Assessing Competencies for Public Health Emergency Legal Preparedness

James G. Hodge, Jr., Kristine M. Gebbie, Chris Hoke, Martin Fenstersheib, Sharona Hoffman, and Myles Lynk

Introduction

Among the many components of legal preparedness for public health emergencies is the assurance that the public health workforce and its private sector partners are competent to use the law to facilitate the performance of essential public health services and functions.1 This is a significant challenge. Multiple categories of emergencies, stemming from natural disasters to emerging infectious diseases, confront public health practitioners.² Interpreting, assessing, and applying legal principles during emergencies are complicated by the changing legal environment and differences in governmental organization of emergency management functions.3 While law and legal competencies are essential to routine public health practices, once government declares a state of public health emergency or disaster, the legal landscape changes.⁴ Typical legal responses to protect the public's health may no longer be the norm. Public health practitioners, legal counsel, health care partners, and others need to be able to assess changing laws and policies and apply them in real-time. To do so, they must be competent in their understanding and use of the law during public health emergencies.

In the context of public health systems, competencies may be defined as a complex combination of knowledge, skills, and abilities demonstrated by members of an organization that are critical to the effective

and efficient function of the organization.⁵ Competency statements describe specific activities that individuals are able to do or perform depending on their respective roles, responsibilities, and qualifications.⁶ Competency resources have been developed for a full range of public health services,⁷ including emergency response⁸ and legal preparedness.⁹

In this article we describe the modern development of competencies in public health law, ethics, and policy, providing numerous examples of types of competency tools and materials. We further discuss existing and emerging actors within the public and private sectors for whom legal competencies in public health emergency preparedness are essential. Through these examinations, we analyze the current status of legal competencies for public health emergency preparedness and identify various gaps to be addressed in improving competencies.

Modern Development of Competencies in Public Health Law

Competencies for the public health workforce have developed through extensive dialogues sponsored largely by the Centers for Disease Control and Prevention (CDC) beginning in the late 1990's. 10 Yet, competencies have conceptual origins in industry practices that assess the ability of the workforce to perform jobrelated activities. They have also been used extensively

James G. Hodge, Jr, J.D., LL.M., is an Associate Professor at Johns Hopkins Bloomberg School of Public Health; he is also the Executive Director of the Center for Law and the Public's Health. Kristine M. Gebbie, Dr.PH., R.N., is the Elizabeth Standish Gill Associate Professor of Nursing and Director of the Doctor of Nursing Science at Columbia University School of Nursing; she is also the Director of the Center for Health Policy. Chris Hoke, J.D., is the Chief, Legal and Regulatory Affairs, of the North Carolina Division of Public Health. Martin Fenstersheib, M.D., M.P.H., is the Health Officer of the Public Health Department in Santa Clara County, CA. Sharona Hoffman, J.D., is a Professor of Law and Bioethics, Co-Director of the Law-Medicine Center, and Senior Associate Dean for Academic Affairs at Case Western Reserve School of Law. Myles Lynk, J.D., is the Peter Kiewit Foundation Professor of Law and the Legal Profession at Arizona State University College of Law.

in health education, particularly related to technical and "just in time" training. Through this training, persons with specific skills are evaluated based on their ability to perform needed tasks and fill gaps. For example, the training and certification of emergency medical technicians have traditionally been competency-based, and included evaluation components.¹¹ Required competency sets also guide curricula in nursing, ¹² dentistry, ¹³ preventive medicine, ¹⁴ and other disciplines.

Whether utilized in practice or academic settings, competencies are comprised of facts, knowledge, skills, attitudes, and values, as illustrated in Figure 1, below.

Figure I

Competency Creation Building Blocks Facts/Knowledge Skills COMPETENCIES Attitudes/Values

Competency statements are typically based on a standard formula, including: (1) an *action verb* indicating a level of performance (e.g., describe, apply, identify, recognize); (2) a *subject* or content area (e.g., chain of command); and occasionally (3) *contextual references*. The following example of a competency in emergency preparedness for public health workers includes these elements:

A public health worker must be competent to...:

Describe the public health role in emergency response in a range of emergencies that might arise (e.g., "This department provides surveillance, investigation, and public information in disease outbreaks, and collaborates with other agencies...).¹⁵

As requirements for employment, competency statements may describe complex performance expectations within the workplace similar to the knowledge/skills/abilities (KSAs) statements of many job classifications. They can include a series of embedded tasks that are either sequential or parallel and are demonstrated over long periods of time. Correspondingly, they require contextual measurement based on a range of contingent indicators. In contrast, educational competency statements form the building blocks of learning

experiences by describing structured learning objectives. Measurement indicators, such as examinations, are usually used in the short term (e.g., specific class or a course of study) to assess achievement of specific competencies.

Competencies in a field of work or education should not be confused with specific job requirements. A single position may use only some of a worker's pre-existing competence, and may require the addition of job-specific abilities. For example, public health legal competencies may add to general competence in the practice of law for attorneys working in public health. An understanding of public health law may also be an important addition to public health competencies for many professional, technical, and support staff working in public health, and are thus referenced in other public health competency sets.

In 2001, the Center for Law and the Public's Health at Georgetown and Johns Hopkins Universities led a collaborative effort to describe necessary public health law competencies for public health professionals. ¹⁶ With support from CDC, the Center produced a set of statements on law-specific skills and legal knowledge desirable for the practice of public health. As featured in Table 1, these statements were drafted to serve as guides for public health leaders with specialized roles related to public health law, as well as for front-line professional staff who need a basic understanding of the role of law to protect the public's health. Though not tailored to emergency legal preparedness, they help provide a base for competencies in emergency response.

Since the development of the Center's competency statements in public health law, there have been initial efforts to (1) specify competencies (e.g., in the context of specific achievements) or desired level of competencies (e.g., related to what an individual has achieved) for public health legal preparedness and response and (2) expand the number of persons receiving competency-based training. CDC authors and others have suggested that legal competencies for public health preparedness should include:

- Interpreting public health laws before, during, and after public health emergencies;
- Applying emergency laws and provisions in response to a declared emergency;
- Identifying legal issues requiring potential reform or modification;
- Assessing the consequences of legal action or inaction; and
- Integrating legal decisions within the larger public health response.¹⁷

Table I

Public Health Law Competencies (Select)

I. Public Health Powers—Generally	Level
Describes the basic legal framework for public health; roles of federal, state, and local governments; and the relationship between legislatures, executive agencies, and the courts.	F
Describes the meaning, source, and scope of states' powers to protect the public's health, safety, and general welfare (i.e., police powers) and to protect the individual from identifiable harm (i.e., parens patriae powers).	M, O
Identifies and applies basic provisions of the governmental unit's health code and regulations within the particular area of practice (e.g., communicable disease control, environmental health, public health nursing).	M, O
Describes the scope of statutory and regulatory provisions for emergency powers.	0
Distinguishes public health agency powers and responsibilities from those of other governmental agencies, executive offices, police, legislature, and courts.	0
II. Regulatory Authority/Administrative Law	Level
Describes basic legal processes, such as how legislatures create and amend laws, how executive officials enforce laws, and how courts make and interpret laws.	0
Determines procedures for promulgating administrative regulations.	0
Determines procedures for obtaining mandatory or prohibitory injunctions from a court.	0
Follows administrative procedure laws for conducting investigations, holding hearings, and promulgating regulations and provisions concerning open public records.	M, O
Weighs options and applies, when necessary, processes to address public health problems through criminal charges for specific behaviors and civil suits for damages.	0
III. Ascertaining Authority/Obtaining Legal Advice	Level
Identifies legal issues for which legal advice should be sought and knows what action to take where legal issues arise, including contacting legal advisors.	M, O
Provides factual assistance and states basic legal issues to legal advisors.	M, O
Reads and comprehends basic statutory and administrative laws.	M, O
Recognizes that legal rules do not always specify a course of conduct.	M, O
Develops enforcement strategies consistent with the law and in the interest of protecting the public's health.	M, O
IV. Laws and Public Health Services and Functions	Level
Describes how law and legal practices contribute to current health status of the population.	0
Determines how the law can be used as a tool in promoting and protecting the public's health.	M, O
Identifies the mechanisms through which law can deter, encourage, or compel health-related behaviors.	M, O
Identifies and exercises legal authorities, responsibilities, and restrictions to assure or provide health care services to populations.	M, O
Identifies and exercises legal authority over the quality, delivery, and evaluation of health care services within the agency's jurisdictions.	M, O
Applies ethical principles to the development, interpretation, and enforcement of laws.	F, M, O
V. Legal Actions	Level
Describes how and under what circumstances legal searches of private premises can be performed.	S, M, O
Knows how and under what circumstances legal seizures of private property for public health purposes can take place.	S, M, O
Describes the limits of authority for legally closing private premises.	S, M, O
Identifies legal authority for compelling medical treatment or instituting mandatory screening programs.	S, M, O
Knows legal authority for imposing quarantine, isolation, or other restrictions.	S, M, O
VI. Legal Limitations	Level
Recognizes prominent constitutional rights implicated through the practice of public health (e.g., freedom of speech, right to privacy, due process, equal protection).	S, M, O

 $\label{lem:eq:control_contro$

A growing array of new competency-related products has emerged to guide workforce development. Table 2 provides examples of these products relevant to public health legal competencies for emergency preparedness.

Targeting Sectors for Competencies in Public Health Legal Preparedness

One of the key factors in broadening the application of competencies in public health legal preparedness is identifying the individuals who should be capable of demonstrating specific or general knowledge before, during, and after emergencies. While many existing public health legal competency models target the governmental public health workforce, public health legal preparedness requires the efforts and competence of a wider array of persons in public and private sectors. These individuals must work together to use the law as a tool for public health responses during emergencies.

Pivotal to these responses are legal counsel to public health agencies or departments.¹⁹ These individuals encompass attorneys in a variety of organizational settings, including (1) general counsels and their staff employed by public health agencies; (2) attorneys general and their staff representing public health agencies; (3) tribal, county, and city attorneys representing public health agencies; and (4) academic attorneys who guide and train public health lawyers and consult others during emergency situations.²⁰ Collectively, these counsels must be able to:

- Analyze legal issues in emerging areas of concern in public health preparedness by interacting with public health practitioners, identifying legal issues related to appropriate public health responses, and resolving legal barriers;
- Draft legislation, regulations, model orders, motions, and other legal documents in accordance with constitutional, national, state, and local laws; ethical norms; and best practices in public health;
- Train practitioners in the effective use of public health law;
- Participate in preparedness planning and exercises;
- Assist in analyzing gaps and weaknesses; and
- Provide real-time representation during emergencies.

Public health legal counsel must accomplish these and other functions in partnership with other members of the public health workforce, a diversely trained, multi-disciplinary group that includes physicians, nurses, epidemiologists, health educators, laboratorians, community outreach workers, and others. These persons have important roles that may require legal competency during emergencies based on their training and education.²¹

In 2003, the Institute of Medicine identified law as one of the essential areas of competence for public health practice that should be included in the curriculum of schools of public health.²² Public health practitioners are increasingly cognizant of the importance of law in day-to-day functions and emergency situations.²³ Quarantining persons with communicable diseases, closing unsafe buildings or unsanitary restaurants, initiating vaccination programs, reporting diseases, and restricting children with infectious diseases from school are longstanding responsibilities of public health practitioners that require competence in public health law.²⁴

However, the modern, multi-sectoral approach to emergency preparedness and response presents new challenges. Routine responses to complex, unpredictable emergency situations are inadequate. Accessing information efficiently and accurately is critical. Decisions must be made in real-time with a firm understanding of their legal and ethical implications. ²⁵ Gaps or impediments in the laws must be anticipated, identified, and rectified in collaboration with public health legal counsel.

Accordingly, public health legal preparedness also requires differing types of competency among (1) legislators and judges at the federal, tribal, state, and local levels; (2) general legal counsel in the attorney's general and corporation counsel's offices, departments of emergency management, public health, environment, labor, housing, and other government services; (3) private sector counsel representing hospitals, insurers, medical practitioners, and volunteers; and (4) some members of the public participating in community efforts. Functional knowledge of public health law can help these persons use the law effectively during emergencies to collaborate and coordinate responses.²⁶

Identifying Gaps to Improving Competencies in Public Health Legal Preparedness

The public health workforce and many of its private sector partners recognize the value of using a competency-based approach to increasing public health legal preparedness, training, and response.²⁷ Extensive work to refine and broaden the scope of legal competencies has led to new products (see Table 2) and better understanding of the role of law during public health emergencies. Raising the level of competencies through training in legal preparedness is increasingly

Table 2

Select Examples of Competency (and related) Materials That Facilitate Public Health Legal Preparedness and Response

Title & Source	Application Site/ Target Audience	Subject Areas		
General Resources	-			
Identifying Individual Competency in Emerging Areas of Practice: An Applied Approach (2002), Gebbie et al., Qual. Health Res http://qhr.sagepub.com/cgi/content/abstract/12/7/990	Education and Research	Competency Development		
Competency-to-Curriculum Toolkit: Developing Curricula for Public Health Workers (2004), Center for Health Policy, Columbia University School of Nursing http://www.cumc.columbia.edu/dept/nursing/chphsr/pdf/toolkit.pdf	Education and Research	Competency Application Through Training		
Public Health Competency Sets (including	legal competencies)			
Core Competencies for Public Health (2005), Council on Linkages Between Academia and Public Health Practice http://www.phf.org/Link/corecomp.pdf	Workplace/Education — Foster workforce development by helping academic institutions and training providers to develop curricula and course content and to evaluate public health education and training programs	Analytic/Assessment Skills Policy Development/Program Planning Skills Communication Skills Cultural Competency Skills Community Dimensions of Practice Skills Basic Public Health Sciences Skills Financial Planning and Management Skills Leadership and Systems Thinking Skills		
Public Health Nursing Competencies (2004), Quad Council of Public Health Nursing Organizations http://www.astdn.org/publication_quad_council_phn_competencies.htm	Workplace/Education — Guide for agencies that employ public health nurses and academic settings that facilitate education and training	Application of Core Competencies in Public Health Nursing		
Core Competencies for Local Environmental Health Practitioners (2001), American Public Health Association http://o-www.cdc.gov.mill1.sjlibrary.org/nceh/ehs/Corecomp/Core_Competencies_EH_Practice.pdf	Workplace	Assessment Management Communication		
Applied Epidemiology Competencies (2005), Centers for Disease Control and Prevention/Council of State and Territorial Epidemiologists http://www.cste.org/assessment/competencies/comp.pdf	Workplace – Frontline, Mid-level, and Senior Level Epidemiologists	Assessment and Analysis Skills Basic Public Health Sciences Skills Communication Skills Community Dimensions of Practice Skills Cultural Competency Skills Financial and Operational Planning and Management Skills Leadership and Systems Thinking Skills Policy Development Skills		
Core Legal Competencies for Public Health Professionals (2001), Center for Law and the Public's Health at Georgetown and Johns Hopkins Universities www.publichealthlaw.net/Training/Competencies.	Workplace/Education	Public health powers – generally Regulatory authority Ascertaining authority Public health services and functions Legal actions Limitations Personnel/contracts Public health powers		
Core Competency Development Project (2006), Association of Schools of Public Health http://www.asph.org/userfiles/Version2.3.pdf	MPH Education	Communication Diversity Cultural Proficiency Leadership Professionalism and Ethics Program Planning and Assessment Systems Thinking		

Bioterrorism & Emergency Readiness: Competencies For All Public Health Workers (2002), Center for Health Policy, Columbia University School of Nursing http://www.cumc.columbia.edu/dept/nursing/chphsr/pdf/btcomps.pdf	Workplace – Public Health Leaders/Administrators, Health Professionals, and Technical and Clerical Support	Emergency Response (all public health workers, in addition to official-specific areas)
Introduction to Public Health Law for Bioterrorism Preparedness and Response (2002), Center for Law and the Public's Health http://www.publichealth law.net/Training/Sources.htm>	Workplace/ Education — Public health leaders/professionals, legal counsel, students in law and public health	Public Health Emergency Legal Responses
Public Health Emergency Law (PHEL) (2004), CDC Public Health Law Program, CDC Coordinating Office for Terrorism Preparedness and Emergency Response http://www2a.cdc.gov/phlp/phel.asp >	Workplace/Education – Public health officials/professionals	Public Health Emergency Legal Issues and Responses
Resources for Applying Legal Competencies		
Pennsylvania Public Health Law Bench Book (2006), University of Pittsburgh Center for Public Health Preparedness http://www.prepare.pitt.edu/pdf/benchbook.pdf	Workplace – Judicial Bench Book	Emergency Response Jurisprudence Resources
Public Health Emergency Bench Book (2006) Washington State http://www.courts.wa.gov/content/manuals/publicHealth/pdf/publicHealthBenchBook.pdf		
Public Health Law Bench Book for Indiana Courts (2005), Center for Public Health Law Partnerships, University of Louisville http://www.publichealthlaw.info/INBenchBook.pdf		Jurisprudence Resources
Health Officer Practice Guide for Communicable Diseases in California (2007), California Department of Health Services, Division of Communicable Disease Control http://www.dhs.ca.gov/dcdc/pdf/Practice%20Guide.pdf	Workplace – Health officers	Legal Review of General authority of health officers; Constitutional limits; Enforcement authority; Interjuris- dictional coordination; Confidentiality; Media resources; Various public health powers
Pandemic Influenza and Public Health Law:What Public Health Departments Need To Know (2007) (DVD), CA Dept of Health Services, Immunization Branch http://cdlhn.com/default.htm	Workplace – Health officers	Review of specific public health law powers in response to pandemic flu

seen as an essential part of comprehensive public health emergency planning. 28

Awareness of legal issues during public health emergencies is advantageous for preparedness, but practitioners must also be able to work together to construct a favorable legal environment for emergency response.²⁹ This implies a higher level of competency for some persons to not just understand the law, but also to wield it effectively to further legitimate public health goals. Despite significant advances in legal competency-building, several gaps or limitations must be considered:

Development of specific legal competencies for public health emergency preparedness. Existing approaches to public health legal competencies are beneficial, but incomplete. Some existing competency products were developed when the public health community had a limited understanding of specifying and applying competencies. These products may fail to identify key sub-topics related to emergency preparedness; do not always reflect changing legal and ethical norms dur-

ing emergencies; do not fully address the multitude of individuals who are key to legal preparedness; and may lack application in real-time. Competence in legal preparedness should be developed within an organizational structure that allows for regular dissemination, extensive training, and routine updating. As an initial goal, core elements of public health legal preparedness should be produced through processes similar to those used to create existing competency statements,³⁰ with input from the relevant actors identified above.

Clarification. Coupled with the prior gap is the need to clarify competencies for persons practicing public health and public health law. Competencies must be stratified to delineate knowledge, skills, and abilities for each of the following groups:

- Public health leaders at each level of government;
- Legal counsels representing public health departments, institutions, and organizations involved in protecting the public's health;

- Public health policymakers, including members of city and county boards of health or councils, federal or state agencies, and the judiciary;
- Public health professionals (in public health departments generally or in specific public programs such as environmental regulation or professional/institutional licensing);
- Public health technicians and support staff (in public health departments generally or in specific positions such as persons handling laboratory specimens, accessing vital records, or receiving public inquiries);
- Staff of other organizations contributing to the public's health; and
- Academics teaching public health law and ethics (or related subjects).

Uniformity. Existing competency resources in public health legal preparedness have been developed in response to specific needs within some portion of the public health and legal communities (see Table 2). Many of these excellent resources may be described as core public health law materials that are meant largely for a legal audience. Other competency tools may feature or reflect legal or ethical principles for a non-legal audience. However, because these legal and non-legal resources have been developed over many years, through multiple entities, and for differing purposes, they lack cohesion. Users may question which competency tools are the most authoritative or helpful. Inconsistencies among approaches lead to incongruous legal responses. Uniformity of competency resources across sectors of the public health workforce could improve emergency preparedness.

Assignment of levels of competency. Competencies for public health legal preparedness are not static. Rather, they must be consistently examined and used to assess whether certain individuals have obtained a specific level of competence (e.g., novice, knowledgeable, proficient). Achieving levels of competency may be based on several factors, including the individual's title or position, existing education, years of experience, and anticipated role(s) during emergencies. The competency in legal preparedness of a counsel who serves as the lead for emergency management issues may differ from that of her counterpart in a public health department whose responsibilities are unrelated to emergency management. Still, both counsels need some level of competency in public health legal preparedness because each may be called to act during emergencies.

Implementation and evaluation. Beyond production or refinement of competency resources is the need to ensure implementation of competence build-

ing at the workforce level. Legal public health preparedness is deemed optional for many members of the public health workforce. Required training exercises or curricular objectives that coordinate individuals and institutions in the public and private sectors may help disseminate legal knowledge. For example, the New York City Department of Health and Mental Hygiene requires workforce training on core public health functions (including some legal topics) to better prepare for public health emergencies. In addition, competencies among various individuals should be routinely measured and evaluated with an understanding that achieving competencies is continual. These suggestions may require increased funds, new methods to deliver competency resources, and changes to public health curricula - each of which underlies an improved national commitment to public health legal preparedness.

Conclusion

Assessing public health legal preparedness among the public and private sectors is challenging. Public health emergencies raise unique legal issues, necessitate rapid responses, and require consistent approaches. Existing efforts to improve competencies in legal preparedness have contributed to an awareness of the role of law during emergencies. Yet, there is no coherent, national strategy to improve competencies in legal emergency preparedness that invites participation among partners in public and private sectors. As a result, response to future emergencies may be hampered, as has occurred in the past, by varying legal responses among persons who lack the ability to use the law effectively in real-time to improve the public's health. A uniform set of legal competencies that are routinely implemented and evaluated would prove invaluable to emergency preparedness and response.

Acknowledgements

The authors gratefully acknowledge the contributions of Benjamin Mason Meier, J.D., LL.M., M.Phil., Center for Health Policy, Columbia University, for his extraordinary contributions to various parts of this manuscript, including tables and figures, as well as Aleah Yung, J.D./M.P.H. Candidate, Georgetown and Johns Hopkins Universities, and Katie Heley, B.A., for their editing and research assistance.

References

- R. A. Goodman, A. Moulton, G. Matthews, F. Shaw, P. Kocher, G. Mensah, S. Zaza, and R. Besser, "Law and Public Health at CDC," MMWR 55, Supplement 2 (2006): 29-33.
- J. G. Hodge, Jr., "Legal Triage during Public Health Emergencies and Disasters," Administrative Law Review 58, no. 3 (2006): 627-644.
- 3. W. J. Duncan, P. M. Ginter, A. C. Rucks, M. S. Wingate, and L. C. McCormick, "Organizing Emergency Preparedness within United States Public Health Departments," *Public Health* 121 (2007): 241-250.

- 4. See Hodge, supra note 2; J. Watkins, "Bioterrorism: Cases When Public Health Agencies Should Have Sweeping Powers," The Internet Journal of Allied Health Sciences and Practice 4 (2006): 1-5.
- K. R. Miner, W. K. Childers, M. Alperin, J. Cioffi, and N. Hunt, "The MACH Model: From Competencies to Instruction and Performance of the Public Health Workforce," *Public Health Reports* 120, Supplement 1 (2005): 9-15.
- 6. J. C. Nelson, J. D. K. Essien, R. Loudermilk, and D. Cohen, *The Public Health Competency Handbook: Optimizing Individual & Organization Performance for the Public's Health*, Center for Public Health Practice of the Rollins School of Public Health, Atlanta, 2002.
- 7. Council on Linkages between Academia and Practice, "Core Competencies for Public Health Practice," 2003, available at <www.trainingfinder.org/competencies/list.html> (last visited March 26, 2007; password protected).
- K. Gebbie and J. Merrill, "Public Health Worker Competencies for Emergency Response," *Journal of Public Health Manage*ment Practice 8, no. 3 (2002): 73-81.
- 9. See Goodman et al., supra note 1.
- 10. See Gebbie and Merrill, supra note 8.
- 11. W. E. Brown, R. W. Dotterer, D. Gainor, R. L. Judd, B. Larmon, K. M. Lewis, G. S. Margolis, S. Mercer, J. J. Mistovich, L. D. Newell, J. F. Politis, W. A. Stoy, J. A. Stupar, B. J. Walz, and R. Wagoner, EMT-Paramedic and EMT-Intermediate Continuing Education. National Guidelines, available at http://www.nhtsa.dot.gov/people/injury/ems/Nscguide/guidelin.htm (last visited November 30, 2007).
- 12. American Association of Colleges of Nursing, White Paper on the Education and Role of the Clinical Nurse Leader, 2007, available at http://www.aacn.nche.edu/Publications/White-Papers/CNL2-07.pdf (last visited November 30, 2007).
- 13. Commission on Dental Accreditation, American Dental Association, Accreditation Standards for Dental Education Programs, Chicago, 1998, available at http://www.mlanet.org/publications/standards/dental/intro.html (last visited November 30, 2007).
- 14. D. S. Lane, V. Ross, D. W. Chen, and C. O'Neill, "Core Competencies for Preventive Medicine Residents," American Journal of Preventive Medicine 16, no. 4 (1999): 367-372.

- 15. See Gebbie and Merrill, supra note 8.
- 16. Center for Law and the Public's Health, Core Legal Competencies for Public Health Professionals, Baltimore, MD 2001, available at http://www.publichealthlaw.net/Training/TrainingPDFs/PHLCompetencies.pdf (last visited November 30, 2007)
- 17. See Goodman et al., *supra* note 1.
- 18. A. Moulton, R. Gottfried, R. Goodman, A. Murphy, and R. Rawson, "What Is Public Health Legal Preparedness?" *Journal of Law, Medicine & Ethics* 31, no. 4 (2003): 672-683.
- W. Lopez, and T. R. Frieden, "Legal Counsel to Public Health Practitioners," in R. A. Goodman et al., eds., *Law in Public Health Practice*, 2d ed. (New York: Oxford University Press, 2007): 199-221.
- 20. Id.
- 21. See Gebbie and Merrill, supra note 8.
- Institute of Medicine, Who Will Keep the Public Healthy? Educating Public Health Professionals for the 21st Century (Washington, D.C.: National Academy Press, 2003).
- 23. See Lane et al., supra note 14.
- 24. California Department of Health Services, Division of Communicable Disease Control, *Health Officer Practice Guide for Communicable Diseases in California*, 2007, available at http://www.dhs.ca.gov/dcdc/pdf/Practice%20Guide.pdf> (last visited November 30, 2007).
- 25. See Hodge, supra note 2.
- L. O. Gostin, Public Health Law: Power, Duty, Restraint (Berkeley: University of California Press and Milbank Memorial Fund, 2002): at 263-265.
- M. Lichtveld, J. G. Hodge, K. Gebbie, F. E. Thompson, D. I. Loos, "Preparedness on the Frontline: What's Law Got to Do with It?" *Journal of Medical Ethics* 30 (2002): 184-188.
- 28. See Moulton et al., supra note 18.
- 29. See Hodge, supra note 2.
- 30. K. Gebbie, J. Merrill, I. Hwang, M. Gupta, R. Btoush, and M. Wanger, "Identifying Individual Competency in Emerging Areas of Practice: An Applied Approach," *Qualitative Health Research* 12 (2002): 990-999; B. J. Turnock, "Roadmap for Public Health Workforce Preparedness," *Journal of Public Health Management and Practice* 9, no. 6 (2003): 471-480.