



# 2017 Epidemiology Capacity Assessment

## Key Findings

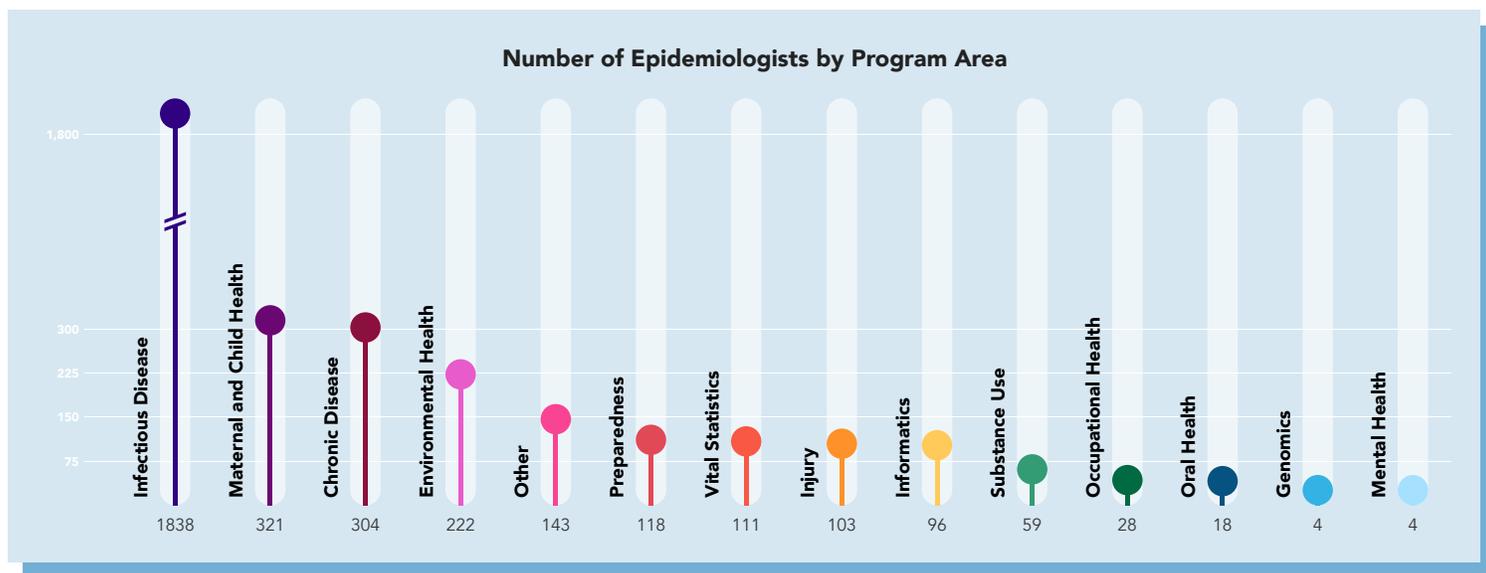
### INTRODUCTION

Since 2001, the Council of State and Territorial Epidemiologists (CSTE) has conducted six periodic **Epidemiology Capacity Assessments (ECAs)** to monitor the numerical strength and functional applied epidemiology capacity in state and territorial health departments. The 2017 ECA was completed by the State and Territorial Epidemiologists from all 50 states, the District of Columbia, and three territories, between April and August 2017. The ECA serves many purposes:

- Monitor changes in the quantity and quality of the applied epidemiology workforce
- Identify policy, system and environmental influences affecting epidemiology services and staffing
- Provide data to health departments for evidence-based decision making and assessment of performance compared to other jurisdictions
- Describe the needed skills and expertise among the applied epidemiology workforce

### RESULTS

The state and territorial epidemiology workforce continues to grow, but more epidemiologists are needed in both well-established and emerging program needs. From 2013-2017, the number of epidemiologists **increased 22%** to a total of 3370, the highest increase observed since the ECA began in 2001. Three quarters of epidemiologists work in infectious disease, chronic disease, and maternal and child health (MCH), while **less than 5% work in emerging areas**, such as substance abuse, informatics, and mental health.



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## Capacity

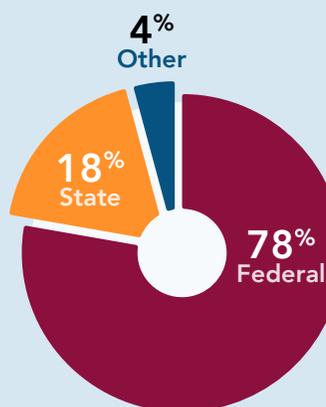
Capacity to monitor and investigate health problems remains high, but evaluation and research capacity lag behind. Overall, capacity is low in emerging program areas such as informatics, substance, abuse, and mental health. An additional **1200** epidemiologists are needed to reach full capacity, which would be a 36% increase over current capacity.

- In 2017, the percentages of the states and DC that reported substantial to full capacity to monitor health status and investigate health problems and hazards were high (84% and 92%, respectively). Yet **only 39%** reported **substantial to full capacity in evaluation** and 22% in research.
- The percentage of states reporting substantial to full capacity overall was **greatest** for the program areas of infectious disease (96%), chronic disease (78%), and MCH (75%), and **lowest** for informatics (2%), substance abuse (16%), and mental health (25%).

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### Funding Sources



## Training, Hiring, & Retention

Training, hiring, and retaining a qualified workforce represent serious challenges to health departments, as does the continued reliance on federal funding.

- The greatest training priority was in **analytics**, defined as informatics and the application and translation of public health data.
- Restrictions on offering competitive pay (80%), salary scale (76%), opportunity for promotion (73%), and hiring quickly (62%) were challenges for hiring.
- The most frequently cited issues for retention were opportunity for promotion (88%), salary scale (80%), merit raise restrictions (70%), and loss to the private sector (65%).
- In 2017, more than **three quarters** of health department epidemiology funds were **provided by the federal government**, with an average of 20% provided by the states. Heavy reliance on federal funds reduces flexibility, adds to insecurity in the workplace, and may affect the ability to cover core functions.

## RECOMMENDATIONS

1. Develop a strategy to increase epidemiology capacity, especially in evaluation, research and underdeveloped program areas, such as substance abuse, mental health, and informatics and data translation. The next generation of epidemiologists needs the appropriate skillsets and subject-matter expertise to complement existing staff.
2. Review and develop new recruitment and retention strategies for state health department epidemiologists.
3. Maintain efforts to establish training standards and provide training to ensure a highly qualified public health epidemiology workforce. In particular, CSTE and others must work closely with public health schools and programs to ensure a supply of graduates trained in emerging areas and in evaluation and applied research techniques.
4. Explore the gap between state public health mandates and state capacity to meet those mandates. Policy makers, especially at the state level, must provide adequate funding to close critical gaps—especially for epidemiology positions and training—if health departments are to meet the needs of their populations.
5. Conduct future assessments to monitor workforce trends and identify changes in the workforce and overall epidemiology capacity.

The entire report can be found at [cste.org](http://cste.org). For further information, contact Jessica Arrazola at [jarrazola@cste.org](mailto:jarrazola@cste.org).