



Public Health Law

Office for State, Tribal, Local and Territorial Support
Centers for Disease Control and Prevention

The Legal Epidemiology Competency Model Version 1.0

Competencies are the knowledge and skills that workers need to perform their work well—a set of statements that workers and employers can use to define their accomplishments and work goals.¹ A *competency model* is a list of competencies, organized into groupings or domains, which describes the range of skills needed for satisfactory to exceptional employee performance. Some governmental agencies refer to these as “core competencies.”

The goal of the Legal Epidemiology Competency Model (LECM), presented in Figure 1 (below), is to offer guidelines for minimum competencies in *legal epidemiology*,² including research and translation knowledge and skills required of public health practitioners, lawyers, and policy experts working in state, tribal, local, or territorial health departments.

Background and Purpose

The LECM is neither comprehensive nor prescriptive; in most cases, competencies used from this model to create job-related standards will depend on the practitioner’s area of study. Rather, the aim of this project is to present a user-friendly model of *specific skills and knowledge necessary to effectively develop, implement, or oversee legal epidemiology studies*.

Developed by the Public Health Law Program (PHLP) in the Centers for Disease Control and Prevention (CDC), the LECM has the promise to 1) provide a common language to describe the critical skills and knowledge of practitioners engaged in the scientific study of law as a factor in the cause, distribution, and prevention of disease and injury; 2) drive the development of legal epidemiology-focused curricula, scholarly support, and additions to the literature; and 3) guide the development of products related to public health law research and training under federal capacity building cooperative agreements, and similar funding opportunities.

¹ [Competency Models—Communicating Industry’s Education and Training Needs: Competency Model Development and Use: A Technical Assistance Guide](#), Competency Model Clearing House (2015).

² Legal epidemiology is the scientific study of law as a factor in the cause, distribution, and prevention of disease and injury. See Scott Burris, Marice Ashe, Donna Levin, Matthew Penn, & Michelle Larkin, [A Transdisciplinary Approach to Public Health Law: The Emerging Practice of Legal Epidemiology](#), 37 Ann. Rev. Pub. Health 135 (2016).



Many experts and organizations have supported the development of the LECM. A multidisciplinary [Expert Review Workgroup](#) assisted the CDC team with the elements included in this final draft, providing suggestions and comments. The [Public Health Foundation](#) (PHF) guided the model's validation and provided feedback on the framework of the draft model, project methodologies, and competency development process. PHF also developed targeted [communications materials](#) from this work. In May 2017, PHF hosted a [virtual town hall meeting](#) focused on the draft LECM that was attended by more than 130 people. During and after this meeting, participants could provide input on the draft LECM. That feedback is reflected in this version of the LECM.

Ideally, the LECM will be the standard used by practitioners to ensure that legal epidemiology deliverables, including trainings, are competency-based. For instance, under an umbrella cooperative agreement managed by CDC's Office for State, Tribal, Local and Territorial Support (OSTLTS), ChangeLab Solutions has developed a series of competency-based legal epidemiology trainings using the previous version of the LECM as a guide. These free, on-demand trainings are available on the [Public Health Law Academy website](#).

Other anticipated uses of the LECM include

- Updating and revising job descriptions by employers
- Career planning and self-assessment by employees
- Career guidance and exploration for students
- Developing Competency-based training and learning outcome objectives
- Developing, evaluating, and planning curricula

Key Assumptions About the LECM

The LECM is meant to reflect the practice of legal epidemiology. As such, PHLP and the Expert Review Workgroup understood that certain assumptions must be made about competency development in a transdisciplinary, cross-cutting, emerging field:

- Legal epidemiology recognizes that generating, analyzing, and communicating information about law through quantitative and qualitative analysis is essential to the promotion of population health.
- Legal epidemiology practitioners, including non-attorneys, should possess basic competencies in public health law,³ including understanding the process for creating and implementing law and policy, as well as basic principles of administrative and constitutional law. An understanding of these basic principles is essential to demonstrating competency in legal epidemiology.
- These competencies do not limit the practice of legal epidemiology; they are meant to reflect basic competencies at three tiers of practice within each domain, but not all of the necessary skills for every job would be represented in the model, and every person working in the field would not necessarily need all of the competencies listed. As such,

³ The Public Health Law Competency Model describing these competencies can be found on [CDC's Public Health Law website](#).

the model was created to provide a broad set of skills and should be tailored for individual job descriptions and uses.

Organization of the LECM

The LECM is organized into three major domains: 1) general legal epidemiology competencies, 2) legal mapping, and 3) legal evaluation. Domain 1 focuses on cross-cutting knowledge and includes statements related to basic research and epidemiology skills needed to conduct and translate both types of legal epidemiology studies. Domain 2 addresses those competencies needed for conducting legal mapping studies, including those related to identifying the need for and designing policy surveillance projects. Domain 3 focuses on legal evaluation and includes statements related to designing projects that study potential associations between health and law.

The organization of the LECM into three tiers (entry level, mid-tier, and senior manager/principal investigator) reflects three stages of legal epidemiology career development and closely mirrors the three stages of public health career development, as defined by PHF's Council on Linkages. This framework, depicted in Figure 2 (below), allows the competencies to build upon one another, supports those who are involved in legal epidemiology studies at progressive stages of their careers, and provides guidance on identifying appropriate competencies for the relevant career stage. Key behaviors are also offered to reflect each competency statement across each tier. Key behaviors are those associated with each competency that the most competent public health practitioners will engage in while performing their jobs.

Acknowledgments and Disclaimers

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For further assistance with the LECM, please contact PHLP at phlawprogram@cdc.gov. PHLP provides technical assistance and public health law resources to advance the use of law as a public health tool. PHLP cannot provide legal advice on any issue and cannot represent any individual or entity in any matter. PHLP recommends seeking the advice of an attorney or other qualified professional with questions regarding the application of law to a specific circumstance. The findings and conclusions in this summary are those of the authors and do not necessarily represent the official views of CDC.

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FIGURE 1. Legal Epidemiology Competency Model, Version 1.0: Domains, Competencies, and Key Behaviors

Domain 1: General Legal Epidemiology Competencies

Competency Statement 1	Tier 1	Tier 2	Tier 3
<p>Articulate the importance of legal epidemiology concepts to inform health, fiscal, administrative, legal, social, and political research and discourse</p>	<p>1.1.1a: Conduct background research on a problem in terms of public health burden, including burdens, disparities, and applicable laws and policies</p>	<p>1.1.2a: Identify key sources of data for legal epidemiology purposes</p>	<p>1.1.3a: Identify needs for health, fiscal, administrative, legal, social, and political research</p>
	<p>1.1.1b: Define and describe basic legal epidemiology principles and concepts</p>	<p>1.1.2b: Link legal epidemiology concepts to existing and planned public health activities and programs</p>	<p>1.1.3b: Explain legal epidemiology concepts to transdisciplinary collaborations, partnerships, and team building</p>
	<p>1.1.1c: Identify opportunities to include legal epidemiology principles in existing organizational activities</p>	<p>1.1.2c: Identify opportunities to incorporate legal epidemiology principles in cross-sector collaborations, funding applications, and outreach</p>	<p>1.1.3c: Promote legal epidemiology principles and concepts in organizational strategic planning processes and in policy agendas for federal, state, tribal, local, territorial, and global public health programs, as well as nongovernmental organizations and academic programs</p>
Competency Statement 2	Tier 1	Tier 2	Tier 3
<p>Apply legal epidemiology principles to research studies, funding opportunities, and policy agendas</p>	<p>1.2.1a: Apply basic ethical and legal principles pertaining to the collection, maintenance, use, and dissemination of legal epidemiology data</p>	<p>1.2.2a: Determine study processes and outcomes (timeline, Institutional Review Board coordination, publications)</p>	<p>1.2.3a: Ensure relevant approvals are obtained for research studies</p>
	<p>1.2.1b: Serve as a member of a transdisciplinary legal</p>	<p>1.2.2b: Assemble a transdisciplinary legal epidemiology research</p>	<p>1.2.3b: Manage a transdisciplinary legal</p>

	epidemiology research team	team across disciplines, including assignment of roles and responsibilities	epidemiology research team
	1.2.1c: Collaborate across relevant disciplines to effectively use the resources allocated for specific legal epidemiology studies	1.2.2c: Assign available resources to activities needed to support high quality legal epidemiology research	1.2.3c: Allocate funding for legal epidemiology studies within new or existing programs
	1.2.1d: Draft study documentation, including scoping information and legal epidemiology research protocols, codebooks, and data sheets	1.2.2d: Recommend study documentation processes to finalize coding schemes and research protocols	1.2.3d: Oversee the completion of study documentation
Competency Statement 3	Tier 1	Tier 2	Tier 3
Communicate legal epidemiology findings, methodologies, and recommendations to lay and professional audiences	1.3.1a: Contribute to research papers, articles, reports, or abstracts	1.3.2a: Author research papers, articles, reports, and abstracts	1.3.3a: Conceptualize a strategy for the development and dissemination of written, oral, and graphic materials
	1.3.1b: Create audience-appropriate oral and visual presentations	1.3.2b: Recommend audience-appropriate communication methods for the dissemination of legal epidemiology materials	
	1.3.1c: Communicate legal epidemiology methods and analyses for feedback and critique	1.3.2c: Identify opportunities to disseminate methods and processes for critique	1.3.3b: Participate in peer review of findings by soliciting and receiving feedback
	1.3.1d: Identify actionable next steps on the basis of legal epidemiology findings to advance health outcomes	1.3.2d: Develop recommendations from research relevant to diverse audiences	1.3.3c: Partner with stakeholders to ensure that legal epidemiology findings are used to inform public health practice
Competency Statement 4	Tier 1	Tier 2	Tier 3
	1.4.1a: Document evidence about the	1.4.2a: Recognize needs for legal	1.4.3a: Monitor and evaluate legal

Analyze the use of legal epidemiology findings to inform health, fiscal, administrative, legal, social, and political activities	influence of legal epidemiology studies in informing the ongoing debate on or reform of related laws or legal mechanisms	epidemiology studies to inform ongoing debate and reform of related laws or legal mechanisms	epidemiology findings for their effectiveness and impact
			1.4.3b: Identify opportunities for replication, update, and/or expansion of existing legal epidemiology studies

Domain 2: Competencies for Legal Mapping Studies

Competency Statement 1	Tier 1	Tier 2	Tier 3
Identify opportunities for legal mapping to inform the process, nature, and impact of policies and laws on public health	2.1.1a: Obtain initial health- and law-related background information	2.1.2a: Select jurisdictions, populations, or outcomes to analyze	2.1.3a: Set research priorities such as topics, types of studies, and outputs
	2.1.1b: Identify applicable current laws and policies on an issue	2.1.2b: Determine data sources with information needed for analysis	
	2.1.1c: Describe the status of the legal and policy framework surrounding an issue	2.1.2c: Compare the problem to gaps in current understanding with input from a subject matter expert	2.1.3b: Gather input from partners and activities in the field to finalize a research question
	2.1.1d: Draft a problem statement through background research	2.2.1d: Define objectives and scope of the study	2.1.3c: Determine the feasibility of study objectives
Competency Statement 2	Tier 1	Tier 2	Tier 3
Develop policy surveillance or legal assessment studies to address specific research questions	2.2.1a: Collect laws or policies iteratively using online search platforms on the basis of background research	2.2.2a: Develop methods and instruments for collecting valid and reliable legal or health data	2.2.3a: Confirm the appropriateness of the legal mapping study scope and coding system with subject matter experts
	2.2.1b: Generate search string, variables of interest, definitions, and coding system on the basis of initial review of collected information	2.2.2b: Consult with stakeholders, accrediting bodies, and other partners regarding legal mapping standards, measures, and metrics	2.2.3b: Strategize a research agenda across multiple legal mapping studies
		2.2.2c: Assign tasks to team members on the basis of administrative requirements and resources	

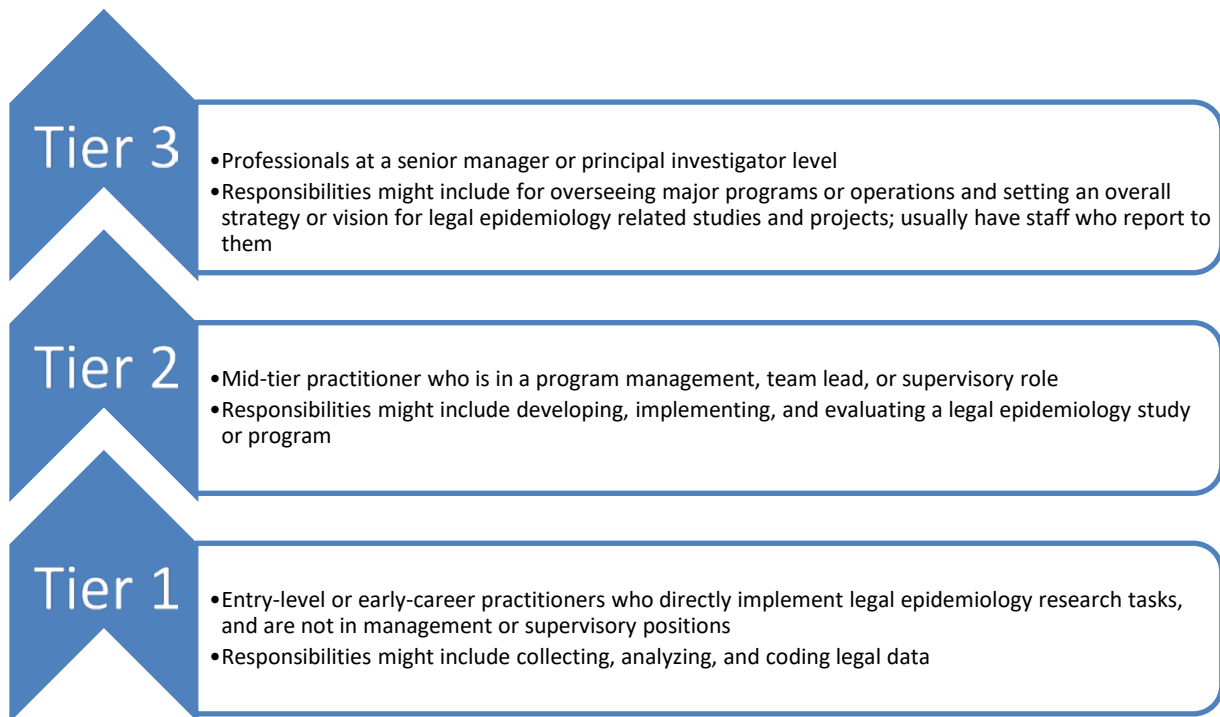
Competency Statement 3 Analyze laws, policies, and political and programmatic priorities using evidence-based or empirical guidelines (including health-related principles or trends, stakeholder or special interests, and other key developments or concerns)	Tier 1	Tier 2	Tier 3
	2.3.1a: Apply a coding system to collected laws and policies using an iterative process	2.3.2a: Standardize procedures and systems to ensure quality and consistency of coding	2.3.3a: Monitor progress and provide objective feedback on research strategy using institutional knowledge and experience
	2.3.1b: Quantify variations in laws or policies between jurisdictions or over time	2.3.2b: Compare research findings with study objectives and outcomes	2.3.3b: Collaborate with partners to review legal mapping study methodology, progress, and findings
	2.3.1c: Use relevant databases to track and assess legal and policy information	2.3.2c: Identify opportunities for innovation and enhancement of methods or use of new technology or resources for legal epidemiology studies	2.3.3c: Pursue opportunities for innovation and enhancement of methods or use of new technology or resources
Competency Statement 4 Validate and synthesize results that compare and contrast meaningful variations in law and policy related to health	Tier 1	Tier 2	Tier 3
	2.4.1a: Resolve ambiguities and discrepancies in legal mapping data	2.4.2a: Check the validity and reliability of legal mapping data	2.4.3a: Ensure that the legal mapping study design, process, and findings have met the original research objectives
	2.4.1b: Identify trends in legal mapping	2.4.2b: Confirm research findings and limitations of legal mapping study	
	2.4.1c: Summarize findings from the legal mapping study	2.4.2c: Draft conclusions from legal mapping studies on the basis of the current legal, public health, and political context	2.4.3b: Confirm conclusions in the context of current knowledge and information from the field

Domain 3: Competencies for Legal Evaluation Studies

Competency Statement 1	Tier 1	Tier 2	Tier 3
Identify opportunities for a legal evaluation study to address existing legal, health, or other issues	3.1.1a: Identify legal evaluation needs on the basis of gaps in existing evidence (literature, legal data, and other evidence)	3.1.2a: Assess the utility of legal evaluation strategies to address identified gaps	3.1.3a: Gather support for legal evaluation from internal and external stakeholders in the field
	3.1.1b: Identify data sources and analytical tools relevant to studying research priorities	3.1.2b: Determine the relevance of interventional, infrastructural, or intersectional laws to the identified research priorities	3.1.3b: Establish research priorities on the basis of the potential for improving population health, socioeconomic or cultural disparities, and the public health system
	3.1.1c: Determine prerequisites for study development (e.g., legal mapping datasets, needs for particular expertise)	3.1.2c: Identify resources in light of the need and the feasibility of the research, including extramural funding and staff and stakeholder involvement	3.1.3c: Obtain and allocate resources for conducting a legal evaluation
Competency Statement 2	Tier 1	Tier 2	Tier 3
Design a legal evaluation to study potential associations between law and health	3.2.1a: Propose options for a research plan incorporating legal evaluation theory	3.2.2a: Operationalize key constructs and concepts in a draft legal evaluation research plan	3.2.3a: Finalize the research plan, including engagement with potentially underrepresented or underprivileged populations
	3.2.1b: Identify legal evaluation study designs with proximal and distal impacts of law	3.2.2b: Develop a logic model incorporating proposed legal evaluation study designs to inform the legal evaluation research plan	3.2.3b: Finalize a logic model, incorporating the mechanisms through which the law can deter, encourage, or compel health-related behaviors
	3.2.1c: Follow legal and ethical principles in designing the study	3.2.2c: Secure approvals for the legal evaluation	3.2.3c: Develop a fiscally sound budget that will support the

			activities defined in the research plan and that is consistent with financial and ethical rules
Competency Statement 3	Tier 1	Tier 2	Tier 3
Collect and analyze qualitative and quantitative study data using generally accepted research methodologies	3.3.1a: Collect data relevant to an issue and appropriately document the process	3.3.2a: Develop a quality control plan to standardize analytic codes and outputs	3.3.3a: Determine deadlines and quality targets for analyses
	3.3.1b: Collaborate with team members to review initial results	3.3.2b: Ensure reliability and adherence to methodology in the collection and management of data	3.3.3b: Monitor the legal evaluation progress within budget and resource limitations
	3.3.1c: Ensure validity and reliability of the data		
	3.3.1d: Address principles of epidemiology and informatics in data collection and analysis	3.3.2c: Apply standardized population categories or variables to data analysis	3.3.3c: Analyze research results using institutional knowledge and experience on the topic, as well as general knowledge of legal principles
Competency Statement 4	Tier 1	Tier 2	Tier 3
Interpret results, draw conclusions, and formulate key findings toward the improvement of public health	3.4.1a: Identify key findings and limitations from the data collection and analysis	3.4.2a: Make recommendations for the interpretation of data, including, but not limited to, authority, credibility, currency, and authenticity	3.4.3a: Confirm findings according to geographic, socioeconomic, political, or cultural factors identified through stakeholder engagement
	3.4.1b: Describe patterns or trends in data across sources	3.4.2b: Interpret point estimates and confidence intervals of measures of central tendency and dispersion, disease or event frequency, and measures of association and impact	

FIGURE 2. Three Stages of Legal Epidemiology Career Development



Glossary

Associational studies: Scientific study of the relationship between legal data and public health data.

Behavioral statements: Demonstrable and measurable indicators of an individual's knowledge, skill, and ability.

Codebook: A codebook for a legal dataset (also known as a data dictionary) defines the variables and correlating values in the legal data. Codebooks for legal datasets include a brief description of the study and scope of data collection, any relevant technical information about the files, definitions for each variable, and definitions for each possible value of the variables.⁴

Coding: The process of converting textual into numerical information, focusing on objectively measurable features (i.e., dates, parties, and penalties).⁵

Investigational studies: Investigation of the relationship between legal data and governmental functions, health outcomes, or cost outcomes through qualitative interviews.

Legal assessments: Cross-sectional, scientific collection, and analysis of codified legal provisions important to health across jurisdictions.

Legal dataset: A collection of coded legal provisions for scientific analysis.

Legal epidemiology: The scientific study and deployment of law as a factor in the cause, distribution, and prevention of disease and injury in a population.

Legal epidemiology practitioners: Public health lawyers, public health scientists, and public health practitioners who study the relationship between law and population health.⁶

Legal epidemiology principles: The fundamental concepts of understanding, implementing, and evaluating laws to change behaviors and environment.⁷

Legal evaluations: Comparative analyses of legal data with health, cost, or systems data.

Legal mapping: Comparative law analyses on topics important to health.

Policy surveillance: The ongoing, systematic collection, analysis, interpretation, and dissemination of information about a given body of public health law and policy.

Protocol: A clearly defined description of the type of law to be studied, search methods for databases, and a coding scheme identifying features of laws.⁸

⁴ See Evan D. Anderson et al., [Public Health Law Research: Theory and Methods](#) (Alexander C. Wagenaar & Scott C. Burris eds., Jossey-Bass 2013).

⁵ See *id.*

⁶ See Burris, *supra* note 2..

⁷ See *id.*

⁸ See Anderson, *supra* note 4.

Translation: The interpretation of legal expertise into actionable knowledge to guide both lawyers and nonlawyers in policy development, implementation, and advocacy.⁹

Scoping: A method used to define the parameters of the population, disease, and law to be studied in order to develop effective coding schemes.

⁹ See Burris, *supra* note 2..