

# RESEARCH AGENDA

Public Health Services &  
Systems Research

January 2012

[www.publichealthsystems.org](http://www.publichealthsystems.org)

<b>Table 1. The Public Health Workforce</b>
<b><i>Enumeration</i></b>
1. What is the size and composition of the public health workforce, including the mix of training and experience, occupational responsibilities, institutional practice settings, and socio-demographic characteristics of workers?
2. How do the size and composition of the public health workforce vary across states and communities, and change over time?
<b><i>Demand, Supply, and Shortages</i></b>
3. What factors influence the supply of, demand for, and geographic and organizational distribution of workers within the public health workforce?
4. How does the size and composition of the public health workforce affect the volume, mix, quality, and outcomes of public health strategies delivered at local, state, and national levels?
5. What analytic methods provide the most valid and reliable estimates of public health workforce shortages and surpluses based on population characteristics, preventable disease burdens and risks, and economic conditions?
<b><i>Diversity and Disparities</i></b>
6. How do supply-side and demand-side factors affect the racial, ethnic, socioeconomic, and cultural diversity of the public health workforce?
7. How does public health workforce diversity affect the volume, mix, quality, and outcomes of public health strategies delivered at local, state, and national levels?
8. How does public health workforce diversity affect health disparities?
9. What recruitment and retention strategies are most effective in enhancing racial, ethnic, socioeconomic, and cultural diversity in the public health workforce?
<b><i>Recruitment and Retention</i></b>
10. What models are most effective in recruiting qualified workers into public health jobs?
11. How do the components of compensation packages affect the recruitment and retention of qualified workers in public health jobs?
12. What factors beyond compensation affect worker decisions to pursue public health careers?
13. How do formal and informal mentoring strategies affect recruitment and retention of qualified workers in public health jobs?
14. How does staff turnover influence the effectiveness and efficiency of public health strategies delivered at local, state, and national levels?
15. How do human resource policies, including civil service systems and collective bargaining agreements, affect the recruitment and retention of qualified workers in public health jobs?
<b><i>Workforce Competencies</i></b>
16. What standardized assessment methods are most effective in producing valid and reliable measures of the skills and competencies attained by public health students and practicing professionals?
17. How do the skills and competencies of the public health workforce impact the effectiveness, efficiency, and outcomes of public health strategies delivered by this workforce?
18. How do different types of staffing models (i.e. allocation of tasks and responsibilities to different types of public health workers based on their competencies) impact the effectiveness, efficiency, and outcomes of public health strategies delivered by these workers?
19. How do certification programs for public health professionals impact the effectiveness, efficiency, and outcomes of public health strategies delivered by these professionals?
<b><i>Educational Methods and Curricula</i></b>
20. What impact do existing education and training programs have on the skills and competencies of the public health workforce?

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21. What models of education and training are most effective in producing the volume and mix of qualified public health professionals needed to meet future demand?
22. What models of education and training are most effective in improving the skills and competencies needed by the existing public health workforce to practice effectively and efficiently?
23. What are the benefits, costs, and return-on-investment estimates associated with acquiring different levels of education and training in public health?
24. What models of education and training are most effective in improving cultural competency among public health professionals?
25. What models of education and training are most effective in improving the financial management skills of public health professionals?

**Table 2. Public Health System Structure and Performance**

<b><i>System Boundaries and Size</i></b>
1. What methods provide the most valid, reliable, and relevant means of defining the geographic and organizational boundaries of public health delivery systems at local, state, and national levels?
2. What methods provide the most valid, reliable, and relevant measures of the effectiveness, efficiency, and outcomes of public health strategies delivered by public health delivery systems at local, state, and national levels?
3. How do the scale of operations and the scope of activity within public health delivery systems influence the effectiveness, efficiency, and outcomes of public health strategies delivered at local and state levels (e.g. economies and diseconomies of scale and scope)?
4. How do cross-jurisdictional models of public health service provision impact the effectiveness, efficiency, and outcomes of public health strategies delivered at local and state levels?
<b><i>Public Health Agency Organization and Governance</i></b>
5. How do the structures, powers, and functions of local and state boards of health influence the effectiveness, efficiency, and outcomes of public health strategies delivered at local and state levels?
6. How do public health agency leadership strategies and characteristics influence the effectiveness, efficiency, and outcomes of public health strategies delivered at local, state, and national levels?
7. How do the legal powers and duties of governmental public health agencies influence the effectiveness, efficiency, and outcomes of public health strategies delivered at local and state levels?
8. How do the organizational characteristics of governmental public health agencies, including decision-making structures and administrative relationships with other government agencies, influence the effectiveness, efficiency, and outcomes of public health strategies delivered at local and state levels?
9. What forms of decision support, guidance, and technical assistance for governmental public health agencies are most effective in improving the effectiveness, efficiency, and outcomes of public health strategies delivered at local, state, and national levels?
<b><i>Interorganizational Relationships and Partnerships</i></b>
10. How do interorganizational relationships and patterns of interaction within public health delivery systems impact the effectiveness, efficiency, and outcomes of public health strategies delivered at local, state, and national levels?
11. What conditions and strategies facilitate productive interorganizational relationships and patterns of interaction among organizations that contribute to public health strategies at local, state, and national levels?
<b><i>Performance Measurement, Quality Improvement, and Accreditation</i></b>
12. What measures provide the most valid and reliable indicators of the implementation and impact of quality improvement strategies in public health settings?
13. What types of quality improvement strategies have the largest effects on the effectiveness, efficiency,

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and outcomes of public health strategies delivered at local, state, and national levels?
14. How do public health agency accreditation programs influence the effectiveness, efficiency, and outcomes of public health strategies delivered at local, state, and national levels?
15. What impact do performance measurement systems, public reporting initiatives, and performance management tools have on the effectiveness, efficiency, and outcomes of public health strategies delivered at local, state, and national levels?
16. How do accreditation, quality improvement, performance measurement, and public reporting initiatives impact disparities in the effectiveness, efficiency, and outcomes of public health strategies delivered to racial and ethnic minority and low-income populations?
<b><i>Social Determinants of Health and Health Disparities</i></b>
17. What public health strategies are most effective in addressing health disparities and/or social determinants of health at local, state, and national levels?
18. How do the organizational, financial, and workforce characteristics of public health agencies and their partners influence the implementation and effectiveness of strategies to address health disparities and/or social determinants of health at local, state, and national levels?
19. How do disparities in access to information and communication technologies among public health practitioners and the communities they serve affect the effectiveness, efficiency, and outcomes of public health strategies, particularly for racial and ethnic minority and low-income populations?
20. What policy, system, and administrative strategies are most effective in reducing disparities in the effectiveness, efficiency, and outcomes of public health strategies delivered to racial and ethnic minority and low-income populations?

**Table 3. Public Health Financing and Economics**

<b><i>Fiscal Analysis</i></b>
1. What measures provide the most valid and reliable indicators of the financial performance of public health agencies at local, state, and national levels?
2. How does the financial performance of public health agencies affect the effectiveness, efficiency, and outcomes of public health strategies delivered at local, state, and national levels?
3. How does implementation of a uniform system for classifying, tracking, and reporting public health financial resources influence the effectiveness, efficiency, and outcomes of public health strategies delivered at local, state, and national levels?
<b><i>Financing Mechanisms</i></b>
4. How do funding formulae, payment methods, policy decisions, and community health needs and risks influence the levels of investment made in public health strategies at local, state, and national levels?
5. How do the legal powers and duties of public health agencies and their governing boards (including taxing, spending, and fee-setting authorities) influence the levels of investment made in public health strategies at local, state, and national levels?
6. How do funding sources, financing mechanisms and funding levels influence the scope of public health strategies delivered at local, state, and national levels and the effectiveness, efficiency, and outcomes of these strategies?
7. What impact do non-governmental investments in public health strategies have on overall levels of investment in these strategies and on the effectiveness, efficiency, and outcomes of these strategies?
8. What are the effects of the economic recession on the scope of public health strategies delivered at local and state levels, the levels of investment made in these strategies, and the effectiveness, efficiency, and outcomes of these strategies?
<b><i>Costs, Performance, and Outcomes</i></b>

**Table 3. Public Health Financing and Economics**

9. Which investments in public health strategies have the largest effects on health outcomes (e.g. healthy life expectancy and quality of life), and what are the costs of delivering these strategies at local, state, and national levels?
10. How do investments in public health delivery systems and supports (infrastructure) impact the effectiveness, efficiency, and outcomes of public health strategies delivered at local, state, and national levels?
11. What characteristics of public health delivery systems influence the efficiency with which public health strategies are delivered at local, state, and national levels?
12. How do investments in public health strategies influence or offset the need for downstream spending on medical care and/or other social services?

**Table 4. Public Health Information and Technology**

***Capabilities to Assess and Monitor Health Outcomes***

1. How sensitive and specific are established health outcome measures (e.g. quality-adjusted life-years, healthy life expectancy) to the effects of public health strategies delivered at local, state, and national levels?
2. What established and new measures provide the most valid, reliable, and feasible indicators of the health outcomes attributable to public health strategies?
3. What measures provide the most valid, reliable, and feasible indicators of the appropriateness, fidelity, community-centeredness, and reach of public health strategies delivered at local, state, and federal levels?
4. What measures provide the most valid, reliable and feasible indicators for monitoring health disparities and disparities in the delivery of public health strategies at local, state, and national levels?
5. How do the content, quality, and timeliness of public health surveillance systems and informatics capabilities influence the effectiveness, efficiency, and outcomes of public health strategies delivered at local, state, and national levels?

***Translation and Dissemination of Research-Tested Public Health Strategies***

6. What are the information-seeking behaviors of public health practitioners, and what factors influence these behaviors and the strategies used for addressing information needs?
7. What strategies are most effective in enhancing the adoption, implementation, and diffusion of research-tested public health strategies among public health practitioners and policy decision-makers (e.g. academic detailing, practice-based research networks, public reporting, pay-for-performance, accreditation)?
8. What public health system strategies and characteristics are most effective in enhancing the adoption of and adherence to research-tested self-care and prevention practices among at-risk populations, particularly minority and low-income populations?
9. What public health system strategies and characteristics are most effective in enhancing the adoption of and adherence to research-tested prevention practices among health care providers, schools, work-sites, and other community settings?

***Information and Communication Technologies***

10. How do health information and communication technologies influence the effectiveness, efficiency, and outcomes of public health strategies delivered at local, state, and national levels(e.g. electronic health records, mobile health technologies, social media, electronic surveillance systems, geographic information systems, network analysis, predictive modeling)?
11. How do health information and communication technologies influence the effectiveness of public health system strategies to enhance the adoption, implementation, and diffusion of research-tested public health strategies among public health practitioners, at-risk populations, health care providers, and other community stakeholders?

**Table 4. Public Health Information and Technology**

12.	How do electronic health record (EHR) and public health record (PHR) data systems as well as health information exchanges affect the structure of public health delivery systems, particularly regarding integration and coordination with clinical health care providers?
13.	How do electronic health record (EHR) and public health record (PHR) data systems as well as health information exchanges affect the content, quality, and timeliness of public health surveillance systems, and how do these changes in surveillance affect the quality of public health intervention strategies?
14.	What informatics methods and applications (e.g. filtering, signal extraction, natural language processing) are most effective in helping public health practitioners make use of new data sources from EHR and PHR systems?
15.	How do disparities in access to information and communication technologies among public health practitioners and the communities they serve affect the effectiveness, efficiency, and outcomes of public health strategies delivered at local, state, and national levels, particularly as it relates to racial and ethnic minority and low-income populations?

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