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CDC/CSTE Applied Epidemiology Competencies

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Tier 2 Competencies Questionnaire

CDC/CSTE Applied Epidemiology Competencies

Background for Competency Development

The Centers for Disease Control and Prevention (CDC) along with CSTE recognize the critical role of epidemiologists at all levels of public health practice. In January 2004, CDC and CSTE hosted a workforce summit to address workforce issues affecting public health epidemiologists. Leaders in applied epidemiology were invited to discuss the key workforce issues in this field. Participants strongly supported the need for establishing core competencies for applied epidemiologists. The stated purposes for developing these competencies are 1) to more clearly define the field of applied epidemiology and provide guidance to practitioners regarding expected competencies; 2) inform supervisory and personnel systems in governmental public health agencies of expected competencies for staff hiring and aid establishing civil service job titles and in the development of “career ladders” for advancement for epidemiologists; and 3) inform educators and academic institutions of the expected competencies. This competency development process has since been identified as a priority for CDC and CSTE.

CDC and CSTE have convened an expert panel to define competencies for applied epidemiology for local, state and federal public health epidemiologists. This panel has representation from state and local health agencies, academia, private industry, and from across CDC. The panel, convened by Denise Koo, MD, MPH from the Office of Workforce and Career Development at CDC and Matt Boulton, MD, MPH from the School of Public Health at the University of Michigan, first met October 2004. Gus Birkhead, MD, MPH of the New York State Department of Health and Kathleen Miner, Ph.D., MPH, C.H.E.S. from the Rollins School of Public Health at Emory University co-chair the expert panel.

Intended Users

The applied epidemiology competency set was developed in three sections, with each section focused on epidemiologists with a different level of experience and responsibilities:

Tier 1 – Frontline epidemiologist:

- Newly graduated Master’s degree with minimal experience, but from a Master’s program with a focus on epidemiology and/or analysis and assessment, or
- Bachelor’s or other professional degree such as nursing without formal, academic epidemiology training and at least two years experience performing epidemiologic work.

Tier 2 – Journey level (may supervise a unit or serve as a project leader or surveillance coordinator):

- Master’s degree in epidemiology or public health with two to five years work experience in a public health agency
- PhD in epidemiology
- Other non-epidemiology professional degree (e.g., MD, DVM, PhD in a social science field) with specific epidemiology training (e.g. MPH degree, CDC Epidemic Intelligence Service program)

Tier 3 – Senior level

- 3a: supervisor and/or manager, director of a major section, program or bureau in a public health agency.
- 3b: senior scientist/subject area expert in an epidemiologic focus area

For more information regarding the CDC/CSTE Applied Epidemiology Competencies, please visit www.cste.org or refer to the printed CDC/CSTE Applied Epidemiology Competency Booklet available at the CSTE booth. Questions and comments may be directed to jlemmings@cste.org.

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INSTRUCTIONS

- Complete the contact information below

Name: _____

According to the definitions above (page 2), I consider myself a: Tier 1 Epidemiologist
 Tier 2 Epidemiologist
 Tier 3a Epidemiologist
 Tier 3b Epidemiologist

Degree(s): _____

Title(s): _____

Department: _____ State: _____

Email: _____ Phone Number: _____

- For **each competency listed**, please answer the following questions and enter your answers in the table below:
 1. As an epidemiologist, do you perform this activity? (YES or NO)
 - a. If YES, how often do you perform this task? (Daily, Weekly, Monthly, Rarely, or As Necessary)
 2. Do you think this should be included as a competency for a Tier 2 epidemiologist? (YES, NO, Uncertain).
- For **each Skill Domain (1- 8)**, please answer the following questions and enter your answers in the table below. Attach additional sheets if necessary.
 3. What competencies are missing from this domain?
 4. Additional Comments
- Submit any additional comments regarding the Applied Epidemiology Competency Development Process or definitions used (i.e. Tier 1, Tier 2, and Tier 3 Epidemiologists) with this questionnaire or to jlemmings@cste.org.
- We would appreciate feedback on Domains 1 and 2 of this document as well as at least two additional CDC/CSTE Applied Epidemiology Competency domains.

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A Complete Competency Set is available at the CSTE Booth in the Exhibit Hall

Skill Domain #1 Assessment and Analysis	As an epidemiologist, do <u>YOU</u> perform this activity?	If <u>YES</u> to Q1, How often do you perform this task?	Do you think this should be a competency for Tier 2 level epidemiologists*?
Major Competencies:	Q1	IF YES to Q1	Q2
1. Identify public health problems pertinent to the population	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Rarely <input type="checkbox"/> As Necessary	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Uncertain
2. Conduct surveillance	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Rarely <input type="checkbox"/> As Necessary	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Uncertain
3. Investigate acute and chronic conditions in the population	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Rarely <input type="checkbox"/> As Necessary	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Uncertain
4. Apply principles of good ethical/legal practice as they relate to study design and data collection, dissemination, and uses	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Rarely <input type="checkbox"/> As Necessary	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Uncertain
5. Manage data from surveillance, investigations, or other sources	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Rarely <input type="checkbox"/> As Necessary	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Uncertain
6. Analyze data from an epidemiologic investigation	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Rarely <input type="checkbox"/> As Necessary	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Uncertain
7. Summarize results of the analysis and draw conclusions	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Rarely <input type="checkbox"/> As Necessary	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Uncertain
8. Recommend interventions and control measures in response to epidemiologic findings	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Rarely <input type="checkbox"/> As Necessary	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Uncertain
9. Evaluate programs	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Rarely <input type="checkbox"/> As Necessary	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Uncertain

Q3. What competencies are missing from this domain?**

Q4. Other Comments?**

*See definition of a Tier 2 Epidemiologist Above
 **Attach additional sheets if necessary

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Skill Domain # 2 Basic Public Health Sciences	As an epidemiologist, do <u>YOU</u> perform this activity?	If <u>YES</u> to Q1, How often do you perform this task?	Do you think this should be a competency for Tier 2 level epidemiologists*?
Major Competencies:	Q1	IF YES to Q1	Q2
1. Use knowledge of causes of disease to guide epidemiologic practice	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Daily <input type="checkbox"/> Rarely <input type="checkbox"/> Weekly <input type="checkbox"/> As Necessary <input type="checkbox"/> Monthly	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Uncertain
2. Use laboratory resources to support epidemiologic activities	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Daily <input type="checkbox"/> Rarely <input type="checkbox"/> Weekly <input type="checkbox"/> As Necessary <input type="checkbox"/> Monthly	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Uncertain
3. Apply principles of informatics, including data collection, processing, and analysis, in support of epidemiologic investigations	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Daily <input type="checkbox"/> Rarely <input type="checkbox"/> Weekly <input type="checkbox"/> As Necessary <input type="checkbox"/> Monthly	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Uncertain
Q3. What competencies are missing from this domain**?			
Q4. Other Comments**?			

*See definition of a Tier 2 Epidemiologist Above

**Attach additional sheets if necessary

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Skill Domain # 4 Community Dimensions of Practice	As an epidemiologist, do <u>YOU</u> perform this activity?	If <u>YES</u> to Q1, How often do you perform this task?	Do you think this should be a competency for Tier 2 level epidemiologists*?
Major Competencies:	Q1	IF YES to Q1	Q2
1. Provide epidemiologic input into epidemiologic studies and community public health planning processes at the state or local level	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Daily <input type="checkbox"/> Rarely <input type="checkbox"/> Weekly <input type="checkbox"/> As Necessary <input type="checkbox"/> Monthly	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Uncertain
2. Participate in development of community partnerships to support epidemiologic investigations	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Daily <input type="checkbox"/> Rarely <input type="checkbox"/> Weekly <input type="checkbox"/> As Necessary <input type="checkbox"/> Monthly	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Uncertain
3. Engage the public in the public health work and decision making of the Health Department when needed using mechanisms suitable to the circumstances	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Daily <input type="checkbox"/> Rarely <input type="checkbox"/> Weekly <input type="checkbox"/> As Necessary <input type="checkbox"/> Monthly	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Uncertain
Q3. What competencies are missing from this domain**?			
Q4. Other Comments**?			

*See definition of a Tier 2 Epidemiologist Above
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Skill Domain # 5 Cultural Competency	As an epidemiologist, do <u>YOU</u> perform this activity?	If <u>YES</u> to Q1, How often do you perform this task?	Do you think this should be a competency for Tier 2 level epidemiologists*?
Major Competencies:	Q1	IF YES to Q1	Q2
1. Describe population by race, ethnicity, culture, socioeconomic, educational, and professional backgrounds, age, religion, and sexual orientation	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Daily <input type="checkbox"/> Rarely <input type="checkbox"/> Weekly <input type="checkbox"/> As Necessary <input type="checkbox"/> Monthly	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Uncertain
2. Establish relationships with groups of special concern (e.g. disadvantaged or minority groups, groups subject to health disparities, historically underrepresented groups)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Daily <input type="checkbox"/> Rarely <input type="checkbox"/> Weekly <input type="checkbox"/> As Necessary <input type="checkbox"/> Monthly	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Uncertain
3. Design surveillance systems to include groups subject to health disparities or other potentially under-represented groups (using standard categories where available)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Daily <input type="checkbox"/> Rarely <input type="checkbox"/> Weekly <input type="checkbox"/> As Necessary <input type="checkbox"/> Monthly	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Uncertain
4. Conduct investigations using languages and approaches tailored to population	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Daily <input type="checkbox"/> Rarely <input type="checkbox"/> Weekly <input type="checkbox"/> As Necessary <input type="checkbox"/> Monthly	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Uncertain
5. Use standard population categories or subcategories when performing data analysis	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Daily <input type="checkbox"/> Rarely <input type="checkbox"/> Weekly <input type="checkbox"/> As Necessary <input type="checkbox"/> Monthly	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Uncertain
6. Utilize knowledge of specific socio-cultural factors in the population to interpret findings	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Daily <input type="checkbox"/> Rarely <input type="checkbox"/> Weekly <input type="checkbox"/> As Necessary <input type="checkbox"/> Monthly	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Uncertain
7. Recommend public health actions that would be meaningful to the affected community	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Daily <input type="checkbox"/> Rarely <input type="checkbox"/> Weekly <input type="checkbox"/> As Necessary <input type="checkbox"/> Monthly	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Uncertain
8. Communicate findings to affected community using mechanisms that are tailored to that community/special population	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Daily <input type="checkbox"/> Rarely <input type="checkbox"/> Weekly <input type="checkbox"/> As Necessary <input type="checkbox"/> Monthly	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Uncertain

Q3. What competencies are missing from this domain?**

Q4. Other Comments?**

*See definition of a Tier 2 Epidemiologist Above
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Skill Domain # 6 Financial and Operational Planning and Management	As an epidemiologist, do <u>YOU</u> perform this activity?	If <u>YES</u> to Q1, How often do you perform this task?	Do you think this should be a competency for Tier 2 level epidemiologists*?
Major Competencies:	Q1	IF YES to Q1	Q2
1. Conduct epidemiologic activity in a manner that is aligned with financial and operational plan of the agency	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Daily <input type="checkbox"/> Rarely <input type="checkbox"/> Weekly <input type="checkbox"/> As Necessary <input type="checkbox"/> Monthly	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Uncertain
2. Use skills that foster collaborations, strong partnerships, and team building to accomplish epidemiology program objectives	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Daily <input type="checkbox"/> Rarely <input type="checkbox"/> Weekly <input type="checkbox"/> As Necessary <input type="checkbox"/> Monthly	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Uncertain
3. Clarify roles and responsibilities of all participants in epidemiologic activities	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Daily <input type="checkbox"/> Rarely <input type="checkbox"/> Weekly <input type="checkbox"/> As Necessary <input type="checkbox"/> Monthly	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Uncertain
Q3. What competencies are missing from this domain**?			
Q4. Other Comments**?			

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Skill Domain # 7 Leadership and Systems Thinking	As an epidemiologist, do <u>YOU</u> perform this activity?	If <u>YES</u> to Q1, How often do you perform this task?	D Do you think this should be a competency for Tier 2 level epidemiologists*?
Major Competencies:	Q1	IF YES to Q1	Q2
1. Promote shared vision to drive action	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Rarely <input type="checkbox"/> As Necessary	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Uncertain
2. Conduct performance driven work	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Rarely <input type="checkbox"/> As Necessary	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Uncertain
3. Promote ethical conduct	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Rarely <input type="checkbox"/> As Necessary	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Uncertain
4. Promote workforce development	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Rarely <input type="checkbox"/> As Necessary	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Uncertain
5. Prepare for emergency response	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Rarely <input type="checkbox"/> As Necessary	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Uncertain
Q3. What competencies are missing from this domain**?			
Q4. Other Comments**?			

*See definition of a Tier 2 Epidemiologist Above
 **Attach additional sheets if necessary

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Skill Domain # 8 Policy Development	As an epidemiologist, do <u>YOU</u> perform this activity?	If <u>YES</u> to Q1, How often do you perform this task?	Do you think this should be a competency for Tier 2 level epidemiologists*?
Major Competencies:	Q1	IF YES to Q1	Q2
1. Participate in development of public <div style="border: 1px solid black; height: 100px; width: 100%;"></div>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Daily <input type="checkbox"/> Rarely <input type="checkbox"/> Weekly <input type="checkbox"/> As Necessary <input type="checkbox"/> Monthly	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Uncertain
	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Daily <input type="checkbox"/> Rarely <input type="checkbox"/> Weekly <input type="checkbox"/> As Necessary <input type="checkbox"/> Monthly	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Uncertain
Q3. What competencies are missing from this domain**?			
Q4. Other Comments**?			

*See definition of a Tier 2 Epidemiologist Above
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Additional Comments?

Submit any additional comments regarding the Applied Epidemiology Competency Development Process or definitions used (i.e. Tier 1, Tier 2, and Tier 3 Epidemiologists) with this questionnaire or to jlemmings@cste.org.