this field, which not only helped develop skills but also provided additional support (professional, intellectual) for this kind of work. It also made it possible to include some junior faculty and graduate students in this kind of work, to develop and encourage their interest.
- Funding for our current PHSSR work, networking with other grantees and learning about their work has given us ideas and contacts that have assisted/supported us in our work.

APPENDIX B: Suggestions for improving PHSSR grants process

- More focus on innovation and impact in funding decisions, shorter applications (like the NIH movement).
- It is difficult to have a 12 percent indirect cap for budgets. If there is a way that former researchers could engage in a dialogue with the accounting and program staff, it would be very helpful. As research budgets continue to shrink, the "loss" of indirects on RWJF projects may limit some researchers' ability to apply.
- Funding needs to increase to at least $500-600K per 2-3 year project that is funded. We need these resources to design and complete projects with more sophisticated methods and to complete policy and practice relevant deliverables.
- Actually, I think that the RWJF grant process is one of the more straightforward and transparent processes I have experienced. My only suggestion would be to provide written and summarized feedback, including scores (if scoring systems are used) for projects resulting from the review process.
- This may not be realistic, but the amount of funding per grant makes it difficult to do very ambitious or definitive projects. The results of our project were less valuable than we hoped because by scaling the investigations to what was realistic for the amount of funding, there was less "power" to the study.
- I think the grant process overall is good, perhaps more interactive grantee meetings, rather than just presentations by some grantees some interactive discussion and dialogue on best practices, challenges, and future directions for PHSSR
- Process is mostly good and reasonable, though with two rounds of grant proposals (brief proposal, then long proposal if invited) it is an extensive amount of work.
- I wish that PHSSR wasn't so narrowly defined. It has almost ignored the provision of medical care by health departments in favor of focusing on the core functions of public health. Primary care offered by health departments deserves study, especially in the era of health reform.
- While I am currently funded on a PHSSR project, I have previously submitted several unsuccessful projects to RWJF. The lack of feedback of any kind for an unsuccessful project is problematic. It is difficult for an investigator to know what if anything they might do to increase their chances of being successful the next time.

<u>Comments already quoted above in the text:</u>

- The grants require researchers to do non-publication-based dissemination. This will hinder many researchers from applying as such dissemination can hinder or block academic publication. The dissemination process needs to be separated from the research process as each process requires very different skill sets. As in business, marketing is separate from R&D. Comparative advantages should be exploited by using the best people to do each task.

- The more work we do examining PHSSR research questions related to local public health jurisdictions, the more we realize that small sample sizes within states can be a limiting factor in being able to use rigorous methods. Yet the awards are often not large enough to support multi-state projects, unless one state takes the lead and the other partner states are willing to play a more minor role and receive substantially less financial support. Collaborative projects that involve multiple health agencies across states, as well as other partner organizations, are crucial to increasing sample size and statistical power for this work.
- The time frame between announcement and deadline for submission has gotten prohibitively short. It's difficult to develop a research team and write a strong proposal in the time allotted. The short time frames makes it look like the funding is "wired" to go to someone.

Section 8: Survey of Unsuccessful PHSSR Applicants

Purpose

The purpose of this survey was to obtain information on the PHSSR proposal process from researchers whose PHSSR proposals were turned down, in order to obtain a different perspective on the proposal process and on any effects of the grant process might have in encouraging even unsuccessful researchers to stay in the field, perhaps with subsequent PHSSR or other funding.

Major Findings

This section is based on 115 responses from applicants who were turned down by RWJF for PHSSR funding for the 2010, 2011, and 2012 awards.

These respondents expressed a strong desire for feedback from RWJF on their proposals. Most of the researchers were not able to conduct the research that they proposed in their unsuccessful applications. Among the few who were able to find alternative funding, the Centers for Disease Control and National Institutes of Health were the most commonly cited funding sources.

The respondents indicated that they continue to do research in the public health services and systems area and expressed an intention to remain in the field despite having their proposals turned down for PHSSR grants.

Most respondents, 76 percent, took time to offer RWJF substantive suggestions for improving researchers' interest in the public health systems and services research. These suggestions are provided later in this section.

Methodology

This survey was sent to all 287 applicants who applied for PHSSR rounds that resulted in grants awarded in 2010, 2011, and 2012 but were rejected, either at the brief or full proposal stage. The National Network of Public Health Institutes administered the Call for Proposals for these three years and provided us complete lists of unsuccessful applicants for the 2010, 2011, and 2012 awards. The initial survey was sent on December 17, 2012, followed by six reminders, the last of which was sent on February 13, 2013. The e-mail addresses for 31 respondents did not work, but the remaining 255 e-mails went through. We received 119 responses, a 47 percent response rate. We received responses from 47 applicants for the 2010 awards, 58 applicants for the 2011 awards, and 14 applicants for the 2012 awards.

Detailed Findings

Confirmation of Turn-Down Status

All but one of the 119 respondents confirmed that they had indeed submitted the proposal that we had in our records, and 115 confirmed that they had been turned down. Three respondents indicated that they in fact had gotten a PHSSR award. The analysis is this section is based on the 115 respondents who were confirmed as having been turned down. Among the confirmed unsuccessful applicants, 60 percent were turned down at the brief proposal stage, and 40 percent were turned down after submitting a full proposal, as shown in Table 1.

Table 1: Phase of proposal process when turned down

After submitting a brief proposal	After submitting a full proposal	Total
68 (60%)	46 (40%)	114* (100%)

** One respondent did not answer this question.*

Proposal instructions

As Table 2 shows, the great majority of respondents found the proposal instructions satisfactory, with 78 percent rating the instructions "excellent" or "good." Only two percent rated them "poor."

Table 2: Usefulness of proposal instructions

Excellent	Good	Fair	Poor	Total
16 (14%)	73 (64%)	26 (23%)	2 (2%)	114* (100%)

**One respondent did not answer this question.*

Of the 25 percent (28 respondents) who rated the instructions fair or poor, the most common complaint was lack of clarity on the selection/review criteria (13 respondents in total). For example:

- "After several years of being requested to submit a full proposal, it became evident that the instructions provided insufficient detail on criteria for selection."
- "Don't think the RFP was clear the [about RWJF's] expectations and how the proposal would be evaluated."
- "The instructions were very brief and didn't really explain what the organization was looking for. Perhaps they should offer a webinar or something explaining their goal/missions for funding and strategy tips for writing for funding from RWJF."
- "I don't remember a specific problem with respect to the procedure or process for submitting. However, it would be helpful to understand more about what makes a proposal to RWJF successful or not."

Other explanations for the sub-par rating were that the process was cumbersome (1 applicant), the instructions lacked detail (3 applicants), and the application format was awkward (2 applicants).

Respondents were generally satisfied with the amount of effort needed to meet the requirements called for in the solicitation instructions, with 76 percent judging the effort required reasonable, as shown in Table 3.

Table 3: Effort required for completing proposal instructions

Reasonable	Required considerable effort but requests were reasonable	Required somewhat more effort than appears needed	Required considerably more effort than appears needed	Total
37 (33%)	49 (43%)	20 (18%)	7 (6%)	113 (100%)

Note: Two respondents did not answer this question.

Handling of proposal decision

This was the area where respondents were most critical of RWJF. More respondents rated handling of the decision process as fair or poor (56 percent) than rated the decision process good or excellent (44 percent), as Table 4 shows.

Table 4: Rating of the way the proposal decision was handled

Excellent	Good	Fair	Poor	Total
3 (3%)	46 (41%)	41 (37%)	21 (19%)	111 (100%)

Note: Four respondents did not answer this question.

Among the 35 (of 62) respondents who provided an explanation for why they found the handling of the proposal lacking, almost all (32 in total) cited the lack of feedback as the problem. Two other people said they felt that the reviewers did not understand their proposed projects, and another expressed a desire that grant program be more open to "non-traditional public health topics." Here are a few examples of those wishing for more feedback:

- "It would be helpful to know more specifically why it was not selected and what could be done better. Grantees spend lots of time writing grants and rarely get feedback, it would help us learn and do better if feedback and viewer comments were helpfully and constructively shared."
- "It appears as though this solicitation focuses on new investigators to the field and those that include advanced research methods. I had received positive feedback about our proposal idea from Foundation staff and was encouraged to apply. I thought it was very responsive to the call, and was surprised when no proposals in this area were funded.
- "It is unhelpful to have a proposal not considered for funding without ANY feedback as to why it wasn't considered. It makes the process appear unfair. There does not need to be a detailed response, but at a minimum state the reason for that particular proposal (doesn't match interests of RWJF; poor methodology; etc.)"

- "Much of the feedback is generic (e.g., we received a very large number of proposals). Given the amount of work required to submit something, it would be much more helpful to have specific feedback. It's very discouraging and seems quite inaccessible to someone who has not been funded by RWJF before."
- "We had an excellent proposal on an important topic (meeting the goals and requirements) but received no indication (as far as I remember, but it was a bunch of years ago) on why we did not even reach the first cutoff."

Past and future PHSSR work

Most respondents (72 percent) said they had done public health systems and services research before applying for the RWJF funding, as shown in Table 5, and almost all respondents (86 percent) said they were unable to conduct the project for which they applied for RWJF PHSSR funding, as shown in Table 6. However, rejection by RWJF does not appear to have resulted in researchers leaving the field: 72 percent of respondents said they have undertaken PHSSR since being turned down for the RWJF funding, as shown in Table 7, and 95 percent said they expected to continue to do PHSSR work, as shown in Table 8. The survey questions on past, current, and future public health systems and services research were worded to include research funded by RWJF's PHSSR program, other RWJF programs, as well as sources outside of RWJF.

Table 5: Past public health systems and services research

Before submitting this proposal, had you done any other public health systems and services research projects?		
Yes	**No**	**Total**
79 (72%)	31 (28%)	110* (100%)

**Five respondents did not answer this question.*

Table 6: Ability to conduct proposed project

Have you been able to conduct this public health research without this funding?		
Yes	**No**	**Total**
15 (14%)	95 (86%)	110* (100%)

** Five respondents did not answer this question.*

Table 7: Continued PHSSR work

Since this proposal, have you undertaken any public health systems and services projects?		
Yes	**No**	**Total**
79 (72%)	31 (28%)	110* (100 %)

Five respondents did not answer this question.

Table 8: Future PHSSR work

Do you expect to continue to do work in public health systems and services research?		
Yes	**No**	**Total**
104 (95%)	6 (5%)	110* (100%)

Five respondents did not answer this question.

Being new to the PHSSR field appears to have affected whether or not researchers had undertaken any other PHSSR research projects since being rejected by RWJF. Among new researchers (defined here as those who said they had not done any public health systems and services work prior to this proposal), only 48 percent of respondents said they had undertaken any subsequent PHSSR research, compared to 81 percent of established PHSSR researchers. On the other hand, new researchers and established researchers presented themselves as just as likely to continue doing PHSSR work: 97 percent of new researchers said they expected to continue in the field and 94 percent of established researchers said they expected to continue their PHSSR work. (Please see Appendix A for these cross tabulation tables.)

For those 15 researchers who were able to conduct the proposed research despite not getting RWJF funding, the most common sources of funding were the National Institutes of Health (NIH) and the Centers for Disease Control (CDC). These are the sources provided by the ten respondents who identified their replacement funding:

- NIH's K23 award program. (Note: These awards support the career development researchers engaged in patient-oriented research. Qualifying research includes epidemiologic, nutrition, behavioral and social science projects in which the researcher interacts directly with study participants. Source: http://www.nhlbi.nih.gov/funding/training/redbook/newk23.htm)
- CDC
- NIH's National Cancer Institute
- NIH's National Institute on Aging and the Bronfenbrenner Center at Cornell University
- CDC's Community Transformation Grant, First 5 LA (a local advocacy and grant making organization in Los Angeles), UniHealth Foundation (a private health care foundation), Kaiser Permanente Foundation, California Community Foundation
- CDC's National Public Health Improvement Initiative
- Mayo Clinic
- NIH, American Cancer Society, and own institution
- Own institution; in-kind time
    - Other RWJF funding

For the six respondents who said they expected to leave the field, explanations largely had to do with lack of funding. Two respondents said they were developing work in other programs areas without mentioning dearth of funding for PHSSR projects. A few examples:

- "As a practice agency, the only way we can do research is with grant funding and assistance in grant development. Research is not the first priority of practice agencies and with public health funding cuts, and staff losses, it has been increasingly difficult to write proposals and compete successfully."
- "There are more interesting things to do and PHSSR is taking too strong a HSR focus rather than a focus on understanding how public health systems really work."
- "Funding is nearly impossible to find outside of RWJF sponsored sources"
- "Support for good research in this field is highly limited and usually comes with a mandate for immediate development of "tools." The pace of development of science and of practice are much slower than the pace of policy, thereby frustrating both disciplined advancement in both practice and research. "

For the 95 percent of researchers who have chosen to remain in the field, RWJF's program appears to play a mixed role in that decision. As shown in Table 9, 57 percent of respondents said that RWJF's programs encouraged them to stay in the field to any degree, while 43 percent said that the program played no role in encouraging them to remain in the field. This finding suggests that other opportunities exist for supporting PHSSR projects.

Table 9: Role of RWJF in encouraging PHSSR researchers to remain in field

To what degree has RWJF's PHSSR played a role in encouraging you to remain in the field?				
To a strong degree	**Somewhat**	**To a small degree**	**Not at all**	**Total**
13 (13%)	20 (19%)	26 (25%)	45 (43%)	104 (100%)

Note: Only respondents who said they expected to remain in the field, of whom there were 104, answered this question.

Suggestions for improving interest in PHSSR

It is noteworthy that 87 out of the 115 respondents, or 76 percent, took the time to answer, sometimes at length, the final open-ended question requesting suggestions for improving researchers' interest in PHSSR. As shown in Table 10, the suggestions fell into four main categories: (1) funding amount; (2) research focus or type of recipient; (3) the application and decision process; and (4) training, technical support, and collaboration. A handful of suggestions did not fit into these categories but can found in the complete list of suggestions found in Appendix B. That appendix provides the words contained in the response and then indicates the category into which we assigned the response. Twelve respondents offered comments that were compound in nature and were categorized as two or three separate suggestions, for a total of 99 individual suggestions.

(1) One in five respondents answering this question provided a comment having to do with funding. Some simply encouraged RWJF to continue funding at the current levels, some

wished for increased funding opportunities, and some recommended increasing the number of grants, even if that meant the grant amount was smaller.

(2) About a third of the comments concerned the project focus or type of grant recipient. Some felt that certain issues, such as obesity and tobacco, were given preference. Others wanted more practice organizations funded as opposed to research institutions. Others wished to see more projects with non-traditional, innovative, or mixed-methods approaches funded. Several respondents voiced the concern that the same researchers were funded repeatedly and urged RFWJ to expand beyond these "usual suspects," as one respondent put it. For example:

- "Need to expand beyond a small group of people that are connected and share similar perspectives."
- "From what I can see, RWJF tends to fund certain types of disciplines and a set of researchers that is relatively small. I think people in many disciplines can contribute to quality research in public health systems and services, and it would be nice to see a broader set of people and disciplines funded. I also understand they will not be taking unsolicited proposals any more, which also suggests that funding is likely to be limited to people who have had funding before from them."
- "It would be considerably more helpful to increase the number of awards and not have them primarily go to the same people/organizations over and over again. "New investigators" and "innovative methods" could significantly help diversity the field."

(3) Twelve respondents, or 14 percent of those responding to this question, iterated their desire for more feedback on why their proposals had been turned down.

(4) About a third of the comments encouraged more training and technical support for those who might want to enter the PHSSR field and for increased communication or collaboration among those already in the field or those new to the field. One respondent suggested that having a list of previously funded researchers would be helpful to applicants and another suggested establishing a listserv for PHSSR researchers to help potential partners connect.

- "Provide avenues for researchers to connect better with public health organizations, especially at the national level to identify research gaps. Foster the collaboration between researchers and public health organizations to provide better access to those working in the public health field."
- "There are very few opportunities to secure funding in this area and the current CFPs don't seem to support those of us who are already doing some of this work. It would be nice to have opportunities to team up with other PHSSR researchers and practitioners throughout the county who want to collaborate in this area."
- "Consider making a list of suggested researchers who want to partner with practice agencies in specific areas available."

Table 10: Suggestions for improving interest in PHSSR

Funding amount	
Continue funding	7
Offer grants of longer duration	1
Offer more grants (even if smaller)	4
Increase overhead	1
Increase funding	7
Total	20 (20%)
Research focus or type of recipient	
Broaden focus of funding:	9
Target funding at innovative or non-traditional research	5
Target funding at practice-based research	5
Fund other types of research organizations	1
Fund researchers in other disciplines	2
Fund researchers other than "the usual" recipients	6
Encourage/fund PHSSR in graduate programs	4
Provide funding for doctoral students:	1
Fund smaller organizations	1
Total	34 (34%)
Application/decision process	
Improve application and decision process	1
Provide clearer guidance on selection criteria	7
Total	8 (8%)
Training, support, and collaboration	
Increase opportunities for collaboration/communication among PHSSR researchers and public health agencies	6
Provide a list of previously funded research	2
Provide mentoring to new researchers	3
Provide more feedback	12
Provide more training and support	1
Provide TA for public health departments undertaking research	2
Provide webinars on research findings	1
Publish research findings in practice-focused journals	1
Total	28 (28%)
Other	
Too specific for brief category. See Appendix A.	6
Unclear	1
Use ACA to strengthen PHSSR research	2
Total	9 (9%)

TOTAL	99 (99%)*

Note: Total does not equal 100 percent due to rounding. These 99 suggestions were made by 87 respondents. Comments that did not include substantive suggestions were excluded.

APPENDIX A

Table A1: Ability to conduct public health systems and services research project without RWJF funding, by researcher experience

Have you been able to conduct this public health research without this funding?	New to PHSSR field	Not new to PHSSR field	Total
Yes	3 (10%)	12 (15%)	15 (14%)
No	28 (90%)	67 (85%)	95 (86%)
Total	31 (100%)	79 (100%)	110 (100%)

Table A2: Continued public health systems and services research, by researcher experience

Since this proposal, have you undertaken any other research on public health systems and services issues?	New to PHSSR field	Not new to PHSSR field	Total
Yes	15 (48%)	64 (81%)	79 (72%)
No	16 (52%)	15 (19%)	31 (28%)
Total	31 (100%)	79 (100%)	110 (100%)

Table A3: Plans to remain in public health systems and services field, by researcher experience

Do you expect to continue to do work in public health systems and services research?	New to PHSSR field	Not new to PHSSR field	Total
Yes	30 (97%)	74 (94%)	104 (95%)
No	1 (3%)	5 (6%)	6 (5%)
Total	31 (100%)	79 (100%)	110 (100%)

Note: A respondent was classified as new to the PHSSR field if they said they had not done any public health systems and services work prior to this proposal.

APPENDIX B:
Complete list of suggestions for improving researchers' interest in PHSSR (Each row is a different respondent)

Suggestions for improving researchers' interest in PHSSR	Suggestion(s)
The RWJF's focus on providing funds for important research is the most important means of improving suggestions. I applaud both the purpose and the methods of the organization.	Continue funding
If there are more grants given (even smaller awards) that would improve researchers' interest	Offer more grants (even if smaller)
It seems like this area is really gaining ground. Special issues of high-impact and practitioner-focused journals are really helpful, as are CFPs that are specific to this area. I think maybe getting the topic into more graduate classrooms could really make a difference, so, providing funding for syllabus and lesson development in PHSSR and sharing the results of projects with the rest of the PHSSR community would be awesome.	Publish research findings in practice-focused journals; encourage/fund PHSSR in graduate programs
Link it to practice and value input from non-academic sources as leads on research grants.	Target funding at practice-based research
First, working with doctoral programs to develop lines of communication and opportunities for encouraging PHSSR. Second, provide financial assistance to doctoral students to undertake PHSSR.	Encourage/fund PHSSR in graduate programs; provide funding for doctoral students

Suggestions for improving researchers' interest in PHSSR	Suggestion 1
Engagement with the Associate Deans for Public Health Practice through ASPH would help grow the community.	Increase opportunities for collaboration among PHSSR researchers and public health agencies
If the foundation really wants to improve interest, they need to have some resources devoted to innovative work. The government (CDC) won't or can't do it. There is no profit for the private sector to do it. A considered look at the life cycle of clinical research reveals that the exploratory and developmental research that precedes clinical trials is at least as expensive and time consuming as the eventual trial. Why would anyone think that social science research would be different?	Target funding at innovative or non-traditional research
Need better funding for projects being implemented in real world settings that avoid unnecessary efforts to "translate" smaller trials of intervention in restricted settings to the "real-world" environments. I think NIH is following this trend which may sacrifice the purity of intervention and trial-design but actually has much greater likelihood of being used.	Target funding at practice-based research
There needs to be funds to do this kind of research.	Increase funding
Provide more support for small organizations attempting to partner around this kind of research.	Support smaller organizations
Offering webinars on the topic and highlighting study results.	Provide webinars on research findings
Focus funding on general systems and organizational research for any type of public health concern rather than targeting specific PH issues like tobacco or obesity. Systems level findings should be at least reasonably generalizable across health issues and keeping the focus more generic would attract more researchers.	Broaden focus of funding

Suggestions for improving researchers' interest in PHSSR	Suggestion(s)
There are very few opportunities to secure funding in this area and the current CFPs don't seem to support those of us who are already doing some of this work. It would be nice to have opportunities to team up with other PHSSR researchers and practitioners throughout the county who want to collaborate in this area.	Increase opportunities for collaboration among PHSSR researchers and public health agencies
Collaborations with public health agencies are more difficult to carry off than pure research topics. If RWJ wants to involve public health agencies it needs to be open to non-traditional research topics.	Target funding at innovative or non-traditional research
Linking to ACA is helpful	Use ACA to strengthen PHSSR research
Develop a way to provide feedback to applicants.	Provide more feedback
Make more funding available	Increase funding
Consider making a list of suggested researchers who want to partner with practice agencies in specific areas available.	Increase opportunities for collaboration among PHSSR researchers and public health agencies
Increased technical assistance for public health departments in undertaking research.	Provide TA for public health departments undertaking research
My suggestion is as simple as providing continuing sources of funding for high quality PHSS research. Feedback on proposal that are not funded would be valuable. Increasing the level of funding would be huge, since our PHSSR projects have been universally underfunded.	Continue funding; provide more feedback
Provide clear guidelines on why proposals are rejected.	Provide more feedback

Suggestions for improving researchers' interest in PHSSR	Suggestion(s)
Provide avenues for researchers to connect better with public health organizations, especially at the national level, to identify research gaps. Foster the collaboration between researchers and public health organizations to provide better access to those working in the public health field.	Increase opportunities for collaboration among PHSSR researchers and public health agencies
It would be very helpful to have feedback on proposals from reviewers.	Provide more feedback
Need to expand beyond a small group of people that are connected and share similar perspectives.	Fund researchers other than "the usual" recipients
At times I don't think that RWJ has a good understanding of the practical questions facing the public health community	Too specific for category
I believe that PHSSR is doing a great job of promoting public health research. To improve researchers' interests, I think engaging broader disciplines, beyond public health such as public finance, political science, economists, business operations etc. In other words, challenge the status quo public health service researchers who seem rather limited at this time. Continue to build a cadre of researchers committed to PHSSR, particularly graduate students and early career academics.	Broaden focus of funding; encourage/fund PHSSR in graduate programs
Providing a broader scope of seed or mini-grants to stimulate short-term or startup projects may improve overall interest and capacity for public health systems and service interest.	Offer more grants (even if smaller)
Applying to RWFJ helped me think about not moving into this field given the lack of support and feedback.	Provide more feedback
Create a database of existing expertise? Previous award winners as mentors?	Provide a list of previously funded research; provide mentoring to new researchers

Suggestions for improving researchers' interest in PHSSR	Suggestion(s)
Actually, RWJF inspired my research, but not in the way intended. RWJF has funded some very questionable work and I have used that as a springboard for why. For example, the whole "county rankings" project has produced a line of research about how public health uses measures of questionable reliability to make policy decisions and to engage communities. If the measurements are (nearly) random, then the policy decisions are based on random numbers and the communities are chasing red herrings.	Too specific for brief category
Would need to think about how to institutionalize it within universities...probably focus on developing teaching programs.	Encourage/fund PHSSR in graduate programs
1. Making the application and evaluation process clearer. 2. Expand the definition of public health to include more than traditional aspects into areas like disaster preparedness and response.	Improve application and decision process; broaden focus of funding
RWJ grant RFP opened the door for innovative efforts with non-traditional researchers, but appears to favor classic research with traditional researchers. Change wording of solicitation if you don't mean it. Give more specific feedback on problems with proposal (was it the subject? approach? proposed researchers?), and especially whether with changes you would consider it again. It is very frustrating to have an effort that everyone we approached in other foundations and government who said the proposed project was extremely worthwhile, and a natural for RWJ goals, but then to be rejected by RWJ.	Target funding at innovative or non-traditional research; Provide more feedback
Short of providing funding, not sure what you can do. We could not do our project which we thought had the potential to provide useful information on the value of outpatient palliative care and thereby have a significant impact on the structure of health care.	Continue funding

Suggestions for improving researchers' interest in PHSSR	Suggestion(s)
A listserv of other way in which researchers can connect to learn about intersections in interest and systems.	Increase opportunities for collaboration/communication among PHSSR researchers and public health agencies
List of previously funded research proposals would be helpful.	Provide a list of previously funded research
It would be very helpful if researchers received constructive criticism.	Provide more feedback
It would be great if RWJF can specify what areas of research they are likely to fund. At the moment they do list the specific areas but most of those areas still remain quite broad and vague.	Provide clearer guidance on selection criteria
Fund wider range of proposals; fund new investigators	Broaden focus of funding; fund researchers other than "the usual" recipients
It would be helpful if the area I am working in was considered important--working to prevent amputations for one, and working with the homeless, a second.	Broaden focus of funding
Ensure that the funding is awarded in a fair manner. Other researchers have been awarded RWJ funds using my ideas, but I have never been able to break through. I do good creative work and publish in nice journals. Another issue is that RWJ is too cheap to pay appropriate overhead.	Increase overhead

Suggestions for improving researchers' interest in PHSSR	Suggestion(s)
I think the field requires continued definition and clarification. As more public health solutions seek to strengthen services systems, it seems PHSSR is broadening. Does PHSSR study public health infrastructure (health departments, emergency response systems, work force issues) or any public health issue that is seeking systems level solutions (obesity, tobacco, HIV prevention, children with special health care needs, immunization, etc.?) I think both are valid, but funders in particular should be clear about what they are looking to fund.	Provide clearer guidance on selection criteria
FEEDBACK!	Provide more feedback
There needs to be more mechanisms for funding public health systems and services research. This field has great potential but very limited funding mechanisms.	Increase funding
Some workshop/web seminar helping to understand the funding mechanism will be good.	Unclear
I guess training in doing systems-level research - a movement away from individual-level stuff?	Provide training for systems-level research
Broaden the reach of what is considered PHSSR. Too much appears to be related to administrative or organizational studies, particularly associated with financing	Broaden focus of funding
More feedback of what was missing or lacking in our efforts to improve in our ability to submit successful grants would be a real plus. Thanks.	Provide more feedback
It would be considerably more helpful to increase the number of awards and not have them primarily go to the same people/organizations over and over again. "New investigators" and "innovative methods" could significantly help to diversify the field.	Increase number of awards; target funding at innovative or non-traditional research; fund researchers other than "the usual" recipients
Clarity in the research interests of funders; clear application of grant findings in real world settings	Provide clearer guidance on selection criteria

Suggestions for improving researchers' interest in PHSSR	Suggestion(s)
Additional funding is needed to increase the amount of research in this area.	Increase funding
Perhaps considering a larger geographic region and broader topics of research interest. Perhaps assigning mentors to new researchers to encourage what you are looking for.	Broaden focus of funding; provide mentoring to new researchers
More support for researchers like myself who are resuming/redirecting career in this area (i.e., older PhDs, especially female, who have high quality education and experience but interrupted career due to family obligations and could make contributions to the field). Need initial support to begin research lines/publications before establishing credentials that make one more competitive for these grants.	Too specific for category
Public health systems research is acutely underfunded. Public Health Systems issues in the area of disaster preparedness, primary and secondary prevention, mental health prevention and awareness, health services for the elderly and disadvantaged are so underfunded relative to biomedical basic science research. The imbalance is so enormous when considering the true human suffering and costs that I do not think this will ever change unless programs such as those supported by RWJ are funded through more equitable government based NIH - type sources.	Increase funding
Exactly what RWJF is doing - give it prominence through active funding for research in this area.	Continue funding
Reach out to non-traditional partners/researchers - seems like same group is funded.	Fund researchers other than "the usual" recipients

Suggestions for improving researchers' interest in PHSSR	Suggestion(s)
Researchers who are also doing ground level work (direct service provision, and working within a public health framework) need grant funding to sustain this type of work. I have been very discouraged by the lack of funds to do health systems and services work. This type of work is very time consuming, and requires the ability of the PI to be able to build consensus, bridge systems of care, and work collaboratively. This doesn't happen overnight. We need grants that are funded for at least a minimum of 3 years to be able to do this type of work. We need more grants, and smaller grants, to help projects get started...and then conceivably, they could be implemented into existing health systems if we can demonstrate the benefit to the community served.	Target funding at practice-based research; offer more grants even if smaller; offer grants of longer duration
I don't think the problem is lack of researchers' interest. It is lack of dedicated funding.	Continue funding
More feedback is needed on proposals, how to improve in order to reach mutual goals.	Provide more feedback
Continue the good work you are already doing.	Continue funding
Please give more feedback.	Provide more feedback
That's a great question. I work for a state government, and our research is not even "chronically underfunded"---it is not funded at all. But public health systems must improve their efficiency and efficacy, and that can only be based on evidence. I really feel that there is nowhere to turn. Perhaps RWJ could develop a T.A. approach that would encourage projects with TA, but not so much investment.	Provide TA for public health departments undertaking research
More training and support with the projects	Provide more training and support
Build on provisions in Affordable Care Act to strengthen national program/research in PHSSR.	Use ACA to strengthen PHSSR research

Suggestions for improving researchers' interest in PHSSR	Suggestion(s)
I would welcome more researcher-oriented opportunities to work on interdisciplinary collaborations with colleagues from other universities or organizations. I am wondering if there is a mechanism that would facilitate our sharing our experiences and research interests in PHSSR? If there is currently, my apologies for not being tapped into the network!	Increase opportunities for collaboration among PHSSR researchers and public health agencies
Keep the pre - to full proposal process. Announce priorities explicitly.	Provide clearer guidance on selection criteria
Actually, "systems" means a lot of things. And, methodologies are evolving rapidly. So, some help on degree of sophistication and type of systems analysis desired would be good. Also, I was and am working with long-term basics in public health (i.e., multi-decadal), in particular, the general topic of health consequences and health care needs related to climate change. Climate change introduces some important questions regarding studies with long time frames in a dynamic climate environment -- this new dynamic (as the engineers call it, "the death of stationarity" -- has not yet been fully appreciated or included in public health planning. Moreover, it would help to know RWJ's sense of time frame with regard to health systems. If RWJ is simply tweaking systems in a US/decadal framework, when climate change introduces health challenges of a global and 50-year framework, much of the research RWJ is funding is likely to prove more rapidly ephemeral than work in the past. Meanwhile, I have great respect for RWJ, have participated in a number of RWJ-funded projects, and certainly feel happy with how RWJ handles grants and proposals.	Provide clearer guidance on selection criteria

Suggestions for improving researchers' interest in PHSSR	Suggestion(s)
Continue dissemination of a more diverse group of studies and results from this type of research. It overlaps with many other areas (health policy and law, health services and health systems, epidemiologic surveillance) so the better the field can articulate how these activities are different (or not) the easier it will be for researchers to target some of the issues this group has identified and to seek appropriate funding sources.	Too specific for category
Promoting/supporting more research done by practice organizations, rather than focused mainly on research institutions.	Target funding at practice-based research
Providing constructive feedback on proposals.	Provide more feedback
I Think the webinars are good, it might be helpful to have an organized section at the ASHE con meetings	Too specific for category
More funding	Increase funding
Please continue providing funding; what you may consider as small/insignificant amounts may actually be very beneficial to recipients.	Continue funding
The project we are working on now--works to integrate public health programming and health system/clinic care. Would encourage such efforts--we need to stop working is silos for population health.	Broaden focus of funding
Perhaps folks are confused by the "public health systems and services" concept so interest can be increased by clarifying and offering examples as one starts to consider the application process.	Provide clearer guidance on selection criteria

Suggestions for improving researchers' interest in PHSSR	Suggestion(s)
Reading between the lines, it appeared to me that the RFP seemed to encourage contradiction. For example, it encouraged practitioners to apply and it encouraged grants from new researchers: yet when the funding decisions were made, it appeared that the grants largely went to research institutions, and experienced researchers, not practitioners in the field or new researchers. I would think that a practitioner from the field of local public health provides a relevance to the research and certainly I can understand leaning toward more experienced researchers - but a practitioner who may be a novice researcher with a co-director that is experienced may help to foster a new body of practice-based research that I think RWJ would truly benefit from. OR seeing a proposal from such an entity might foster some RWJ mentoring opportunities to help develop new researchers beyond the Junior Investigator awards.	Fund researchers other than "the usual" recipients; target funding a practice-based research; provide mentoring to new researchers
Meet and discuss projects that will potentially have a significant impact on a concerning social issue. We have been doing this work for over a decade using what has been recommended: evidence based program implemented with high fidelity, strong well-funded coalition addressing the issue, monitor, evaluate, sustain, empower, enable, peer review literature, book accepted for publication on the topic.....	Too specific for category
More funding?	Increase funding
Much of the funding appears to be geared to specific buckets for researchers but I have found it difficult to find funding vehicles that support my type of research organization - non-profit health services research organization that is not affiliated with an academic organization or state or local agency.	Fund other types of research organizations

Suggestions for improving researchers' interest in PHSSR	Suggestion(s)
My works involves QI and I suspect that RWJ reviewers lack adequate knowledge about quality improvement to adequately assess proposals using QI methods. This has been an issue in medical research though it has improved over time. RWJF may need to go beyond the "usual suspects" for reviewers if it wants to attract the best QI-related research. I would add that QI should be a major focus of PHSSR.	Broaden focus of funding
Be clearer about what you are looking for. Give more feedback on pre-proposals and proposals.	Provide clearer guidance on selection criteria
Scholars in the social sciences are doing very relevant work in this area, but you seem primarily interested in funding people in Schools of Public Health. Better advertising outside of schools of public health (public policy, social work, social sciences) would be helpful to attract more scholars.	Fund researchers in other disciplines
From what I can see, RWJF tends to fund certain types of disciplines and a set of researchers that is relatively small. I think people in many disciplines can contribute to quality research in public health systems and services, and it would be nice to see a broader set of people and disciplines funded. I also understand they will not be taking unsolicited proposals any more, which also suggests that funding is likely to be limited to people who have had funding before from them.	Fund researchers in other disciplines; fund researchers other than "the usual" recipients
There should be a clearer set of lines between problems, research, and development of pragmatic solutions into policy translation.	Too specific for category
Broader approach to what is considered rigorous research. Reviewers seem very biased against mixed method approaches favoring traditional quantitative designs.	Target funding at innovative or non-traditional research

Concluding Thoughts

The findings and recommendations in Section 2 cover the main themes of our assessment of RWJF's PHSSR portfolio. Additional observations appear in supporting Sections 3-8. Our overarching message is that good progress has been achieved in field building, on the supply side of interest in the field from the research community. Yet increased attention is needed on the demand side, to generate funding that will maintain the field because of the value that PHSSR can provide by finding better ways to organize, finance, and deliver public health services.

The central insight is that to succeed—both as a substantive way of improving health and as a field-building way of funding research—PHSSR must improve its practical usefulness to the public health practitioners who must manage organization, financing, and delivery. Being of practical use also requires doing much more to consider costs, both of practices or interventions and of the savings they might achieve. The centrality of usefulness suggests expansion of the very good concept of Practice-Based Research Networks and appreciation that their top priority may not be academic publication. It also suggests striving to engineer more practical value into all PHSSR projects, from researchers' goals to writing up findings. Short summaries are essential, and talking points where feasible, especially for managers to communicate with the public and with legislative and administrative overseers. Practical import should usually take front position; study design and methods the last position. The best available evidence and advice is needed. evidence may be achievable through more study. Perhaps over time senior PHSSR thought leaders could find ways to elevate the value of effective practical communication, and producing useful health practices in the eyes of tenure committees.

The prospect of moving toward more evidence-based practices in public health is very exciting, and data are improving. Best operational practices and improvements still seem heavily based on well surveyed expert judgment of practitioners, but they can over time be increasingly tested empirically against health outcomes or known precursors to them. A role seems likely to remain for practical judgment and good management practice, taking as much account of scientific findings as feasible. A healthy component of management skill seems likely to remain part of managing public health indefinitely. The process of continuous improvement in management is indeed continuous, and results may be slow to arrive, particularly given that it is so challenging to alter social determinants and lifestyles. We end with a caution against overpromising the predictability of breakthroughs or the speed of change, although that was not observed in this assessment.