

# Looking Long-Term: How to Utilize a Decade of Applied Epidemiology Fellowship Data to Evaluate Effectiveness

Virginia Dick, PhD—Evaluation Coordinator and Amanda Masters, MPH—Director of Workforce Development  
Council of State and Territorial Epidemiologists, Atlanta, GA

## Background

The CDC/CSTE Applied Epidemiology Fellowship (AEF) was created in 2003 to strengthen the workforce in applied epidemiology at state and local health agencies. CSTE, in collaboration with CDC, HRSA, and ASPPH, established the two year program to give recent graduates from public health programs rigorous preparation and advanced training for successful careers as state or local applied epidemiologists.

The fellowship uses a mentorship model. Host health agencies must demonstrate capacity to provide an AEF fellow with technical training, research opportunities, and practical experience in the application of epidemiologic methods at the state and local level.

Program areas include Chronic Disease, Injury, Substance Abuse, Environmental Health, Maternal and Child Health, Infectious Diseases, and Occupational Health.

There have been 11 classes of fellows who have participated in the fellowship, with over 240 fellows. Recently CSTE began an intensive evaluation process to assess the long-term impact of the program on the state of state and local public health capacity and on the individual participants. Longitudinal employment data and professional development data has been analyzed for over 90 of the alumni.

## Methodology

This internal utilization-focused evaluation uses a mixed methods design. The evaluation relies on the engagement of alumni, staff, and host site participants to inform the evaluation and the interpretation of data findings. Data is gathered on an ongoing basis from alumni, staff, and mentors; as well as current fellows. Data sources include all of the mechanisms listed below. Data analysis currently relies on basic statistical analysis of quantitative data components along with theme analysis of qualitative data and mapping of geographic components. The information from the findings are utilized by the CSTE staff who implement the program to provide continually improvement and refinement of the fellowship.

### Data collection:

- Surveys
- Progress reports
- Training evaluations
- Interviews
- Public record review

### Data analysis:

- Gap and theme analysis
- GIS mapping
- Statistical analysis

## Results

AEF placements all over the country (2003-2012)



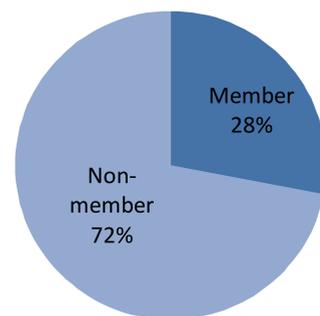
AEF placements have expanded over the years (2003-2012)



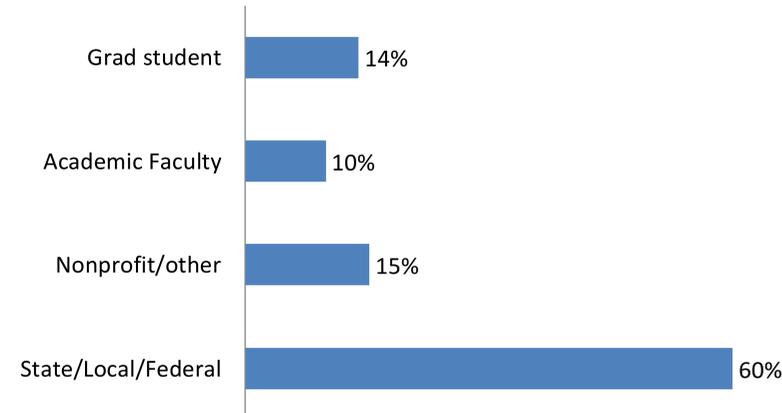
AEF Fellows are employed all over the country (2003-2011)



CSTE Membership After Fellowship



Current Employment (as of 2013)



- Of the 137 alumni for whom full data was available, 120 (88%) had worked in a state/local/federal public health environment for at least a year
- Fellows (N=143) have held their current position for between 1 and 8 years (average of 3)
- Fellows (N=137) have provided an average of 3 years of services to a state/local/or federal public health agency (range of 0 to 9)
- Fellow alumni have published over 160 peer reviewed articles

## Findings

- Nationwide impact
- Fellowship has a significant impact on workforce capacity at the state and local level
- Need to examine opportunities to keep fellows more involved with CSTE and providing support to future generations
- Need better collection tools to gather alumni data over time to track career progress/trajectories

## Next Steps

- Surveys of Applied Epidemiology Fellowship alumni & mentors
- Assessment of competency self assessments throughout Fellowship
- Annual evaluation reports, dashboards, and storyboards for communication
- Conduct SNA and further analysis of the relationship among fellows and mentors over time
- Develop tools to collect consistent data via publically available sources

## References

- Thacker, S. B., Dannenberg, A.L., & Hamilton, D. H. (2001). Epidemic Intelligence Service and the Centers for Disease Control and Prevention: 50 years of training and service in applied epidemiology. *American Journal of Epidemiology*, 154 (11), pg 985-992.
- Ragan, P. Rowan, A., Schulte, J., & Wiersma, S. (2008). Florida Epidemic Intelligence Service Program: The first five years, 2001—2006. *Public Health Reports*, 123, pg. 21-27.



COUNCIL OF STATE AND  
TERRITORIAL EPIDEMIOLOGISTS