



CSTE

COUNCIL OF STATE AND
TERRITORIAL EPIDEMIOLOGISTS

THE NEW STATE EPIDEMIOLOGIST'S FIRST DAYS

PLANNING GUIDE, 2ND ED

Acknowledgements

Development of this publication was supported in part by funding from the Centers for Disease Control and Prevention Cooperative Agreement No. 3U38-OT000143-04 and 3U38-OT00143-05. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of CDC.

Welcome to your new position as the State Epidemiologist!

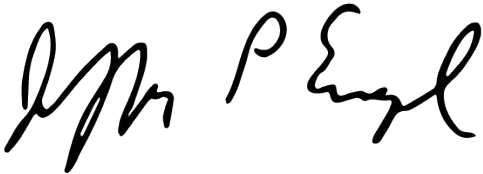
The Council of State and Territorial Epidemiologists (CSTE) is your professional home where you can connect with colleagues across the country, engage on emerging issues, and influence national policy. As the State Epidemiologist, you play a leading role within your jurisdiction in applied epidemiology, the foundational science of public health. At CSTE, you are the representative and voter for your jurisdiction at all meetings of the Council, leveraging your subject matter expertise to effect national public health policy and practice.

CSTE developed this manual to help ease the transition to your new position and responsibilities. It briefly describes how CSTE can be a resource for you and your staff; outlines common challenges you may face, along with corresponding best practices; and presents key leadership and management concepts to help maximize your effectiveness as a leader.

This second edition updates the original 2007 manual to address emerging issues, growth at CSTE, and the need to train leaders in applied epidemiology.

We hope this manual will be useful in your new role. We look forward to working with you, and together *using the power of epidemiology to improve the public's health..*

Sincerely,

A handwritten signature in black ink, appearing to read 'JEFFREY P ENGEL'.

Jeffrey Engel, MD
Executive Director
Council of State and Territorial Epidemiologists

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Introduction

A PLANNING GUIDE FOR THE NEW STATE EPIDEMIOLOGIST

The State Epidemiologist position is complex, demanding, and challenging—and one of the most rewarding and memorable roles a public health professional can fill. A State Epidemiologist is a manager, health expert, disease investigator, emergency responder, public speaker, educator, convener, and public health advocate. Most State Epidemiologists come to the job with experience in some of these roles. But few can anticipate everything needed to succeed. However, many constituents are counting on your success: your health department director, governor, state board of health, state health agency employees, local health officials, and state residents. The opportunity to work with dedicated public health professionals, shape the public health agenda, and impact the health of your state is a tremendous responsibility and potentially a great joy.

ORGANIZATION OF THE MANUAL

With input from experienced State Epidemiologists, the Council of State and Territorial Epidemiologists (CSTE) developed this manual to help newly appointed State Epidemiologists.

This manual is organized to help you 1) become familiar with CSTE, 2) set priorities by addressing four early, pressing challenges, 3) become a leader in applied epidemiology and 4) maintain a strong workforce. The checklist of major activities presented below is intended to orient you to your new position. We suggest you undertake these activities as soon as possible. While their relative priorities may vary, depending on your exact organizational circumstances, it is important for you to be aware of your role and responsibilities with respect to each. Depending on your agency's structure and culture, you may choose to work with your supervisor to initiate some of these activities, such as meeting with higher-level staff, or you may choose to work independently or in consultation with existing staff.

Checklist

Become Familiar with CSTE

- Describe CSTE's strategic plan and high-profile projects.
- Describe the role of the State Epidemiologist within CSTE.
- Explain the role of the State Epidemiologist attending the CSTE Annual Conference.

Address the Challenges

Challenge One: Understand the Job

- Identify political, social, and economic influences—nationally and within your jurisdiction—affecting the practice of applied epidemiology.
- Understand your agency and your unique responsibilities within it: meet with your supervisor, people you will directly supervise, and your organizational peers to learn the traditional responsibilities and expectations for your position.
- Review the agency's and unit's strategic plan. Plan to update your unit's strategic plan based on current needs and priorities.
- Identify and meet with your agency's fiscal staff to review the epidemiology unit budget, the agency budget, the governor's budgetary priorities, and the budget process.
- Review tips from experienced public health leaders for how to be successful on the job.
- Meet with human resources (HR) staff to learn how personnel policies, civil service requirements, and union bargaining units may affect your workplace.

Challenge Two: Represent Your Agency

- Establish a strong relationship with the health department director. Learn his/her expectations for whether, or how, you will communicate with him/her.
- Meet with your health department or state agency press officer. Review the press office protocols and procedures you must follow when contacted by the news media.
- Develop and disseminate your communications strategy and process, in conjunction with your press office.
- Learn the "hot" issues that may affect the epidemiology unit by talking with your staff, your supervisor, and the press officer.

Challenge Three: Engage with Your Stakeholders

- Develop relationships with your staff by setting up group meetings. Share your agenda and priorities with them.
- Meet with the state board of health and local health district authorities. Share your agenda and priorities with them.
- Learn your role vis-à-vis key federal agencies, including the Centers for Disease Control and Prevention (CDC), the Department of Homeland Security (DHS), and the Federal Bureau of Investigation (FBI).
- Establish solid relationships with the heads of the state departments and programs with which you will work (e.g., the state public health laboratory, legal department, statistics program, informatics program, information technology program, etc.) Plan for regular interaction with the

heads of these departments, such as regularly scheduled meetings, and determine optimal methods of communication for impromptu discussions and updates.

Challenge Four: Identify Assets and Resources

- Identify, communicate with, and learn about primary constituencies and their issues.
- Become active in local and national public health and professional organizations.

Become a Leader in Applied Epidemiology

- Familiarize yourself with leadership theory and best practices.
- Meet with your HR lead to discuss opportunities and challenges for recruiting and retaining epidemiologists.
- Meet with your staff members to develop individual professional development plans.
- In consultation with agency leadership, develop a succession plan to address future workforce shortages and needs.

Maintain a Strong Workforce

- Meet with HR staff to learn the recruitment and hiring processes at the agency.
- Identify your staffing needs, including needs for contractors, temporary employees, interns, and full-time employees.
- Identify any challenges to recruiting competent and qualified staff.
- Meet with staff to understand why they choose to work at the agency.
- Identify strategies to improve retention among applied epidemiology staff.

Become Familiar with CSTE

- Describe CSTE's strategic plan and high-profile projects.
- Describe the role of the State Epidemiologist within CSTE.
- Explain the role of the State Epidemiologist attending the CSTE Annual Conference.

CSTE Overview

In the 1950s, Alexander Langmuir, CDC's first Epidemiology Division director, recognized the importance of state input into national decision-making and asked Association of State and Territorial Health Officials (ASTHO) to convene the State Epidemiologists and charge them with deciding which disease cases should be reported to the federal government. The first fully-documented list of notifiable diseases was generated at the ensuing meeting of state and territorial epidemiologists, held in 1951. Since then, CSTE has continued to hold the responsibility for defining and recommending which diseases and conditions should be reportable within states and, of these, which should be voluntarily reported to CDC. From this beginning, CSTE has grown into a national organization, of state, local, tribal, and territorial public health epidemiologists working across disciplines and disease categories. In August 1992, CSTE opened its national headquarters in Atlanta, Georgia with two employees.

CSTE works to establish effective relationships among health agencies at all levels of government—federal, state, local, territorial and tribal. It provides technical advice and assistance to partner organizations and to federal public health agencies such as the CDC. It represents the voice of applied epidemiologists to the CDC, to Congress, to the federal Office of Management and Budget, and to partner organizations. And it supports effective public health surveillance and good epidemiologic practice through training, capacity building, and peer consultation. All this work is informed and guided by the CSTE membership, drawing upon members' surveillance and epidemiology expertise in areas ranging from maternal and child health to infectious diseases and from environmental health to injury control.

Below is an overview of CSTE basics.

Vision: Using the power of epidemiology to improve the public's health.

Mission:

- Promote effective use of epidemiologic data to guide public health practice and improve health
- Support effective public health surveillance and epidemiologic practice through training, capacity development, and peer consultation
- Develop standards for practice
- Advocate for resources and scientifically based policy

Membership: CSTE is the professional home for applied epidemiologists working for governmental public health agencies at the state, local, tribal, or territorial level. *Associate members* are former active members or practicing epidemiologists working in federal, military, academic, corporate or international settings. *Student members* are enrolled full-time in an undergraduate or graduate program and pursuing a degree in public health or a related field.

Member benefits include:

- Leadership opportunities, including eligibility to represent CSTE on external consultations and workgroups
- Networking and professional development opportunities
- Eligibility to author, view, and vote on position statements
- Access to resources, such as the Washington Report (containing relevant federal news from CSTE's Washington, DC, liaison) and the *Journal of Public Health Management and Practice*.
- Annual Conference registration discount

Executive Board: CSTE is governed by a ten-member Executive Board. Four members serve as officers, two serve as members-at-Large, and each of the remaining members represents one of the following areas:

- Infectious Disease
- Environmental Health / Occupational Health / Injury Control
- Surveillance / Informatics
- Chronic Diseases / Maternal & Child Health / Oral Health

Summaries from Executive Board conference calls, in-person meetings, and Annual Conference business meetings are posted in the members-only section of the website.

Steering Committees & Subcommittees: There are six [steering committees](#) led by the Executive Board. These steering committees, in turn, are divided into subcommittees, with each subcommittee led by a senior epidemiologist. To assure a manageable distribution of work, most subcommittees have co-chairs, and some also have workgroups to carry out short-term projects. All subcommittee and workgroup members must be active CSTE members.

Table 1. The six CSTE steering committees and their subcommittees.

Chronic Disease/ Maternal & Child Health/ Oral Health Steering Committee	Cross Cutting I Steering Committee	Cross Cutting II Steering Committee	Environmental Health/ Occupational Health/ Injury Steering Committee	Infectious Disease Steering Committee	Surveillance/ Informatics Steering Committee
<ul style="list-style-type: none"> •Chronic Disease •Maternal and Child Health •Oral Health 	<ul style="list-style-type: none"> •Alcohol Epidemiology •Marijuana •Mental Health •Overdose •Prescription Drug Monitoring Program •Substance Use & Mental Health 	<ul style="list-style-type: none"> •Border / International Health •Health Disparities •Epidemiology Methods •Public Health Emergency Preparedness •Public Health Law •Tribal Epidemiology •Workforce Development 	<ul style="list-style-type: none"> •Climate Change •Disaster Epidemiology •Environmental Epidemiology •Injury Epidemiology and Surveillance •Occupational Health Surveillance 	<ul style="list-style-type: none"> •Enteric Diseases •Healthcare Associated Infections •Hepatitis C •HIV •Influenza and Viral Respiratory Diseases •STDs •Vaccine-Preventable Diseases •Vector-Borne Diseases 	<ul style="list-style-type: none"> •Electronic Laboratory and Disease Reporting •Surveillance Policy •Surveillance Practice and Implementation

CSTE Strategic Plan

CSTE's strategic plan lays out the organization's strategic priorities over the next several years. Each priority is accompanied by a set of specific objectives, and these objectives are further discussed in an actionable implementation plan developed by the CSTE Executive Board and National Office staff. Every two years, CSTE reviews previous strategic plan priorities and related successes.

The primary goal of [CSTE's Strategic Plan for 2018-2020](#) is to strengthen the role of applied epidemiology to drive public health and policy actions. The plan includes three main objectives:

- Establish leading edge public health applied epidemiology.
- Develop, expand and diversify the epidemiology workforce.
- Ensure organizational effectiveness.

CSTE Portfolio

CSTE services include providing information, education, and developmental support to practicing epidemiologists and providing expertise for program and surveillance efforts.

Epidemiology Capacity Assessment (ECA): In 1995, CSTE conducted its first national epidemiology workforce assessment—a critical exercise to identify workforce needs nationwide. Two years later, the association piloted a more rigorous assessment protocol in ten states, and, in 2001, conducted its first [Epidemiology Capacity Assessment \(ECA\)](#). The ECA was the first assessment of core epidemiology capacity in state and territorial health departments, and its results served as a benchmark prior to distribution of approximately \$1 billion in annual federal funding via the state Public Health Emergency Preparedness grants begun after the 9/11 and anthrax attacks in 2001. CSTE administered additional ECAs in [2004](#), [2006](#), [2009](#), [2013](#), and [2017](#). In 2010, the ECAs were supplemented by an [epidemiology enumeration assessment](#) to document the number of epidemiologists working in state and local health departments. Using ECA data, CSTE has been able to generate individual state reports, identify trends in epidemiology workforce capacity, inform the US Congress about epidemiology workforce needs, and develop national recommendations for applied epidemiology workforce development.

CSTE has achieved a 100% response rate from all states for each ECA and relies on each State Epidemiologist to complete the ECA in timely fashion in consultation with program staff and agency leadership.

Applied Epidemiology Fellowship Program (AEF): The AEF Program is a two-year, competency-based fellowship for masters or doctoral-level graduates pursuing an applied epidemiology career. It aims to:

- Create and train a core group of public health workers
- Provide service to sponsoring agencies
- Strengthen capacity in applied epidemiology to meet workforce needs

From the program's inception in 2003 through 2017, 295 fellows have completed the program, with placements in 41 states and 18 cities/counties. Most program graduates are now practicing epidemiologists at the state or local level.

Typically host site applications are accepted each year September through October, while fellowship candidates apply October through January. Fellowships typically begin sometime between June and August.

State Reportable Conditions Assessment (SRCA): The SRCA is an annual, web-based assessment of disease reporting requirements set by various jurisdictions. Ongoing since 2007, this joint CSTE/CDC effort collects publicly available information on 1) the conditions reportable in the 50 states, Washington, DC, the US territories, and large metropolitan areas; 2) who is required to report them, and 3) the timeframes in which they should be reported.

The SRCA is intended to be a publicly available, national repository of information that can be used by public health personnel, researchers, and healthcare providers via online SRCA Query Tools developed by CSTE. SRCA data are the basis for CDC's [Morbidity and Mortality Weekly Report Annual Summaries](#).

Council to Improve Foodborne Outbreak Response (CIFOR): [CIFOR](#) is a multidisciplinary working group convened to increase collaboration across the country and across relevant areas of expertise to reduce the burden of foodborne illness in the United States. CSTE and the National Association of County and City Health Officials (NACCHO) co-chair CIFOR with support from CDC and the US Food and Drug Administration (FDA). CIFOR is most notably known for its eponymous guidelines and toolkit. The second edition of the *CIFOR Guidelines for Foodborne Disease Outbreak Response* (CIFOR Guidelines) describes the overall approach to foodborne disease outbreak response, including preparation, detection, investigation, control and follow-up. The Guidelines are targeted at the local, state and federal agencies responsible for preventing and managing foodborne disease outbreaks and describe the roles of all core responders. The CIFOR Toolkit helps users to identify the CIFOR recommendations most pertinent to their organization, to conduct a self-assessment of their outbreak detection and investigation procedures, and to implement appropriate recommendations from the Guidelines.

CSTE Funding

CSTE is funded primarily through a federal cooperative agreement with CDC, supplemented by state and territorial membership dues to support advocacy for epidemiology programs and funding channels at all levels of government. By maintaining its CSTE membership, a state or territory maintains access to important benefits:

- State-based expertise on a variety of public health topics
- Recommendations for state-based public health surveillance
- Specialized projects of mutual benefit to states and federal agencies
- Monthly all-state epidemiologist calls
- Assessments of epidemiology capacity
- Input into documents of public health importance
- Expert testimony at Congressional hearings
- Advocacy for public health practice in state health departments

State Dues Structure: Dues are tiered based on jurisdictional population size. Dues payment allows a jurisdiction to have input into CSTE policy and program decisions. Conversely, non-payment of dues during a 12-month period may result in the loss of a jurisdiction's voting privileges in policy matters, such as CSTE elections and ratification of CSTE position statements.

State or territorial dues do not include the State Epidemiologist's individual membership fee.

More information on state dues can be found on the [CSTE website](#).

The Role of the State Epidemiologist in CSTE

State Epidemiologists are the core of CSTE's membership and its Executive Board. As such, their participation in key activities is strongly encouraged.

New State Epidemiologist Orientation: In conjunction with CDC, CSTE holds an annual orientation in Atlanta for new State Epidemiologists. During the orientation, State Epidemiologists hear from CDC leaders about current CDC activities; learn about the CDC resources and programs available to support

state and territorial health departments; and have an opportunity to discuss state public health priorities and challenges. In addition, participants learn about:

- CDC field staffing programs (e.g., Public Health Associate Program, Epidemic Intelligence Service, and the Career Epidemiology Field Officer program)
- Accreditation & performance standards and resources
- Epidemiology workforce issues
- Hot topics of the day
- CDC surveillance strategy
- Collaboration with local health departments and across state lines
- CSTE National Office activities.

CSTE Annual Conference Business Meeting: All State Epidemiologists are expected to attend the business meeting at the CSTE Annual Conference.

Monthly Calls: The monthly calls provide a forum for information sharing among State Epidemiologists, City and Large Urban Epidemiologists, and relevant federal partners. Past calls have addressed everything from emerging issues of public health importance to best practices to updates on the political climate.

Regional Meetings: CSTE supports several regional epidemiology meetings each year. These mid-year meetings allow attendees to focus on topics relevant to their local area, share best practices, and improve competency in applied epidemiology.

A current list of supported regional conferences can be found on the [CSTE website](#).

CSTE Annual Conference 101

[CSTE's Annual Conference](#) is the nation's largest conference of applied epidemiologists, attracting more than 1,500 public health epidemiologists from across the US. The five-day conference is usually held in early June. State Epidemiologists are expected to attend conference sessions, network with other attendees, and attend the Business Meeting. Additionally, State Epidemiologists can discuss proposed CSTE position statements with their colleagues, prior to voting on them at the conference.

Business Meeting 101

The CSTE Business Meeting is traditionally held on a Thursday morning at the Annual Conference. Over breakfast, the President provides an overview of the state of CSTE and other Council business. Following that presentation, position statements are discussed and a vote taken. The Business Meeting has a hard stop at 12 pm to accommodate afternoon travel.

Position Statements

[CSTE position statements](#) are the culmination of a lengthy process documenting and analyzing policy issues affecting public health and can address any issue of importance to CSTE members. Position statements may take the form of general policy statements or calls-to-action, requesting that specific health conditions be placed under standardized surveillance. Position statements are submitted each spring and discussed and voted on by the CSTE membership at the Annual Conference in June. Lead

position statement authors and submitters must be active CSTE members; co-authors may be members or associate members.

Approval process (See also the CSTE Policies and Procedures Manual)

- All position statements must conform to a CSTE template and be submitted by a set deadline—13 weeks before the June Business Meeting for “ordinary process” statements.
- Prior to the Annual Conference, position statements are discussed on webinars.
- At the CSTE Annual Conference, position statements are discussed informally during round table sessions and formally during Steering Committee voting sessions. Dates and times of the Steering Committee discussions vary, and are listed in the Annual Conference agenda.
- All CSTE members are encouraged to attend the Steering Committees voting sessions, and an author for each position statement (usually the lead author) must be on-site to present his/her position statement. Following each presentation and ensuing discussion, there is a vote.
- Position statements approved by a quorum of CSTE members (at least one active member from ≥ 10 states or territories represented in any Steering Committee session) may be added to the consent calendar for a Council vote at the Thursday Business Meeting, where each state or territory is allowed one vote, and all non-controversial statements are voted upon collectively.

After approval

- Once approved, all position statements become CSTE policy and are posted on the CSTE website. State Epidemiologists are encouraged to share approved position statements with their epidemiology, surveillance, and informatics staff to ensure these stakeholders are aware of all recommended policy/surveillance changes.
- The submitting author of each position statement is responsible for tracking the position statement during the year following its adoption. By May 1 of the year following adoption, the original submitter must report back to the CSTE Executive Board on the statement’s status and impact. In addition, CSTE National Office staff will follow up with agencies that have provided input into an approved position statement.

Position Statements Summary

Position statements are result of the documentation and analysis of policy issues that affect public health and are of interest to CSTE members.

Types of Position Statements

1. Policy
2. Standardized Surveillance for Diseases or Conditions
3. Standardized Surveillance for Healthcare-Associated Diseases or Conditions through the National Healthcare Safety Network

Approval Process

1. Steering Committee voting session
2. Full Council vote (for statements approved by Steering Committee) at the Business Meeting (1 vote per state/territory).

Recognition – Pumphandle Awardees: The [CSTE Pumphandle Award](#) is bestowed annually for outstanding achievement in the field of applied epidemiology.

Address the Challenges

Challenge One: Understand the Job

- Identify political, social, and economic influences—nationally and within your jurisdiction—affecting the practice of applied epidemiology.
- Understand your agency and your unique responsibilities within it: meet with your supervisor, people you will directly supervise, and your organizational peers to learn the traditional responsibilities and expectations for your position.
- Review the agency's and unit's strategic plan. Plan to update your unit's strategic plan based on current needs and priorities.
- Identify and meet with your agency's fiscal staff to review the epidemiology unit budget, the agency budget, the governor's budgetary priorities, and the budget process.
- Review tips from experienced public health leaders for how to be successful on the job.
- Meet with human resources (HR) staff to learn how personnel policies, civil service requirements, and union bargaining units may affect your workplace.

Influences on the Practice of Applied Epidemiology

APPLIED EPIDEMIOLOGY IS INFLUENCED BY MANY FACTORS.

- Request briefings with key program managers, chief medical officers, and directors of health statistics to learn about the health status of your state and its changing demographics. Base your priorities upon appropriate data.
- Identify local influences affecting the practice of applied epidemiology.

The public health workforce is experiencing dynamic changes (Beck & Boulton, 2015; Shah & Madamala, 2015), including increased focus on accountability, massive budget and workforce cuts, the need to adapt to larger health system changes, and the opportunity to exploit new technologies (Trust for America's Health, 2013). Emerging public health topics, such as informatics, health care reform, and molecular epidemiology, require specialized skillsets involving systems thinking, change management, and working with diverse populations (Brownson et al., 2015; Kaufman et al., 2014).

EPIDEMIOLOGY CAPACITY IS LESS THAN IDEAL.

Currently, there are insufficient numbers of skilled workers, especially epidemiologists, to perform the Essential Public Health Services. For example, according to the 2017 CSTE ECA less than 40% of state health departments have substantial to full (>50%) capacity for two of the four epidemiology-focused essential services: *evaluate effectiveness, accessibility, and quality of health services* and *research for new insights and innovative solutions* (Arrazola et al., 2018). Of concern, an additional 1200 epidemiologists at a master's level or higher are needed to reach full capacity in the four EPHS, which would be a 36% increase over current levels (Arrazola et al., 2018). These findings underscore the importance of recruiting and retaining a diverse and qualified workforce.

STRATEGIES TO STAY CURRENT ON EMERGING ISSUES

- Be an active CSTE member.
- Subscribe to alerts and newsletters for relevant issues.
- Engage your staff and ask that they update you on emerging issues.
- Participate in CSTE Communities of Practice.

Understand the Agency and Your Unique Responsibilities

THE STATE EPIDEMIOLOGIST IS AN INTEGRAL PLAYER AT THE STATE AGENCY.

- Understand the organizational structure and chain of command. Know the statutory public health authorities and regulations of state and local agencies. Learn your expected duties and your statutory, regulatory, committee, and board responsibilities. Learn how the job has been defined in writing and how it relates to the health department director's (or other appointing authority's) view of the position.
- Meet with and obtain briefing documents from senior staff and division or program directors. Pay close attention to information about the breadth of the epidemiology unit and its interactions with other agency units.
- Ask for oral and written briefings on all aspects of your unit, including budgets, staffing, statutory authorities, serious issues, past or current controversies, legislative proposals, constituency support or conflicts, and relationships with local health agencies.
- If the agency is part of a larger umbrella administrative unit, meet with your peers in other agencies and with the health department director to determine how your position and unit fit into the larger picture.
- Meet with your legislative liaison to learn your role in responding to inquiries from legislators.
- Identify important deadlines for activities or documents that may be due or overdue (e.g., to the public, committees, other agencies, the health department director).
- Learn the roles of other state agencies and what they expect from public health, generally, and the epidemiology unit, in particular. Establish a close working relationship between the state public health laboratory and the epidemiology unit.
- Meet with legal counsel to learn about the process for legal representation. Obtain a copy of state statutes and rules relating to reportable diseases and other laws and regulations related to your responsibilities. Review conflict of interest and other ethics procedures.
- Obtain briefings on major controversies and outstanding legal suits pertaining to the epidemiology unit. Understand your expected role in those matters.
- Obtain a briefing on management procedures, major players, and contact information for emergency preparedness and response.
- Thank the health department director or the appointing authority and the people who recommended you for the State Epidemiologist position.

THE STATE EPIDEMIOLOGIST USUALLY SERVES AT THE PLEASURE OF THE APPOINTING AUTHORITY

In most states, the appointing authority is the health department director. In some cases, the state board of health or the head a super-agency is the appointing authority. Regardless of the administrative structure, the State Epidemiologist must make decisions, develop agendas that can gain the support of political leaders, and work with conflicting interests on major public controversies.

THE CHALLENGES OF THE POSITION OF STATE EPIDEMIOLOGIST CAN SEEM OVERWHELMING.

Although the organization and leadership of public health vary from state to state, all State Epidemiologists have wide-ranging and impressive responsibilities. You might manage a large budget, direct a large staff, be responsible for identifying and responding to health threats throughout the state, and serve as the authority for a wide array of clinical and public health issues.

To succeed in the job, you must understand the job. Certain legal or delegated responsibilities and authorities may be written in statute or state regulation. Positions on various boards and committees—ranging from immunization committees to committees that determine requirements for medical insurance coverage—may be expected and/or required. If your state has a state board of health, you might sit on the board and should understand its powers.

When your appointment is announced, epidemiology unit staff will likely prepare briefing documents. If not, ask for helpful information, such as

- General information about the units, divisions, and locations of the department; its budget; and its staff.
- Directory of staff, board of health members, and others.
- Contact information (e.g., home and cell phone numbers, pagers) of critical staff and others.
- Unit-level information such as:
 - Description of the programs
 - Background information on critical staff members
 - Budget and staffing figures
 - Current issues and problem areas
 - Strengths and weaknesses of its programs
 - Primary stakeholders and constituencies
- Detailed information about the state board of health and committees on which the State Epidemiologist serves.
- Pending, proposed or likely legislative and budget initiatives.
- Critical deadlines and schedule information.
- Emergency response information.

Travel and organizational memberships can become a political and media issue if perceived as excessive or out of line with your administration's political position. In some states, agency budgets can support organizational memberships; in others, they cannot. Although such issues seem mundane, they can become problematic if handled incorrectly. The purchasing director in your department can brief you on handling such matters.

Staff are an important source of information about the State Epidemiologist position and decisions on authority and delegation. Therefore:

- Find out what work/responsibilities have been delegated in the past and to whom.
- Determine who approves out-of-state or international travel.
- Decide whether you want to personally approve contracts and out-of-state travel requests.
- Learn whether someone can be designated to sign letters and other documents for you.

FOR A STATE EPIDEMIOLOGIST, TIME IS THE MOST PRECIOUS RESOURCE.

Learning how to optimize the use of your time is an immediate challenge. The state's executive branch may have procedures or regulations that require you personally to handle certain issues. Staff can help devise a system enabling you to obtain regular updates about various matters and to determine how much time to devote to administrative details.

Many people and organizations will vie for your time, and you want to be as accessible as possible. Set your priorities in accordance with the priorities of your agency and the most important and immediate demands and pressing deadlines. Ensure that those who need immediate access to you—for example, your director, critical staff, the state board of health chair, and other leaders—can always reach you. Schedule time to return phone calls, meet with staff, and begin working with the various epidemiology programs.

Decide whether your administrative assistant (if applicable) or other staff can schedule meetings for you, how scheduling decisions will be made, and whether you want private time reserved. Because not every meeting needs your personal attention, delegate attendance or decline some events. In the beginning, however, err on the side of attending too many meetings.

Decide how you wish to handle grants. Because a typical state epidemiology unit may have up to 40 grants annually, reviewing all of them might not be an effective use of your time. Determine whether you want to delegate oversight responsibility for grants to program heads or whether you prefer to oversee grants above a certain dollar amount.

At times staff or others may ask you to make decisions quickly and without sufficient information. Resist pressure to sign anything quickly that needs additional analysis or input.

A MAJOR PUBLIC HEALTH CRISIS IS A TOUGH TEST FOR ANY STATE EPIDEMIOLOGIST.

Emergencies come in many forms: floods, fires, hurricanes, disease outbreaks, major chemical spills, bioterrorism threats (such as anthrax incidents), etc. You cannot plan for every contingency, but you should prepare for the variety of scenarios that rely heavily on epidemiology resources and personnel:

- Review the state's documents on emergency preparedness and response for specific threats (e.g., bioterrorism, pandemic influenza, etc.).
- Learn your expected role, and the protocols for implementing control measures, in investigations of major disease outbreaks.
- Understand laws and regulations related to public health actions, such as isolation, quarantine, and orders from the health officer.
- Determine what resources are available to address a natural disaster, toxic exposure, or bioterrorism event that could require the epidemiology unit's attention.
- Consider suggestions from health officials previously affected by terrorist events (see box below).

SUGGESTIONS FOR EMERGENCY PREPAREDNESS

- Establish trusting relationships with top state law enforcement officers to avoid misunderstandings and complex chains of command.
 - Discuss chain-of-evidence procedures and other relevant crime-investigation issues.
 - Participate in your agency's emergency response trainings and exercises. Know whether your state uses the incident command structure during emergency responses or another organizational structure.
- Prepare for the possibility that the FBI, DHS, state and local law enforcement agencies, and other agencies may have their own communication challenges.
- Prepare procedures for addressing classified information.
 - Develop protocols with law enforcement for determining what information is classified and what can be made public.
 - Determine whether you can gain security clearance; initiate the process, if needed.
- Determine, before an emergency, who on your staff needs FBI security clearance.
- Plan in advance for events that may involve multiple jurisdictions and require regional input.
- Review plans for media and public communications, including contact information for toll-free public information call centers.
- Arrange for, and announce, the immediate availability of a 1-800 phone number for information.
- Capitalize on strong relationships between public health and healthcare providers.
 - Work with local public health authorities to reach out to providers.
 - Distribute fact sheets, diagnostic guides, procedural protocols, and contact information to providers.
- Identify and improve access to existing occupational health monitoring systems. Strengthen such systems, if necessary and possible.
- Recognize the emotional and mental health needs of first-responders, health department personnel, and the public.

Source: Association of State and Territorial Health Officials. (2009). First days: A guide for new state & territorial health officials. Retrieved from <http://www.astho.org/Display/AssetDisplay.aspx?id=2456>.

Strategic Planning

LEARN ABOUT YOUR AGENCY'S STRATEGIC PLAN.

- Review the agency's strategic plan, the epidemiology unit's plans and policies, and other planning documents.

Strategic planning is designed to help an organization respond effectively to evolving situations. According to one expert in the field, "It is a disciplined effort to produce fundamental decisions and actions shaping the nature and direction of an organization's (or other entity's) activities within legal bounds" (Bryson, 1988, p. 74). Such decisions typically concern the organization's mandates, mission, financing, management or organizational design, and product or service level and mix.

The strategic planning process helps organizations to (Bryson, 1988, p. 78):

- Think strategically.
- Clarify future direction.
- Make today's decisions considering their future consequences.
- Develop a coherent and defensible basis for decision-making.
- Exercise maximum discretion in the areas under organizational control.
- Solve major organizational problems.
- Improve performance.
- Deal effectively with rapidly changing circumstances.
- Build teamwork and expertise.

Seven key factors contribute to successful strategic plan implementation: 1) a process sponsor(s) in a position of power to legitimize the process, 2) a champion to push the process along, 3) a strategic planning team, 4) an expectation that there will be disruptions and delays, 5) a willingness to be flexible about what constitutes a strategic plan, 6) an ability to pull information and people together at key points for important discussions and decisions, and 7) a willingness to construct and consider arguments geared to very different evaluative criteria (Bryson, 1988, p. 88).

Budgets

UNDERSTAND THE AGENCY BUDGET, THE HEALTH DEPARTMENT DIRECTOR'S BUDGETARY PRIORITIES, AND THE BUDGET PROCESS.

- Meet with the appropriate agency financial officer. Learn about sources of discretionary and nondiscretionary funds and current budget initiatives.
- Meet with the program managers you supervise to review their budgets and funding sources.
- Learn the budget process and the fiscal calendar.
- Review policies and procedures with the fiscal staff responsible for your unit.
- Expect to represent the epidemiology unit in budget discussions.
- Discuss the unit's budget with the state health agency budget director.
- Understand the state fiscal situation as it relates to surpluses or shortfalls.
- Understand the impact and extent of federal funding to the unit, including projected grant funding for each epidemiology program in the next fiscal year.
- Learn about extramural funding that may be available or is being used in unit programs.

THE BUDGET PROCESS IS CONTINUOUS AND ALWAYS IMPORTANT.

You will need to learn the intricacies of your agency's budget process, which is driven by both policy and politics. Stewarding potential initiatives through the health department director's budget office and the governor's budget office demonstrates leadership and involves staff, stakeholders, and the public. Moreover, government spending is subject to many limitations. State and federal statutes and regulations, the governor's approval, and the support of the legislature will all affect your fiscal priorities. In some states, the board of health also plays a role in the budget process.

The state health agency has at least three distinct revenue sources: state dollars, federal dollars, and dollars earned through fees, permits, and licenses. Surprisingly, federal funds may represent the biggest share of the annual budget. This funding comes from CDC, the Health Resources and Services Administration, US Department of Agriculture, US Food and Drug Administration, US Environmental Protection Agency, and other federal sources. Some states require legislative approval to spend federal funds or hire federally-funded staff. Others place the authority for spending federal dollars in the executive branch.

Most states require a balanced budget, often constitutionally. The governor balances the state's priorities and urgent needs through the budget process. Public health competes with transportation, education, Medicaid, disability and behavioral health, tax relief, and other areas for state dollars. The governor's flexibility is limited by big-ticket items, such as public and higher education, welfare and state Medicaid matches, state employee pay and benefits, transportation, and facility construction and maintenance.

As State Epidemiologist, you most likely will forward your budget requests to the office of the health department director for consideration. If possible, discuss your requests and new initiatives in advance with the state health director or his/her staff. These requests are scrutinized to determine whether they should be forwarded to the governor's budget office or, in some states, directly to the legislative budget office.

Obtaining new state resources is never easy. Obtaining support from the governor or the governor's budget office for new initiatives requires compelling data and cogent stories. Constituencies can help obtain political support. However, support from single-issue interest groups or other advocacy groups must not appear to unduly pressure the health department director or the governor.

GRANT AND EXTRAMURAL FUNDING ARE EXTREMELY IMPORTANT FOR EPIDEMIOLOGY PROGRAMS.

According to CSTE's 2013 ECA, more than 75% of state epidemiology funding comes from federal sources. Therefore, you will need to pay attention to state budget processes and to closely follow federal funding opportunities. CSTE provides input to national congressional leaders about epidemiology funding needs and priorities. Because CDC funding may constitute more than half of all support for several state epidemiology programs, close attention to the federal funding renewal process will help you plan personnel and program priorities for the upcoming fiscal year.

Most states receive some funding for epidemiology programs from nongovernment organizations (NGOs) committed to public health. Nongovernmental grants may alleviate budget shortfalls or help an epidemiology program initiate a new project. Despite the voluminous paperwork involved in grant application and follow-up, such funding may be essential to sustain many state epidemiology programs.

Be aware, though, that NGO grants awarded to your program may be difficult to obtain in full. Some states accept grant funding into the state treasury for disbursement to the programs. However, in state budget crises, the money may never be made available to the epidemiology program. Alternately, an intermediary public health NGO may be used to receive and distribute grant funds to epidemiology programs. This too has drawbacks, with as much as 40% of the award charged to NGO administrative overhead. Carefully review historical access to the grant funds your unit has been awarded so you can make informed decisions on the best method to accept extramural dollars.

Tips to Be Successful on the Job

SUCCESS IS IN THE EYE OF THE BEHOLDER.

- Determine what the agency defines as success.
- Identify what success means to you as the State Epidemiologist.

It is important to define what success means to you within your agency. Success can be described in two ways: building an effective team and organizational accomplishments. Invariably, the two are related.

As you develop a team, consider the following:

- Formal professional development for existing team members
- Formal leadership succession planning
- Recruiting and retaining new talent to address skill gaps
- Enhancing team cohesion through team-building experiences

Organizational accomplishments may include:

- Changes to laws, regulations, and departmental policies that support evidence-based public health interventions
- Program development through a new or enhanced organizational focus
- New or enhanced formal relationships with key partners, such as health care organizations, community organizations, other government agencies, and the private sector
- Dissemination of useful public health information, possibly including a monthly state public health newsletter, annual fact sheets on key public health issues, and timely reports and updates on the health department website
- Successful response to a public health emergency

Critical factors influencing the success of public health agency leaders can include:

- Individual factors
 - Personal attributes
 - Skills and competencies
 - Prior experience
- Individual on-the-job behaviors
 - Building and maintaining relationships
 - “Managing up” (i.e., knowing the best way to communicate with your bosses)
 - Building trust inside and outside the agency
 - Communicating vision, strategies, and priorities
 - Having a systems perspective
 - Proactive leadership amidst a crisis
 - Using data and evidence to shape policy development
- Organizational structures and operations
 - Lines of supervisory authority
 - Organizational placement
 - Internal communications
- Organizational culture
 - Internal policies on who has access to senior leadership
 - Use of inclusive approaches to establish or clarify vision and goals, provide progress reports, and share feedback with the executive team
 - Use of systems to promote evidence-based decision making
 - Use of best practices to improve agency performance, develop staff, and create a “learning organization” with cultural sensitivity and a commitment to diversity and community engagement

Ten Things I Wish Someone Had Told Me When I Became a Health Officer

1. Get and disseminate good data.
2. Tackle more difficult initiatives first.
3. Find, fight and win winnable battles.
4. Hire and support great people.
5. Manage communicable and environmental threats effectively.
6. Do not cede the clinical realm.
7. Learn and manage the budget cycle.
8. Manage the context.
9. Never surprise your boss.
10. Follow core principles.

Source: Frieden, T.R. (2016). Ten things I wish someone had told me when I became a health officer. American Journal of Public Health, 106(7).

Challenge Two: Represent Your Agency

- Establish a strong relationship with the health department director. Learn his/her expectations for whether, or how, you will communicate with him/her.
- Meet with your health department or state agency press officer. Review the press office protocols and procedures you must follow when contacted by the news media.
- Develop and disseminate your communications strategy and process, in conjunction with your press office.
- Learn the “hot” issues that may affect the epidemiology unit by talking with your staff, your supervisor, and the press officer.

Communications Process & Strategy

DEVELOP A COMMUNICATIONS STRATEGY AND PROCESS.

- Meet with the health department communications director and/or press officer to understand policies, procedures, and expectations relating to media communications (e.g., policies regarding release of public information and confidentiality).
- Determine whether you are authorized to speak to the media for the health department on specific issues.
- Determine the chain of command for media response in emergencies. Most state emergency preparedness and response plans include a communications plan.
- Communicate how your office will handle documents and letters requiring a signature.
- Explain to staff how you want to include the communications offices for the health department director and the governor in epidemiology unit communications.

PUBLIC HEALTH IS ABOUT COMMUNICATION.

The state health department’s image is closely linked to your ability to communicate both happy announcements and troubling news. Your duties may include representing your agency to the media and providing information to the public. Your communications procedures and strategy will be influenced by the preferences of the health department director’s office, the communication skills of agency staff, and the role of the communications director. Some State Epidemiologists prefer to handle most media interactions; others are required to defer all media requests to the health department administration. As one of your earliest tasks, determine who speaks for the agency and under what circumstances. Guidance from a skilled communications director with media experience can be priceless. Training in electronic media interviews is a worthwhile investment.

Effective and accurate communication is vital during a crisis (Covello, 2003). Seek out training in risk and crisis communications. Discuss the procedures and responsibilities of communicating in a crisis with the health department director’s staff. Find out if messages have been developed for communication in specific types of crises, such as bioterrorism events.

Err on the conservative side when approached by the media about a developing health issue, and refer requests to the health department communications director. If appropriate, the health department director’s staff will invite you to make a statement.

As State Epidemiologist, you may make many presentations. Be well prepared so you represent the agency well. Ask your staff to help prepare audiovisual materials. File presentations using an organized and accessible system so you can update and reuse the best materials.

You will be expected to sign many documents. Communicate to your staff the formats, styles, and approaches you prefer, so the documents are consistent. In addition, use routing, logging, and approval processes to ensure that appropriate managers have seen and approved documents before you sign them. These processes take time to establish but will help avoid embarrassments, delays, and serious mistakes.

Hot Issues

IDENTIFY AND UNDERSTAND HOT ISSUES.

- Hold discussions with your staff, the agency medical director, the public health laboratory director, local epidemiologists, the press officer, and constituencies to identify and learn about, the most controversial issues that you might face.
- Identify programs, staff, or constituents that require “special consideration” because of support or opposition they might provide on various issues.

HIGH-PROFILE ISSUES ARE THE TOUGHEST CHALLENGES STATE EPIDEMIOLOGISTS FACE.

Public health regularly involves high-profile issues that frequently become front-page headlines and evening news topics. The public has legitimate concerns about public health issues that could affect their families, their businesses, or themselves. Bioterrorism, outbreaks in nursing homes, infant mortality, and workplace exposures are among continually evolving and potentially “hot” issues. Discussions with policy makers, staff, and interested citizens will highlight the pressure points of the moment.

As a new State Epidemiologist, you’ll need to understand these issues, know what your agency is doing about them, be informed about options and best practices, and know the position taken by the health department director or other appointing officials. Your briefings by agency managers should include a review of the most sensitive issues and current strategies to address them. You can then determine whether the agency is on top of the issues; identify legislative or budgetary strategies related to the issues; learn the positions of primary stakeholders and interest groups; and find out whether there are gaps between stakeholder expectations and the agency’s authority to act.

Develop a plan to identify and manage hot issues. Risk communication and media strategies are critical to successfully representing the agency response to crises or serious public health problems. Communication and information sharing with the health department director and communications director are crucial during stressful times.

LEARN ABOUT GROUPS THAT REQUIRE SPECIAL CONSIDERATION.

It is important to be aware of programs, staff, or constituents with stronger-than-expected support or opposition to a particular public health initiative, so you can respond appropriately. For example, the governor or a legislator may favor requiring human papilloma virus vaccination for adolescent girls as a high school entry requirement because of unusually staunch support from special interest groups. Another example is a program that receives additional resources and publicity because of advocacy or

monetary support from celebrities, philanthropists or other influential individuals. Conversely, other programs—such as state clean needle exchange programs for persons with intravenous drug addiction or programs to import medication from less expensive international manufacturers—may come under fire because of special interest opposition. Recognize these special considerations, and avoid political misunderstanding.

Challenge Three: Engage with your Stakeholders

- Develop relationships with your staff by setting up group meetings. Share your agenda and priorities with them.
- Meet with the state board of health and local health district authorities. Share your agenda and priorities with them.
- Learn your role vis-à-vis key federal agencies, including the CDC, the Department of Homeland Security (DHS), and the Federal Bureau of Investigation (FBI).
- Establish solid relationships with the heads of the state departments and programs with which you will work (e.g., the state public health laboratory, legal department, statistics program, informatics program, information technology program, etc.) Plan for regular interaction with the heads of these departments, such as regularly scheduled meetings, and determine optimal methods of communication for impromptu discussions and updates.

Relationships Within the State Health Agency

ENGAGING LEADERSHIP AND YOUR STAFF IS VITAL TO YOUR SUCCESS.

- Learn to navigate the reporting relationships among the health department director's staff.
- Become familiar with the governor's legislative agenda and the health department director's primary initiatives, including any based on executive orders.
- Understand the preferred communication modes of the health department director, governor, chief-of-staff, press officer, and other critical staff.
- Learn the process preferred by the health department director's office for responding to the media and to legislators.
- Determine whether you can attend legislative sessions uninvited.
- Recognize that your unit staff will align with a leader who shows an interest in them. Establish yourself as their champion, and voice their achievements outside the unit.
- Become acquainted with the staff as quickly as possible. Schedule staff meetings, and attend program or unit staff meetings. Seek opportunities to communicate your vision for the unit and your delight about being part of their team.
- Connect with people in key departmental positions, including chief medical officer, communications director, legislative liaison, budget director, legal counsel, state veterinarian, state laboratory director and head of the state vital statistics bureau.
- Form your unit management team. Together, develop your mutual vision and goals.
- Review existing staffing procedures to understand your ability to select staff.
- Assess the strength of current staff. One source of information will be other agencies' impressions of the staff. Note which staff members are respected by their colleagues and constituencies.
- Solicit advice from the human resources or administrative director about procedures for selection, promotion, union relationships, and civil service policies and practices. Emphasize your commitment to upholding a policy of nondiscrimination.
- Invigorate your unit and staff using a cross-cutting project.

ESTABLISH STRONG RELATIONSHIPS WITH THE HEALTH DEPARTMENT DIRECTOR AND HIS/HER STAFF.

As public health work becomes more cross-disciplinary to address distal causes of disease, interaction with colleagues in agriculture, environmental protection, housing, transportation, and behavioral health becomes more important. However, your primary professional relationships are likely to be with colleagues within the health department—especially the department director and his/her staff—and within your unit.

Note: If you do not report to the health department director, you can modify these recommendations as necessary.

FOR MOST STATE EPIDEMIOLOGISTS, THE HEALTH DEPARTMENT DIRECTOR IS THE BOSS.

A health department director usually is appointed by the governor and thus understands that the actions of the health department and its senior staff contribute to public opinion about the governor's performance. Health department directors do not like surprises and do not tolerate well any embarrassment to their administration due to the actions of their key officials—such as the State Epidemiologist—or their departmental units.

State Epidemiologists often come to their positions after many years of high-level work in the public health arena. They have developed their priorities and their understanding of issues important to the health of the state. However, as a unit director, you are now a member of a team that has both political objectives and broad-based goals for the state. And your personal goals might not match the health department director's goals.

In other words, your agenda must be based on the political agenda of the governor and the goals of the health department director—a reality that might be a challenge. A key to your success as State Epidemiologist is an understanding of the values and strategies that motivate the health department director on key public health issues. Sometimes he/she can be advised to embrace new public health agendas. At times, public health issues will be subservient to defined gubernatorial goals for other public issues, such as transportation or education. Although you may have greater opportunity for candor behind closed doors, once the health department director takes a final position, you are expected to support that position.

To better understand the health department director's goals and intentions, become familiar with the governor's campaign promises and major initiatives. Your interview for the State Epidemiologist job might have given you clues about the administration's expectations for public health issues. The governor's policy office might be able to give you a list of campaign promises, recent initiatives, and executive orders.

The best, and perhaps only, successful way to move the public health agenda forward is to first understand how to effectively communicate ideas and information to the health department director and his/her staff. Some health department directors will welcome in-depth discussions with senior staff; others prefer group interaction during senior staff meetings or information filtered through trusted staff. Keep the boss informed and learn how information flows. Your professional knowledge can help the health department director or other appointing authority embrace new priorities and provide policy development expertise to the administration.

PERCEPTIONS OF YOUR UNIT ARE IMPORTANT TO YOUR SUCCESS OR FAILURE.

Public health is blessed with—and plagued by—high-profile issues. Ebola, hazardous waste, bioterrorism, and unsafe drinking water are examples of issues that frighten the public and generate headlines. Other issues, such as family planning, gun violence, and industry regulation, lend themselves to strong social opinions and special interest activism. To move your agency past potential public relations crises, it is necessary to have regular communication about emerging issues or problems, along with reasonable solutions.

Develop a rapport with recipients of critical information within your agency (e.g., health department director, chief and deputy chiefs of staff, policy director, legislative liaison, health policy director, communications director, legal counsel, budget director, etc.). Understanding how best to communicate ideas, problems, and issues to them will help you perform your job effectively.

The media's portrayal of the health department's programs and issues shapes the public images of the governor, the health department director, your agency, and you as State Epidemiologist. A vital first part of your communications strategy is to know when and how to involve the communications office and staff of the health department director and governor. For example, the health department director may prefer to share the spotlight when positive news stories are highlighted and to help strategize behind-the-scenes when difficult issues arise. For some tough issues, don't be surprised if the epidemiology unit must take the lead, providing distance from (and cover for) the health department director. If you and the health department communications director have a good relationship with the governor's communications director, both offices can collaborate on the best media strategy.

In an emergency, be ready to cancel existing plans. The state and your boss will want you on the job to reassure residents about emerging health issues and threats. Make every effort to maintain and increase the health department director's confidence in your ability to handle high-profile issues in a way that supports, or at least does not denigrate, the administration.

Attendance at legislative sessions that address major concerns to your unit may be in your best interest. Determine whether uninvited attendance to these sessions is acceptable and, if so, the standard etiquette for visitors. For pending bills involving epidemiology programs, work with the governor's legislative liaison for health-related issues or, if permitted, directly with legislative staff. Cast epidemiology as a nonpartisan, science-based resource for the state. Make epidemiology compelling and relevant to nonscientists.

IN MANY CASES, ONLY ONE STATE EPIDEMIOLOGIST, BUT HUNDREDS OF STATE HEALTH EMPLOYEES, WORK IN THE EPIDEMIOLOGY UNIT.

Most staff in place when you arrive assume they still will be in place when your replacement arrives. Although some respect and legitimacy come with the position and title, *State Epidemiologist*, more respect and confidence come when you empower your staff through common purpose. Working toward and accomplishing positive public health change are powerful motivators when staff members know the boss supports them as individuals and as a unit. Thus, as State Epidemiologist, you need to quickly connect with staff to establish credibility, gain their confidence, and provide the foundation on which to build direction and promote progress. You're more likely to accomplish your agenda when you and your staff direct your energies, enthusiasm, and ideas to the same goals.

Unifying themes can unite a complicated and fragmented agenda. State health agencies are diverse, with many categorical and programmatic silos that separate staff, and staff will appreciate seeing the bigger picture. Charting progress on the website and celebrating successes will energize both staff and constituencies.

Clearly communicate to your staff your expectations, your appreciation of and respect for them, your desire to touch base frequently and honestly, and your desire to know them. Techniques for reaching hundreds of employees include sending all-agency e-mails, scheduling staff meetings, inviting staff to “breakfasts with the boss” and brown bag lunches, asking to speak at divisional staff meetings, attending retirement events and other rites of passage, visiting branch offices, and otherwise showing respect for the work of the individual employees.

Review the agency’s practices regarding employee recognition. You can put your stamp on employee relations within the division with individual recognition for a “job well done.”

Heads of the epidemiology programs can be invaluable resources. They usually are experienced managers, familiar with the state system, and experts in their programs. Developing comfortable, trusting relationships with program heads to whom you can delegate responsibility will make your job more manageable. Decide whom you want in your senior-level staff meetings. Encourage program heads to speak freely and provide feedback on issues and strategies.

A vital but sometimes underrated position is that of the administrative assistant or secretary. Fill this critical position thoughtfully. The administrative assistant needs to be organized, discreet, knowledgeable about major players, loyal, and pleasant during tricky situations. He or she will help you be efficient, maintain a manageable schedule, inform you of the agency’s currents and undercurrents, and represent you to the world with every phone call answered and visitor greeted.

In choosing a cross-cutting project, review successful and innovative lessons. An excellent reference is the “Ten Lessons in Innovations” chapter from Harvard University’s Kennedy School of Government, which is found in *Innovations in American Government, 1986-1996* and provides specific examples of outstanding programs. The book [can be purchased online or as an eBook at this address](#).

State Board of Health

ESTABLISH YOURSELF WITH THE STATE BOARD OF HEALTH.

- Understand the role of the state board of health and your relationship to the board.
- Introduce yourself to all state board members, if appropriate.
- Understand the appointment process for board members, and learn when their terms expire.
- Suggest possible board members when a vacancy arises.

Boards of health differ from state to state. In some states, the boards of health have rule-making authority, are appointed by the governor, and have the task of appointing high-level public health officials. Other states do not have a board of health at all.

The state board of health is an important stakeholder in public health practice. Discuss with the health department director the appropriateness of interacting with the chair of the board and other members. If appropriate, plan to attend all board meetings.

Understanding the relationship between the State Epidemiologist and the state board of health—and their respective roles—is important. To better understand your relationship, consider the following:

- Find out whether you are expected to present updates on epidemiologic or other significant issues at board meetings.
- Identify the key issues facing the board.
- Determine the relationship of the state board of health to the health department director or other appointing authority.
- Respond to queries from the board on issues within the boundary of your responsibilities.
- Determine the knowledge base of board members so you can adjust your presentation style. Some boards comprise medical providers, public health officials, and others with a health background, whereas other boards comprise members of the general public or state legislature. In some states, medical societies, hospital associations, or legislative committees fill some roles usually held by state boards of health.

Local Health Districts

ESTABLISH YOURSELF WITH THE LOCAL HEALTH DISTRICTS.

- Review state statutes and regulations regarding legal authorities for public health action. Understand the balance of legal responsibility between state and local public health agencies.
- Meet with your local health liaison, or staff members who fill the role, to learn the strengths and weaknesses of the relationship between the local and state health departments.
- Meet with leaders of organizations representing local epidemiologists. Familiarize yourself with their issues and concerns.
- Communicate your intention to visit local health agencies, and schedule visits to those with the most pressing issues first.

LOCAL PUBLIC HEALTH AGENCIES CAN BE YOUR BIGGEST FANS OR GREATEST DETRACTORS.

In certain states, public health authority lies with the state health department, and in others, legal authority for public health interventions (e.g., health officer's orders, isolation, and quarantine) falls to local health departments or districts. A thorough understanding of the authorities in your jurisdiction is necessary for planning and working effectively with local agencies.

Local agency staff and directors have relationships throughout the state, especially with county commissioners and state legislators. The entire state public health system works better if teamwork and local-state relationships are strong and based on mutual trust and respect. Local and state health agencies share major goals and visions for the community; building on these shared aspirations strengthens cooperative relationships. In many states, local health departments carry out the mission of the state health agency. Mutual sources of support and interest include local health organizations (such as the local public health director's association), the state public health association, and state

associations of epidemiologists. In some states, local partners include community health centers or district hospitals.

Local agency directors and epidemiologists report to their own political administrations, and their political pressures may differ from yours. Respect their political pressures. Include local directors in problem-solving activities that affect their agencies.

Tensions can arise, however, when state and local agencies compete for the same public health resources. Excellent communication with local public health leaders and county commissioner associations will help to avoid public conflict that negatively affects all the players.

Many states have one or more major urban areas. Metro-area health agencies' roles and their relationships with the state health agency may differ from those of their suburban or rural neighbors. Often urban health departments are involved in direct care, perhaps even running hospitals and clinics. Directors of these agencies appreciate knowing you understand their responsibilities and wish to work with them.

Meeting with all local agencies during your first few months may not be feasible. However, meeting with local agencies is important when their epidemiology programs heavily rely on state resources or where diseases and prevention efforts are concentrated. These visits can include other key staff members. For example, the infectious disease program head can accompany you to an area challenged by outbreaks of waterborne diseases. If appropriate, inclusion of the state public health laboratory director may mitigate a local district's concern about laboratory issues.

Healthcare Providers and Systems

HEALTHCARE PROVIDERS AND SYSTEMS AIM TO IMPROVE THE HEALTH OF THE COMMUNITY.

- Familiarize yourself with the state's healthcare systems and organizations and their relationships with public health.

Understanding your state's healthcare systems and providers is crucial for preventing and managing disease. The state medical society, the state hospital association, accountable care organizations, and the statewide organization of infection control practitioners can all be considered stakeholders and potential assets to the State Epidemiologist. In addition, owing to the ongoing epidemic of opioid-related morbidity and mortality, the state poison control center is an important public health stakeholder and partner. Cross-functional coordination is essential for improving the quality, sustainability, and accessibility of public health services.

Federal Agencies

BE PREPARED TO INTERACT WITH A MULTITUDE OF AGENCIES, PARTICULARLY IN AN EMERGENCY.

- Learn what and how information is reported to CDC.
- Develop lists of contacts at CDC (including emergency and after-hours contacts) and other federal agencies whose staff members serve as field experts in particular subject areas.
- Learn your expected role vis-à-vis other state and federal authorities in a bioterrorist incident, large-scale outbreak, natural disaster, or other potentially harmful incident.

INTERACTIONS WITH FEDERAL AGENCIES CAN DETERMINE THE SUCCESS OR FAILURE OF EPIDEMIOLOGY PROGRAMS.

CDC collects and reports health-related data for the nation. Each State Epidemiologist is ultimately responsible for the accuracy, integrity, and completeness of the data reported to CDC from his/her state. Funding is prioritized based on the data received from the state, not only for infectious diseases, but also for cross-cutting health-related agendas. Inaccurate, incomplete, or delayed reports may result in inadequate allocation of federal resources for preventing or controlling adverse health events in your state.

If you need expert consultation that is not available in your state, you can rely on the resources and subject-matter experts at CDC, FDA, the US Department of Agriculture, and other federal agencies. Consolidate contact information for federal agencies so it is immediately accessible during an emergency.

If you believe an investigation requires federal support from the Epidemic Intelligence Service, FDA, National Institute for Occupational Safety and Health, or other agency, remember that the decision to invite federal participation may require approval from the health department director and possibly the governor. Determine the approving authority before inviting any federal help.

In the event of a bioterrorist event, epidemic, or other large-scale human health risk, your responsibilities are set forth in the state emergency response plan. Determine and acquire in advance the security clearances you need. Meet the FBI contact for bioterrorism events, the health department liaison to the state police, and points of contact for emergency preparedness at all military facilities within your state. Discuss the FBI and its role in bioterrorism incidents with your supervisor and contact other State Epidemiologists if you need further advice and information.

Challenge Four: Identify Assets and Resources

- Identify, communicate with, and learn about primary constituencies and their issues.
- Become active in local and national public health and professional organizations.

Interest Groups

IDENTIFY AND COMMUNICATE WITH PRIMARY CONSTITUENCIES.

- Learn the expectations of the health department director's office regarding coordinated agency efforts.
- Learn about issues of primary constituencies and how they fit with the health department director's priorities. These constituencies include advocacy and industry groups, the state hospital association, the local chapter of the Infectious Disease Society of America, the state medical society, and professional and other nonprofit organizations.
- Introduce yourself to the heads of the schools of public health and public health academic programs in the state.
- Join the state public health association and other professional organizations, as appropriate.

PUBLIC HEALTH HAS MANY ALLIES AND MANY STAKEHOLDERS.

Strategic alliances with constituencies, organizations, and colleagues can help you meet your goals. For every issue, you will find people with mutual interests and concerns. Nurturing and mobilizing relationships require time and energy. Although you cannot possibly meet with the leaders of all these groups during your first few months, visiting them on their territory, at their offices or meetings, is a gracious and appreciated gesture of interest and sincerity. Important allies may include leaders of the state hospital association, community health centers, and the association representing community health centers.

Every state has one or more public health associations. Membership in these associations (by you and other staff) expresses support for your state's public health workers. It also allows your agency to influence the association's policies.

In sum, you want to be viewed as part of the broader state public health team.

Academic Health Departments

PARTNERSHIPS WITH ACADEMIC INSTITUTIONS CAN BE FRUITFUL.

- Identify existing academic partnerships and relationships.
- Consider how to collaborate with academic institutions to address health department needs.

Public health academic leaders can be important allies as well. A call or visit to the dean of the school of public health and other public health faculty is a good beginning to a mutually beneficial relationship. Schools of public health; public health programs; and colleges of medicine, nursing, and allied health professions are excellent resources for the epidemiology unit. Many public health epidemiologists receive adjunct or clinical appointments in graduate programs. Faculty members can provide special

research expertise and consultation. Continuing education programs can enhance your staff members' skills. Potential opportunities for joint ventures are many.

An academic health department (AHD) is a type of formalized partnership between health departments and academic institutions. AHD partnerships can enhance public health education and training, research, and services, benefiting students, the health department, academic institutions, and the community alike.

Collaborating with local universities provides the opportunity for your staff to supervise practicum experiences and to provide students with experiential learning opportunities. Ultimately, collaboration with academic institutions may improve your workforce pipeline and could provide a pool of workers to expand surge capacity when needed (e.g. by assisting with outbreak investigation activities, such as patient interviewing).

To find out if there is an established AHD in your area, review this listing:

http://www.pfh.org/programs/AHDLC/Pages/Academic_Health_Departments.aspx

Building Your Network

BECOME ACTIVE IN NATIONAL ISSUES.

- Maintain agency involvement in discussions of national public health issues through memberships in organizations such as the ASTHO and CSTE.
- Participate in national public health organizations (e.g., the American Public Health Association) and professional organizations related to your specialties and interests.
- Provide expertise on critical issues, and contribute to policy development by volunteering for committees convened by national public health and professional organizations, such as CSTE and federal agencies.
- Get to know your neighboring states by contacting your colleagues in those states and establishing communications practices (e.g., receiving their Health Alerts).

UNDERSTANDING NATIONAL ISSUES IS VITAL TO DIRECTING AND MANAGING STATE EPIDEMIOLOGY INITIATIVES.

Most state health programs are funded with federal dollars. Therefore, changes in federal laws, regulations, and policy priorities often significantly affect how programs are run.

CSTE provides a network of peers and a national presence for State Epidemiologists. CSTE members and staff testify at congressional hearings and participate on committees of the CDC and the Health Resources and Services Administration. You can help shape the national public health agenda by becoming active in CSTE by, for example, participating on committees, attending the CSTE Annual Conference, and serving in leadership positions. Relationships with fellow CSTE members are some of the most important peer connections you can make. You'll learn best practices, find colleagues with similar professional challenges, and develop lifelong relationships.

In the national arena, become involved as an expert panelist for your field of expertise. Consider accepting invitations to give presentations in your subject area at national meetings. Serve as an

advisory committee member to CDC on matters pertaining to your epidemiology program strengths. Your staff also can gain information and influence by working with the many ASTHO affiliates, such as the Association of Maternal & Child Health Programs, Association of State and Territorial Health Officials, and the Association of Public Health Laboratories.

Training and Continuing Education

ONGOING TRAINING AND EDUCATION IS IMPORTANT TO ENSURE A COMPETENT WORKFORCE.

- Determine if your agency requires professional development and if there is an existing structure for professional growth among applied epidemiologists.
- Identify strategies to foster continuing education among your staff.

CSTE offers many opportunities for training and continuing education. For example, the Council hosts meetings throughout the year, as well as subcommittee calls—an excellent way to participate for those with travel restrictions. See the “Become Familiar with CSTE” section at the beginning of this manual or [CSTE’s website](#) for more details.

To improve the practice of epidemiology within the public health system and to provide a structure for epidemiology training programs and on-the-job training, CSTE and CDC developed the Applied Epidemiology Competencies (AECs). The AECs can be used as a foundation to create professional development plans for staff. More details about the AECs can be found at http://www.cste.org/members/member_engagement/groups.aspx?code=CSTECDAEC.

Partnering with local universities, public health training centers, or public health institutes can also provide local opportunities for continuing education. A list of public health institutes is available at: <https://nnphi.org/network-engagement/network-engagement-directory/>, and the list of regional public health training centers is accessible at: <https://nnphi.org/phln/network-centers-sites/>

For a more detailed description of the work of the Public Health Training Centers, review this supplement from *Pedagogy in Health Promotion*: http://journals.sagepub.com/toc/phpa/3/1_suppl

Become a Leader in Applied Epidemiology

- Familiarize yourself with leadership theory and best practices.
- Meet with your HR lead to discuss opportunities and challenges for recruiting and retaining epidemiologists.
- Meet with your staff members to develop individual professional development plans.
- In consultation with agency leadership, develop a succession plan to address future workforce needs.

Leadership Theory and Practice

LEADERSHIP IS ROOTED IN THEORY AND PRACTICE.

- Reflect on your own leadership style and how you can adapt to become a transformational leader.

Leadership is both an art and a science (Ledlow & Coppola, 2014). Fundamentally, the leadership *art* encompasses relationships, interpersonal skills, timing and tempo, power, and intuition. While the *science* of leadership comprises technical acumen, skills and principles, along with expertise in the business of public health. Leadership is holistic. As much as possible, it should involve directing the people, the structure, and the processes of the organization laterally or collaboratively, not from the top down

More detailed information on leadership theories, strategies, and practice is contained in the Ledlow and Coppola textbook (2014).

Transformational leaders exhibit charisma, intellectual stimulation, individualized consideration, and inspirational motivation (Ledlow & Coppola, 2014). The table, “Traits of Transformational Leaders” lists examples of best practices for successful leaders.

Traits of Transformational Leaders	
Transformational Leadership Constructs	Examples
Charisma	The leader influences followers by arousing strong emotions and identification with the leader.
Intellectual stimulation	The leader increases followers’ awareness of problems and influences followers to view problems from a new perspective.
Individualized consideration	The leader provides support, encouragement, and developmental experiences for followers.
Inspirational motivation	The leader communicates to appealing vision using symbols to focus subordinate effort and to model appropriate behavior (role modeling).

Adopted from Ledlow & Coppola, 2014.

Successful leadership also involves empowering one’s staff. Effective leaders can use these empowerment strategies to enable their staff to succeed:

- Communicate responsibilities to subordinates.
- Give them authority equal to the responsibility assigned.
- Set standards of excellence.
- Provide the needed training.
- Give knowledge and information.
- Provide feedback on performance.
- Recognize achievements.
- Trust.
- Give permission to fail.
- Treat others with dignity and respect.

Leader vs. Manager

LEADERSHIP AND MANAGEMENT SKILLS ARE BOTH NEEDED TO BE EFFECTIVE.

- Reflect on your role as the State Epidemiologist, and determine how you exhibit leadership and management skills.

Leaders and managers have different perspectives about the organization and their personal role in it, and must work together to accomplish the organization’s mission and vision. Importantly, an individual can be both a manager and a leader.

A manager tends to be more reactive and more closely aligned with organizational policies, standards, guidelines, and established processes. A leader tends to be more proactive and more involved in developing the organizational culture and strategic systems necessary to maximize the organization’s efficiency and effectiveness within the external environment. These differences are further detailed in the table, “Comparison of Leadership and Management.”

Comparison of Leadership and Management	
Leadership	Management
Longer Time Horizon	Shorter Time Horizon
Vision then Mission Oriented	Mission Oriented
Organizational Validity (Are we doing the right things?) – Environmental Scanning and Intuition	Organizational Reliability (Are we doing things correctly and consistently?) Compliance with Rules and Policies and Rule Development
Does the organization have the correct components (People, Resources, Expertise) to meet future and current needs?	How can current components work best now?
Developing and redefining organizational culture to meet external environmental needs	Maintaining organizational climate to ensure performance
Timing and tempo of initiatives and projects	Scheduling of initiatives and projects
Adopted from Ledlow & Coppola, 2014.	

Succession Planning

IT IS IMPORTANT TO PLAN FOR AGENCY LEADERSHIP DEVELOPMENT.

- Determine if the agency has an existing succession plan or what mechanisms are in place to address future staffing needs.
- Consider developing a succession plan for the epidemiology department to maintain institutional knowledge.

Succession planning is an ongoing, systematic process for selecting new leaders to replace those that are leaving an organization. It is consistently cited by state and local governments as a top workforce issue. Developing a succession plan will help your agency address future workforce needs, and can also help the agency address issues with retention (Darnell & Campbell, 2015).

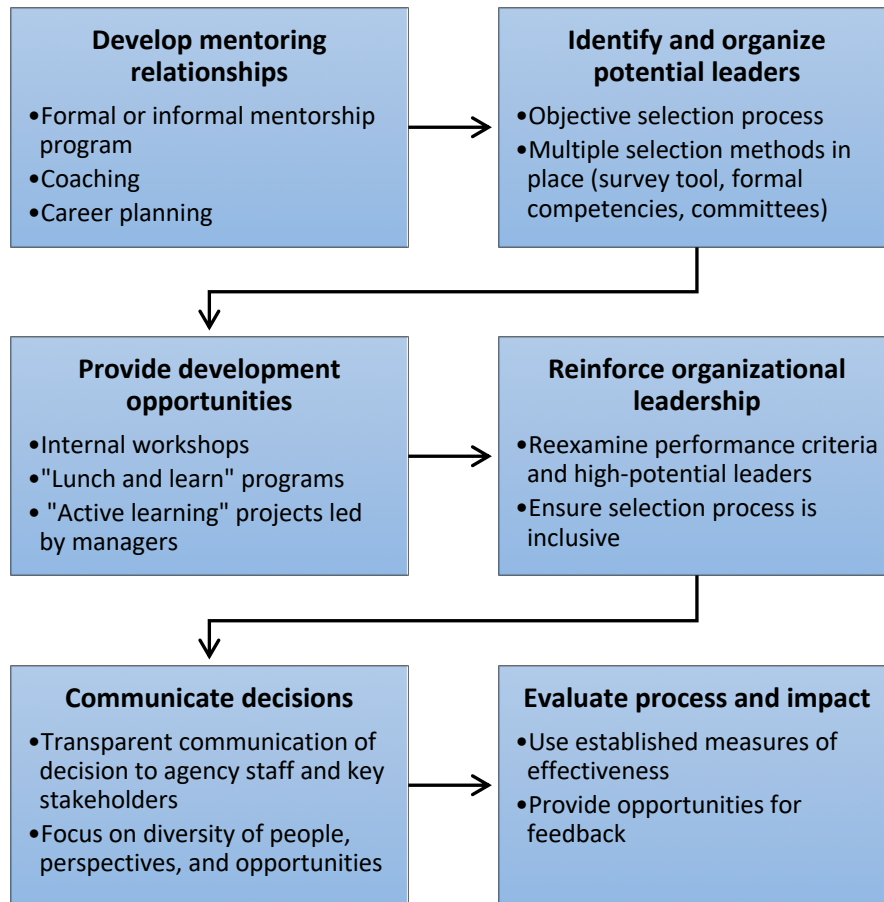
The succession planning process should be strategic, cyclical, simple and flexible. Your HR department may help identify best practices and problem-solving strategies for leadership development and retention (Barnett & Davis, 2008).

Leadership development is essential to succession planning (Groves, 2007). Those stepping into leadership roles need skills, experience and training to fulfill your agency's vision or strategic plan. Your agency can foster these attributes through mentorship programming, coaching, and career planning, carried out by manager-mentors. This type of programming allows for identification of emerging leaders within the organization. It is imperative that this identification is objective and inclusive, so formal selection criteria should be established (Groves, 2007).

Once potential leaders are identified, your agency should provide ample development opportunities—including business and management training programs in public health, as well as identification of mentors who transfer agency knowledge—so these emerging leaders can continue to grow professionally (Wiesman, Baker, & Edward, 2013). Revisit performance criteria regularly to assess potential leaders throughout the development process (Groves, 2007).

Once a succession decision is made it should be communicated transparently to the agency and to any outside stakeholders (Sharma, Chrisman, & Chua, 2003). If your succession planning process is objective and prioritizes diversity, it can result in employee satisfaction, motivation, and retention (Groves, 2007). Evaluate your succession planning process at regular intervals to garner feedback and identify new or persisting workforce needs.

The following model can serve as a guide for developing or modifying your agency's succession plan.



Adapted from Barnett & Davis, 2008.

Establishing a departmental succession plan will strengthen the agency's current and future workforce and ensure leadership continuity. If possible, connect the department's succession plan to the agency's strategic plan. Remember that succession planning is an ongoing process; as the needs of the department change, the plan should be adapted accordingly. Make sure to include HR and other agency leadership in this process and to communicate the plan to employees. More information can be found in [ASTHO's State Health Agency Succession Planning Guide](#).

Maintain a Strong Workforce

DESCRIBE YOUR INCOMING AND CURRENT WORKFORCE NEEDS.

- Meet with HR staff to learn the recruitment and hiring processes at the agency.
- Identify your staffing needs, including needs for contractors, temporary employees, interns, and full-time employees.
- Identify any challenges to recruiting competent and qualified staff.
- Meet with staff to understand why they choose to work at the agency.
- Identify strategies to improve retention among applied epidemiology staff.

A qualified and competent applied epidemiology workforce is necessary to fulfill the Essential Public Health Services. To maintain the workforce, leadership must consider recruitment and retention.

Recruitment

RECRUITMENT IS KEY TO A QUALIFIED WORKFORCE.

Recruitment is the process of hiring a qualified and competent workforce. Selecting qualified candidates who share the organization’s values and culture can yield short-term, intermediate, and long-term benefits for both employees and employers. As discussed in the textbox below, recruitment challenges may require creative solutions, such as partnering with universities to develop a pipeline of new professionals, advertising widely to attract qualified candidates, offering perks to compensate for low state salaries, or bringing on fellows when circumstances prevent the hiring of permanent staff.

Strategies to Address Recruitment Challenges	
Challenges to Recruitment	Strategies to Improve Recruitment
Identifying (or creating) a pipeline of qualified and competent epidemiologists	Consider establishing partnerships with local universities. Partnerships can be formal (e.g., designating the health agency an academic health department) or informal (e.g., supervising student practicum experiences).
Finding the right candidate	There are many places to post hiring announcements, including in the publications and websites of local and national partners, as well as the CSTE career center.
Providing a competitive offer	Historically, state governments have offered their employees premium benefit plans, but some of these plans are being pared back due to budget cuts and rising expenses. Other forms of compensation may include paying relocation expenses, offering clinical hours so employees may maintain licensure, use of flexible work schedules, or loan forgiveness.
Hiring within the constraints of the organizational structure (e.g. hiring restrictions, length of hiring process)	If organizational constraints prevent you from hiring a permanent employee, consider alternate mechanisms to address staffing issues; for example, utilizing temporary employees, contractors, or CDC fellows or assignees.

As shown in the table below, when permanent new staff cannot be hired, there are at least three options to find temporary epidemiology trainees or staff through CSTE or CDC.

Programs That Temporarily Assign Epidemiology Trainees or Staff to State Health Departments		
Program Title	Description	Contact Information
CSTE Applied Epidemiology Fellowship (AEF)	Two-year competency-based fellowship for masters or doctoral-level graduates interested in an applied epidemiology career	CSTE AEF Coordinator 770-458-3811 aef@cste.org
CDC Epidemic Intelligence Service (EIS)	Two-year post graduate experience and on-the-job training for health professionals interested in applied epidemiology	Epidemic Intelligence Service 404-498-6110 EIS@cdc.gov
CDC Public Health Associate Program (PHAP)	Two-year workforce development program for bachelors or masters level graduates who want on-the-job public health experience	Public Health Associate Program 404-498-0030 phap@cdc.gov

Retention

RETENTION IS KEY FOR MAINTAINING A SKILLED WORKFORCE.

Retention of public health employees is of utmost concern in a time when the public health workforce is shrinking due to (1) the retirement of an entire cohort of long-time government employees, and (2) the departure of younger professionals for other reasons. In planning for an exiting workforce, it is important to develop recruitment strategies based on retention goals.

The following table lists prominent retention challenges and strategies.

Strategies to Address Retention Challenges	
Challenges to Retention	Strategies to Improve Retention
<ul style="list-style-type: none"> • Poor job satisfaction • Poor pay satisfaction • Few opportunities for advancement • Inadequate job security • Burnout/Overwhelming workload 	<ul style="list-style-type: none"> • Offer a flexible work schedule • Provide opportunities for professional development through conference attendance or paid enrollment in training courses • Facilitate experiential learning within the agency • Recognize accomplishments and celebrate successes • Incorporate task diversity within the job assignment • Establish a formalized career path • Identify opportunities for advancement that don't require a complete change in skillset (senior scientist vs. manager) • Ensure that opportunities for advancement and compensation are equitably available • Ensure adequate supervisory support

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