



Council of State and Territorial Epidemiologists

CSTE APPLIED EPIDEMIOLOGY FELLOWSHIP HANDBOOK

**CLASS XV
2017-2019**



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Table of Contents

1. Policies and Procedures

About CSTE	4
Terms of Agreement	4
Mentor and Host Health Agency	5
Applied Epidemiology Core Competencies	6
Plan of Action	8
Progress Reports and Biannual Evaluations.....	9
Final Report and Evaluation.....	10
Career Progression	10
Certification	10
E-mail Communication	11
Fellowship Stipend	11
Relocation Stipend.....	11
Health Insurance	12
CSTE Annual Conference and Additional Conference Information.....	13
Professional Development Allowance	13
Travel and Expense Reimbursement Information.....	14
Fellowship Completion and Withdraw/Termination.....	15
Liability Disclaimer	15
Security Clearance Procedures	15
Publication Acknowledgement	16
Ethical Standards and Behavior	16
Employment at a Host Health Agency During Fellowship	16
Grievance Process	17
Leave	17
Income Taxes	18
Important Contacts	19

2. Mentor Information

Mentoring the CDC/CSTE Applied Epidemiology Fellowship	20
The Role of the Mentor	20
Responsibilities of the Mentor	21
Replacement of Mentor (s).....	22
Overseeing, Reviewing and Evaluating Fellowship Assignment Work	22
Checklist of Mentor Responsibilities	23

3. Other Administrative Information

Business Cards	23
CSTE 2017 Payroll Schedule.....	25

Appendices:

A. Relocation Reimbursement Expense Policy	27
B. Example List of Fellow Projects and Major Projects	29
C. Sample Plan of Action	34
D. Sample of Quarterly Progress Report	45

1. Policies and Procedures

A. About the Council of State and Territorial Epidemiologists

The Council of State and Territorial Epidemiologists (CSTE) is a professional association of public health epidemiologists in states and territories working together to detect, prevent, and control conditions of public health significance. CSTE works to establish more effective relationships among state and other health agencies, and to provide technical advice and assistance to the Association of State and Territorial Health Officials (ASTHO) and federal public health agencies such as the Centers for Disease Control and Prevention (CDC). CSTE has more than 1800 members with surveillance and epidemiology expertise in a broad range of areas including: communicable diseases, immunizations, environmental health, chronic diseases, occupational health, injury prevention and control, and maternal and child health.

Epidemiologists working in public health agencies are responsible for monitoring trends in health and health problems, and devising prevention programs that enable the entire community to be healthy. Public health assessment includes surveillance, epidemiologic studies, program evaluation, and performance measurement. Surveillance is the foundation for developing a public health response to any disease threat – infectious, chronic, environmental, and occupational or injury. Surveillance is useful in (1) determining which segments of the population are at highest risk; (2) identifying changes in disease incidence rates; (3) determining modes of transmission; and (4) planning and evaluating disease prevention and control programs.

CSTE is governed by a ten-member Executive Board, which includes four officers, three Members-at Large, and three who represent infectious disease; maternal and child health, chronic disease, and oral health; and injury, environmental health, and occupational health. The CSTE Executive Board conducts regular meetings to provide a forum at which federal and state programs can collaborate on topics of mutual interest.

B. Terms of Agreement

The CSTE Applied Epidemiology Fellow agrees to perform services for a two-year term beginning on the date that the fellow reports to his/her designated host health agency. After 12 months, CSTE will evaluate the appointment based on the availability of federal funds, satisfactory progress of the fellow and mentor performance. After a favorable evaluation, the CSTE National Office will recommend a renewal of the agreement for the remaining 12 months of the fellowship.

The fellow agrees to attend and be compensated for the orientation session in Atlanta, GA, August 28 – September 1, 2017. The fellowship orientation is a week-long training that helps

prepare fellows for achieving their competencies. Additionally, the fellows meet with subject matter experts and network with current and former fellows.

The fellow agree to initiate their assignments at the designated host health agency on or before August 14, 2017. Fellows will work directly with their host site to select a start date that is feasible for both the site and the fellow. This date should be communicated to CSTE via email no later than June 10, 2017. All fellows should notify CSTE as soon as possible should they be unable to report to the host health agency by August 14, 2017. Appointments beginning after that date require approval from CSTE.

C. Mentor and Host Health Agency

Each CSTE Applied Epidemiology Fellow is assigned to a designated host health agency and two mentors. Host health agencies are approved by CSTE through a separate application process. Each agency has demonstrated the capacity to provide the CSTE Applied Epidemiology Fellow with technical training, research opportunities and practical experience in the application of epidemiologic methods.

The mentors will oversee the training, research and field activities of the fellow, ensure that the fellow is familiar with relevant techniques in a given specialty, and encourage the overall professional development of the fellow. Mentors agree to assist the fellow in developing relationship with key staff in order to complete outbreak and emergency preparedness exercises. Host health agencies and mentors are also strongly encouraged to provide financial support and opportunities for the fellow to participate in other public health activities that will expand the fellow's scope and depth of epidemiologic knowledge and/or expand his/her job-related capabilities.

Should fellows be required to participate in or attend meetings on behalf of the host health agency, the agency should assume responsibility for any expenses incurred by the fellow. This includes travel expenses and costs associated with developing materials, etc. Fellows are expected to be integrated into the host site and treated like an entry level permanent employee. If employee programs are offered to regular permanent employees, host sites are expected to provide comparable programs and financial support for the fellow.

D. Applied Epidemiology Core Competencies

Epidemiologic Methods

1. Design or implement a new, or revise an existing surveillance system
2. Evaluate a surveillance system and know the limitations of surveillance data
3. Play a functional role and participate in emergency preparedness and response (training, tabletop exercises, surge capacity, etc.)
4. Interpret surveillance data
5. Design an epidemiologic study to address a health problem
6. Demonstrate an understanding of study design and the advantages and limitations of each type
7. Design a questionnaire or other data collection tool to address a health problem
8. Collect health data from appropriate sources (e.g. case interviews, medical records, vital statistics records, laboratory reports, or pathology reports)
9. Create a database for a health data set
10. Use statistical software to analyze and characterize epidemiologic data
11. Interpret findings from epidemiologic studies, including recognition of the limitations of the data and potential sources of bias and/or confounding
12. Recommend control measures, prevention programs, or other public health interventions based on epidemiologic findings

Communication

1. Write a field investigation report resulting from participation in an outbreak investigation or a time-sensitive field investigation
2. Write a surveillance report
3. Understand the basic process for preparing a manuscript for publication*
4. Make an oral presentation using appropriate media
5. Present data graphically and know how to use graphic software
6. Understand the basics of health risk communication and communicate epidemiologic findings in a manner easily understood by lay audiences
7. Masters-level Fellows: present at a national or regional meeting, publish a technical report, or prepare a manuscript for publication in a peer-reviewed journal
8. Doctoral-level fellows: prepare a manuscript for publication in a peer reviewed journal

Public Health Practice, Policy and Legal Issues

1. Understand the basics of public health law
2. Understand the Health Insurance Portability and Accountability Act of 1996 (HIPPA)*
3. Distinguish between public health research and public health practice*
4. Understand policies for the protection of human subjects in research and the role of an Institutional Review Board (IRB)*
5. Know the essential public health functions*
6. Understand the roles of local, state, and federal public health agencies*
7. Appreciate the diversity of how epidemiology is used in different program areas
8. Understand and demonstrate cultural sensitivity and its relevance to public health practice

Optional Experiences

1. Provide epidemiologic input into an assessment of a local public health priority or issue
2. Fellow to work with another AEF fellow or other public health trainee to complete a similar project and provide support to each other during the project phase
3. Fellow to complete a visit to a lab or a different type of STLT agency than his/her placement; a fellow may also seek to complete an in-person hands-on experience (up to 5 days) in a different area than where he or she works to assist with a short term project or assignment
4. Fellows to complete a report, presentation, brief, etc. related to one of the following activities: (1) Demonstrate knowledge of non-ID data sources and work on a project around this source; (2) Assist a non-ID department with a grant writing opportunity

* Indicates Core Competencies addressed in the fellowship orientation curriculum or in webinar format hosted by CSTE.

E. Plan of Action

Upon arrival at the host health agency, the fellow and mentors will develop a mutually agreed upon plan outlining the course of study, training, and research to be taken during the fellowship assignment to achieve designated core competencies. By the end of the third month of the fellowship, the fellow and mentors should formalize a “Plan of Action” that will outline how the fellow will complete the major required core activities and address competencies.

The purpose of the Plan of Action is to provide a written understanding between the fellow and his/her mentors. It serves as a guideline and agreement about the expectations and opportunities of the fellowship experience. The Plan of Action is also a tool to monitor progress during the fellowship.

Fellows should upload the Plan of Action, with mentor signatures, to the Fellowship Database no later than ninety days after fellowship start date. The Plan of Action will be reviewed and approved by CSTE. The Fellowship Program staff will further discuss the plan with the fellow and the mentors *if necessary*.

Once the Plan of Action is approved by CSTE, the fellow will transfer the information into the Quarterly Report Template. If projects change or added, the fellow will adjust them on his or her quarterly report.

With the support of mentors, the following projects should be identified:

1. Surveillance activity – one or two projects.
2. Surveillance system to be evaluated. Because fellows are encouraged to present evaluation projects at the CSTE Annual Conference, the surveillance system evaluation should be among the first activities the fellow undertakes.
3. Role in preparedness and response.
4. Major project – should encompass a data analysis component and the project should have a timeline included.
5. Additional projects – fellows should work with their mentors and other staff to determine other available short-term projects to help achieve their competencies and refine their skills.
6. National, state or regional meeting(s) to be attended (in addition to the annual CSTE meetings).
7. Fellow Progress Table – the competency table should be completed to help the fellow and mentors identify and address gaps in learning experience. CSTE uses the table to determine fellow completion of the program.

F. Progress Reports and Biannual Evaluations

Fellows agree to submit **quarterly progress reports** for the duration of the fellowship assignment. The quarterly progress reports will be uploaded to the CSTE Fellowship Database every three months. The progress reports describe activities completed during the reporting period. Reports also contain an overview of activities and accomplishments to date according to the original Plan of Action, as well as any changes in the plan. Copies of any publications, abstracts, or posters completed during that quarter should be sent directly to the Workforce and Fellowship Coordinator via email. **Quarterly progress reports should be uploaded to the CSTE Fellowship Database with original signatures (not electronic signatures).**

Additionally, mentors are expected to complete a **biannual evaluation** that evaluates the fellow's performance and outlines progress toward meeting the required core activities. Mentors are expected to have a formal meeting with the fellow to review the evaluation, provide additional feedback and encourage further growth. Original signatures from the fellow and mentors are required on the final document. Biannual evaluation forms should be uploaded to the CSTE Fellowship Database with the corresponding Quarterly Progress Report. Please use the evaluation of your performance as a tool to strengthen and expand your epidemiology skills.

EXAMPLE Reporting Schedule:

Start Date:	June 1, 2017
Plan of Action Due Date:	September 1, 2017
6 Month Quarterly Report & Evaluation:	December 1, 2017
9 Month Report:	March 1, 2018
12 Month Report & Evaluation:	June 1, 2018
15 Month Report:	September 1, 2018
18 Month Report & Evaluation:	December 1, 2018
21 Month Report:	March 1, 2019
Final Report & Evaluation:	Due 2 weeks prior to final date of fellowship ~2019.

Fellows are advised to keep signed copies of all paperwork.

CSTE reserves the right to suspend the fellow's stipend in the event of excessive delay of progress report or evaluation submission.

G. Final Report and Evaluation

Fellows and their mentors are required to submit a final report and evaluation during the last month of the fellowship. The final report should indicate that the fellow has completed all of the required activities. In addition, the report should indicate the following:

- A brief summary of how each of the required activities was completed.
- The fellow's perspective on whether or not the fellowship achieved its training objectives.
- An evaluation of the fellow by his/her mentors.
- Ways that the fellowship could be improved (comments from both fellow and mentors).
- The fellow's future career plans.
- Contact information for the fellow after completion of the fellowship.

The final report and evaluation should be uploaded to the CSTE Fellowship Database no later than two weeks before completion of the fellowship.

H. Career Progression

CSTE intends to monitor the outcome of the Applied Epidemiology Fellowship program through regular contact with each program graduate. Fellow alumni should expect CSTE staff to contact them annually for information about their employment status, career goals, and other pertinent information. Please inform CSTE of any changes in your contact information.

I. Certification

A certificate will be awarded to a fellow at the end of the two-year fellowship, provided they demonstrate the following:

- Completed all of the required core activities.
- Submitted their final report and evaluation to CSTE.
- Performed satisfactorily during the fellowship according to the mentors.

The certificates will be issued and provided by CSTE, but will be cosigned by CSTE and mentors.

J. E-mail Communications

All fellows must be accessible via e-mail during their assignment. The host health agency will provide each fellow with access to a computer and an individual e-mail address. Fellows should provide their e-mail address to CSTE as soon as possible. CSTE expects fellows to use professional language when communicating via email and to follow their host site's communication policy for signature lines and out of office messages.

K. Fellowship Stipend

CSTE agrees to compensate each fellow in the form of a stipend, the amount of which is listed on the fellowship appointment agreement. Stipends follow U.S. Health and Human Services Public Health Service (USPHS) guidelines and the government's GS-rating scale. Stipends will not be considered salaries and, therefore, no taxes will be withheld from them. Each fellow is responsible for ensuring that appropriate taxes are paid on the stipend received.

Payment will be distributed to the fellow on a biweekly basis from CSTE. The stipend payments will be managed by CSTE. CSTE requires fellows to use direct deposit for receipt of their stipend and once enrolled CSTE will provide each fellow with a log-in and password to access to his or her pay stubs online. Should a fellow need to change his or her direct deposit, the fellow should alert CSTE immediately and complete an updated form with documentation of the change. Please note that changes may take up to two pay cycles to process.

L. Relocation Stipend

CSTE provides a relocation stipend of up to \$1000 to assist with defraying the cost of the fellow's move for the fellowship. CSTE is required to follow OMB Circular A-122.42 regarding relocation costs. The specifics of the relocation circular are included in Appendix A.

To be eligible for relocation expenses, a fellow must meet one of the following:

1. The costs of transportation of the employee, members of his/her immediate family and his/her household and personal effects to the new location.
2. The costs of finding a new home, such as advance trips by fellow and spouses to locate living quarters and temporary lodging during the transition period, up to maximum period of 30 days, including advance trip time.

The following rules apply to reimbursements:

1. CSTE defines a household as a legal spouse and/or dependent children.

2. CSTE fellows must complete their move within a reasonable time period of their start date. Expenses incurred for up to 12 weeks after the start date can be reimbursed.
3. CSTE fellows are responsible for planning and making arrangements for his or her own move.
4. CSTE is not responsible for damage to any property owned by the employee during the move.

M. Health Insurance

Medical insurance coverage is required for all fellows. The medical insurance must be established by the fellow's start date, and the fellow must retain coverage throughout his or her fellowship assignment. CSTE will help defray the costs of health insurance for each fellow up to \$370/month (\$4,400/year). CSTE can only reimburse the cost of the fellow, and does not provide support for the spouse and/or dependent children. These funds are to be used only for medical and dental insurance (vision is not covered). In extenuating circumstances, CSTE may supplement plans that exceed the \$4,400/year limit. However, there is no guarantee that additional funds will be secured each year and requests will be evaluated on a case by case basis.

Each fellow is responsible for identifying a health plan in his or her state and is encouraged to pursue the best coverage available within the annual health insurance allowance. Fellows may also choose to remain on a plan with his or her parents or spouse throughout the duration of the fellowship. CSTE will work with the fellow to determine the cost of his or her coverage based upon documentation provided by the fellow. Individual health insurance must be in place by the first day the fellow reports to the host health agency.

Fellows are expected to complete a CSTE Expense Reimbursement form on a monthly or quarterly basis for health insurance costs. Failing to complete reimbursements forms in a timely manner may result in non-reimbursement of insurance benefit. The insurance reimbursements will begin with the first month that the fellow reports to the host agency and continuing through the end of the month in which the fellow terminates the program. CSTE is not responsible in ensuring payment has been made to the insurance provider. Upon receipt of a completed reimbursement request by the fellow, CSTE will provide reimbursement to the fellow (not the insurance provider) within 30 days.

N. CSTE Annual Conference and Additional Conference Information

Fellows are required to attend the CSTE Annual Conference each year of their fellowship (2018 and 2019). Fellows are **not** expected to use their professional development allowance to attend the conference. The dates for the 2018 conference are June 10-June 14, 2018. Dates for the 2019 conference are not yet available. Each fellow will receive instructions for travel arrangements and conference registration.

Fellows are expected to submit an abstract for the CSTE Annual Conference based upon their fellowship related projects. Acceptance of an abstract is not guaranteed. 1st year fellows will submit an abstract for the CSTE Annual Conference for the evaluation of a surveillance system project or another significant project they have completed. 2nd year fellows can submit an abstract for any other project. Fellows are strongly encouraged to submit abstracts to additional professional conferences they plan to attend (see Section O).

O. Professional Development and Subject Area Funds Allowance

As a benefit of the fellowship, **CSTE has allotted \$970 per year to defray professional development expenses.** These funds are to be used for the purpose of travel to meetings or conferences, attending short-term training programs, purchasing of fellowship-work related books, or attendance of classes intended to aid in fellowship-work related projects. An example of an inappropriate use of funds is to pay for poster expenses, computer or A/V hardware, software, trainings not related to epidemiology/biostatistics, commuting, parking or work-related expenses, travel to local and in-state meetings, and other general administrative expenses. The host state agency should be responsible for covering these expenses.

The professional development funds must be used for activities that fall within the fellow's Plan of Action. CSTE also strongly encourages host health agencies to provide funds for fellow travel and training. CSTE communicates with all primary and secondary mentors, encouraging the health department to share the responsibility of supporting fellows to attend conferences, meetings, and reimbursement for in-state travel. CSTE cannot guarantee that additional funding by the host health agency will be available to the fellow.

Based upon yearly budgets, CSTE also provides \$1000 for fellows to attend a subject area conference. This funding can only be used for expenses and travel support to **one or more subject area conferences**. Fellows can request to use a portion of their professional development fees in combination with their subject area fees if their subject area conference expenditures are greater than \$1000. Professional development and/or subject area funds for year 1 must be used by the first year anniversary of the fellow's start date. Professional development funds for year 2 must be used between the one year mark and at least 3 months before the last day of the fellow's assignment. This is a precaution to help the fellow use his or her funding prior to the end of the assignment. CSTE is only able to reimburse the cost of fellow's attendance to meetings/conferences during the period described above.

Funds Guidelines:

- Professional Development and Subject Area funds do not roll over and must be spent within the year period (based upon each fellow's individual start date)
- Requests made during year 2 must be purchased prior to fellow's end date. Travel must be completed before the fellow's last day at their host site.
- Requests should be made using the CSTE online ticket portal
- Sufficient funds must be available in the fellow's professional development allowance account
- Professional development funds cannot be used for international travel
- Service fees for travel made through American Express will **NOT** be deducted from your professional development funds

P. Travel and Expense Reimbursement Information

- CSTE sponsored travel requires preauthorization from CSTE. Please complete the appropriate request form (professional development, conference request, etc.) for authorization. These forms will be sent to you via email or can be located by logging into the CSTE Travel Ticket System.
- CSTE has **one** Expense Reimbursement Form. It will be used for travel-related expenses, relocation, insurance, etc. Expense reimbursement forms must be completed, signed by hand, and submitted to CSTE within **30 days** of expense occurrence by logging into the CSTE Travel Ticket System.
- For travel-related expenses, the expense reimbursement form must itemize per diem, lodging, and other costs by date of travel, and be signed (no digital signatures) by the fellow. Original receipts for any claimed expense of \$50.99 or more must accompany the form, along with flight itinerary/boarding passes.
- All fellow-related travel is arranged through the CSTE Travel Coordinator. The form to arrange travel can be accessed by logging into the CSTE Travel Ticket System. Your CSTE Fellowship Coordinator must have a flight approval listed in the CSTE Fellowship Database before you can request to book a flight.
- If approved, CSTE will support transportation, registration, lodging, and per diem for the meeting up to the maximum dollar remaining in the fellow's professional development allowance account.
- All CSTE fellows are expected to follow CSTE's travel policy while traveling. If you have questions about this policy, please notify CSTE.

Q. Graduation or Withdrawal/Termination

A Fellow will have successfully completed the program once all competencies have been completed and the Fellow has participated in the program for 60% of the fellowship period. Any extended leave absences (Section X) are not counted in this determination.

CSTE reserves the right to terminate the fellowship assignment agreement upon authorization by the CSTE Fellowship Advisory Committee in response to unacceptable conduct, disciplinary problems, or performance-based actions by the fellow. A written request, accompanied by documentation sufficient to justify termination action, must be submitted to CSTE for review and consideration by the Advisory Committee. CSTE may also terminate this agreement if the fellow fails to comply with any of the terms specified in this agreement. Stipend and other allowances will be disbursed through the last day worked by the fellow.

In the event the fellow wishes to voluntarily withdraw from the assignment at any time, he or she must provide 30 days notice and written notification to both CSTE and the host health agency. CSTE may terminate the fellowship assignment in the event that grant support cannot be obtained and provided. CSTE will inform the parties involved and provide 30 days notice.

R. Liability Disclaimer

Neither CDC, SAMHSA, CSTE, ASPPH, the host health agency, nor persons acting on their behalf will be responsible for:

- Any alleged or actual liability, cost or expense incurred as a result of personal injury to or death of persons, including the fellow, or damage to or destruction of property, or for any other loss, or damage, or injury of any kind whatsoever; except where such death, injury, loss, or damage is the result of willful negligence or intentional misconduct of an officer, agent, or employee of CSTE, SAMHSA, CDC, ASPPH, or the host health agency.
- Any claims, losses, or expenses or damages, including, but not limited to, bodily injury, death, or property damage caused by negligence or misconduct of the fellow.

To the greatest extent permitted by law, Mentor, on behalf of the host health agency, hereby indemnifies and holds harmless CSTE and its officers, employees, Fellows, representatives and their successors and assigns from and against any and all damages, suits, claims, obligations, costs and expenses (including reasonable attorneys' fees) which may arise by reason of (i) any act or failure or omission to act by Mentor or the host health agency or (ii) any breach of the representations or obligations imposed by this Agreement by the Mentor or host health agency. This paragraph shall survive the termination of this Agreement.

S. Security Clearance Procedures

All fellows must comply with the security, safety, and personnel requirements established by their host health agency. Fellows should contact their host mentor and/or facilitator to discuss these procedures, as this may affect their start date with the host health agency.

All fellows must be trained in HIPAA health information security before accessing patient data. It is the fellows responsibility to ask the host health agency for this training before working with any health data that is linked to identifying personal information.

T. Publication Acknowledgement

Copies of all papers published as a result of the fellow's appointment (including those published after the assignment has ended) must be sent to the Fellowship Program Coordinator at CSTE. All published reports, journal articles, or professional presentations that rely on the work conducted during participation in the fellowship should carry an acknowledgement such as the following:

"This study/report was supported in part by an appointment to the Applied Epidemiology Fellowship Program administered by the Council of State and Territorial Epidemiologists (CSTE) and funded by the Centers for Disease Control and Prevention (CDC) Cooperative Agreement Number 1U38OT000143-05."

U. Ethical Standards and Behavior

Fellows are expected to conduct research and day-to-day epidemiologic investigations, data analysis, and information synthesis according to the highest scientific and ethical standards. Fellows must comply with all applicable laws, regulations, and policies regarding privacy protection, human research subjects, use of laboratory animals (if applicable), and safety. Fellows are to follow all rules and regulations that apply to host health agency personnel (safety, breaks, security access, etc.).

V. Employment at Host Health Agency during the Fellowship

Fellows are expected to complete the entire two-year fellowship to which they have been appointed. In accepting a CSTE Applied Epidemiology Fellow, the host health agency agrees to support the unique educational and training opportunities afforded to a fellow by the program. The CSTE Applied Epidemiology Fellow will perform services beginning on the date that the fellow reports to his/her designated host health agency. After 12 months, CSTE will evaluate the appointment based on the availability of federal funds, satisfactory progress of the fellow and mentor performance. After a favorable evaluation, the CSTE National Office will recommend the renewal of a contract for the remaining 12 months of the fellowship.

Host health agencies may extend an offer to a fellow for employment only after the one year mark and all the competencies have been met for the fellowship. If the fellow has not completed two years, CSTE will only provide consent if all required activities have been achieved or an agreement has been made to satisfy the competency requirements. CSTE expects all fellows to complete requisite activities and competencies. If an opportunity for employment arises before the fellow has completed the full two years.

W. Grievance Process

Fellow Grievance: In the event that a fellow has a grievance with the conduct or quality of the program, an official complaint must be submitted in writing to the CSTE Workforce and Fellowship Coordinator. It is expected that the fellow will have discussed the issue with his or her mentor and health agency director prior to submitting any written complaint. CSTE will attempt to facilitate resolution of the issue within two weeks of receipt of the official complaint. If no resolution is made, the CSTE Fellowship Advisory Committee will take up the issue.

Host Health Agency Grievance: If the host health agency has concerns about the actions or attitude of the designated fellow, or is unable to meet training requirements, written communication should be sent directly to the CSTE Workforce and Fellowship Coordinator, for mediation within two weeks. If no solution is reached within that period, the CSTE Fellowship Advisory Committee will then be invited to assist. All communications of this nature are to be filed in writing at CSTE and identified as a formal grievance. The parties involved will keep all communications in confidence.

X. Leave

The fellow agrees to report to the worksite in accordance with the regular workweek schedule, holiday schedule, and inclement weather policies as established by the host health agency. Fellows are not to be away from their assignment for extended periods of time. CSTE reserves the right to suspend the stipend payment accordingly if it deems necessary, as well as terminate this agreement in the event of excessive absenteeism on the part of the fellow.

Fellows are to be granted the same amount of vacation and/or sick leave that a first year health department employee receives. Fellows are not required to account to CSTE for their time off (except leave over 2 weeks). However, fellows must receive approval from his/her mentor for any absences. Fellows must comply with a mentor's request for time accountability.

In compliance with the Family and Medical Leave Act of 1993, up to twelve weeks leave may be offered to any fellow who needs to take an extended leave of absence due to injury, pregnancy, paternity leave, adoption, or illness. Upon request from the host agency, the fellow will be offered six (6) weeks of time off where the fellow will be receiving 60% of the full stipend amount. If host agency's policy requires, the fellow may be required to utilize vacation and sick time accrued from time worked at the host agency before receiving the reduced stipend. If further leave time is required after the six weeks reduced stipend and host agency's vacation and sick time have been used, the fellow will not receive any portion of the stipend for the remainder of the leave (up to six weeks). The other provisions of the fellowship will not be affected by the leave of absence (e.g. health insurance reimbursement support, professional development, etc). This position is consistent with the Family and Medical Leave Act followed in states where fellows are assigned and integrated into the host site environment and expected to follow the administrative guidelines and leave policies.

Y. Income Taxes

The Internal Revenue Service (IRS) has determined that individuals who participate in the Applied Epidemiology Fellowship Program are considered “Fellows” (versus employees) for income tax purposes, due to the specific characteristics of the assignment. Therefore, CSTE assumes no responsibility for federal, state, and local tax withholding from stipend payments. Although subject to some of the same policies and procedures, Applied Epidemiology Fellows are not considered employees of CSTE, CDC, ASPH, SAMHSA or the host health agency. **CSTE assumes no tax liability and will not submit a Form 1099 at the end of the year during the fellow’s training, but will provide a summary of earnings for each calendar year. Fellows should seek individual tax advice as necessary from qualified professionals.**

The Internal Revenue Code, Section 117, applies to the tax treatment of all scholarships and fellowships. Under that section, non-degree candidates are required to report, as gross income, all stipends and any monies paid on their behalf for course tuition and fees required for attendance. CSTE stipends are not considered salaries.

Z. Important CSTE Contacts

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2. Mentor Information

A. Mentoring a CSTE Applied Epidemiology Fellow

The goal of the CSTE Applied Epidemiology Fellowship program is to attract and prepare public health epidemiologists for careers with state and local health departments. The two-year program recruits and trains qualified candidates to support public health initiatives and provide opportunities for neophyte epidemiologists to expand their skills to a level where they function as competent epidemiologists with little or no supervision. Upon completion of the fellowship, graduates will be prepared to conduct day-to-day epidemiological activities and research on issues that affect public health.

The CSTE Applied Epidemiology Fellowship is designed to accomplish one of CDC's defined prevention strategy goals of "strengthening local, state, and federal public health infrastructures to support surveillance and implement prevention and control programs."

Further, Healthy People 2010 workforce objectives are being met in areas of:

- Incorporation of specific competencies in the essential public health services into the personnel systems
- Increase proportion of Tribal, State, and Local public health agencies that provide or assure comprehensive epidemiology services to support essential public health services

B. The Role of the Mentor

The mentor is expected to fulfill the responsibilities outlined here. Although fellows may possess sophisticated skills, they require guidance and direction from their mentors. The mentor will:

- **Oversee the fellow's work activities by:**
 - Creating an environment that fosters professional development
 - Offering advice and assistance
 - Integrating the fellow into the host site environment
- **Help the fellow broaden his/her network of professional colleagues**
- **Help the fellow assess resources needed to accomplish goals by, for example, gaining access to data and subject-matter experts**
- **Support and encourage the fellow in his or her technical and professional development**
- **Express a caring and interested attitude in the fellow's present activities, future goals, and interpersonal relationships with agency staff**

C. Responsibilities of the Mentor

Fellows are to be provided with the same administrative support and provisions that entry level host site employees are provided.

Before the Fellow's arrival:

- Ensure appropriate office space and equipment (telephone, computer, statistical software, etc.) are available. Have essential items for the fellow's assignments and day-to-day activities available.
- Arrange with the responsible administrative party the following:
 - Identification badge
 - Building/parking/office access keys
 - E-mail account
 - HIPAA information privacy training
 - Health and safety information
 - Parking permits
 - Computer passwords and access is setup on Fellow's computer for all programs the fellow will use
 - Other training, especially related to computer policies and use
- Provide assistance/recommendations for the fellow, if necessary, for lodging for the duration of the fellowship.
- Just before fellow's arrival, inform co-workers and office staff of his/her arrival date and make sure the administrative details given above are in order. Be sure that everyone understands the purpose and terms of the fellowship, including how long the fellow will be with the agency and general scope of activities in which he/she will be involved.

Upon the Fellow's arrival:

- Welcome the fellow to your agency and introduce him/her to the staff (including the agency director), environment, and resources.
- Orient the fellow, reviewing the purpose, goals, and objectives of the fellowship, his/her role, the role of the mentor, and any other pertinent information.
- Ensure that the fellow receives an identification badge, keys, computer access, e-mail address, and other items as outlined in the section above.
- Work with fellow to develop a mutually agreed upon Plan of Action document, to be submitted to CSTE no later than 90 days after fellow start date. The fellow will receive specific information on Plan of Action preparation during the Fellow Admin Orientation webinar session and at the CSTE Applied Epidemiology Fellowship Orientation (a one week orientation in Atlanta, GA for all incoming CSTE fellows).

D. Replacement of Mentor(s)

CSTE requires that each fellow have a primary and secondary mentor for the duration of their fellowship. CSTE will approve each primary and secondary mentor on the basis of their submitted application and relevant supervisory experiences. If a circumstance arises where either the primary or secondary mentor resigns from the mentor position, please notify CSTE immediately of this change so that CSTE can work closely with the host agency to identify a replacement in a timely matter. CSTE will require a resume of the identified replacement and will conduct a mentor orientation to familiarize the new mentor with the policy and procedures of the fellowship.

E. Overseeing, Reviewing and Evaluating Fellowship Assignment Work

- The mentor is responsible for general oversight of the scientific and technical aspects of the fellow's work assignments. Advice and assistance should be offered to ensure successful progression of applied epidemiologic training over the course of the fellowship. Mentors should be available to spend at a minimum 4 hours per week with the fellow during the first month of the fellowship and 2 hours per week thereafter for the rest of the fellowship. The CSTE National Office will provide administrative support and ensure that the Fellow is working with the mentors to meet competency requirements. The mentor is also expected to ensure that administrative and logistical matters are addressed.
- The mentor is required to evaluate the fellow's performance biannually; however more frequent informal evaluations are encouraged. Biannual and final evaluation will be provided to you and are in the appendix.
- The mentor is responsible for encouraging the fellow's professional development and for securing financial assistance to ensure professional development. In addition to ensuring that the fellow is available to attend conferences, seminars, and meetings throughout the Agency, the mentor will encourage the fellow to provide feedback on his/her experience(s) within the Agency. The mentor will assist the fellow in making contacts at public health agencies, other federal agencies, and academic institutions to foster professional development.
- The mentor will be familiar with the "Core Competencies" of the fellowship and strive to ensure that the fellow achieves all training requirements to the extent that each activity can be performed unaided by the completion of the fellowship. Thus, the mentor will allow the fellow increasing levels of responsibility and leadership in work assignments as the fellowship progresses. A list of the core competencies can be found in section D of the Policies and Procedures.

- The mentor will discuss future plans with his/her fellow, including possible professional opportunities which might be available for individuals with their acquired experience and abilities.
- The mentor will attend the CSTE Annual Conference at least 1 of the 2 years of the fellowship period.

F. Checklist of Mentor Responsibilities

Before the Fellow's arrival:

- ___ Sign Fellow-Host Health Agency agreement and return to CSTE
- ___ Provide assistance/recommendations for suitable long-term housing
- ___ Ensure appropriate office space, software and equipment
- ___ Essential items needed for assignment:
 - ___ Map of workplace
 - ___ Phone directory
 - ___ Relevant publications, references, and work-tools
- ___ Administrative details
 - ___ Identification badge and access keys
 - ___ Health and safety information
 - ___ HIPAA information security training
 - ___ Parking permit (as needed)
- ___ Inform co-workers and office staff of the fellow's arrival, including the purpose and terms of the fellowship

Upon the fellow's arrival at the host health agency:

- ___ Welcome and introduce to staff
- ___ Review purpose, goals, and objectives of the fellowship and mentor's role
- ___ Ensure the fellow receives ID badges, keys, and other items listed above
- ___ Begin working with fellow to develop the Plan of Action

During the Fellowship Period:

- ___ Approve the Plan of Action before the end of the fellows first 90 days
- ___ Review, approve and sign the Fellow Quarterly Progress Reports; due quarterly on fellow start date

Quarterly Reports Due

Report	Due to CSTE by	Submitted on
6 month		
9 month		
12 month		
15 month		
18 month		
21 month		
Final (due two weeks prior to end date)		

- ___ Complete Fellow Evaluation Forms and review with fellow.

Biannual Evaluations Due

Evaluation	Due to CSTE by	Submitted on
6 month		
12 month		
18 month		
Final (due two weeks prior to end date)		

- ___ Attend the CSTE Annual Conference in 2018 or 2019 (at least 1 of the 2 years of the fellowship period).

3. Other Administrative Information

A. Business Cards

All fellows should be provided personalized business cards for distribution at meetings, to colleagues and associates, and others as necessary. The host site is responsible for providing fellows with business cards.

B. CSTE 2017 Payroll Schedule

June 2017- December 2017

The 2018 payroll schedule will be provided in Fall 2017.

Beg.	End.	Pay Date
May 21	Jun 3	Jun 9
Jun 4	Jun 17	Jun 23
Jun 18	Jul 1	Jul 7
Jul 2	Jul 15	Jul 21
Jul 16	Jul 29	Aug 4
Jul 30	Aug 12	Aug 18
Aug 13	Aug 26	Sep 1
Aug 27	Sep 9	Sep 15
Sep 10	Sep 23	Sept 29
Sep 24	Oct 7	Oct 13
Oct 8	Oct 21	Oct 27
Oct 22	Nov 4	Nov 10
Nov 5	Nov 18	Nov 24
Nov 19	Dec 2	Dec 8
Dec 3	Dec 16	Dec 22
Dec 17	Dec 30	Jan 5

APPENDIX A

Appendix A: Relocation Expense Reimbursement Policy

CSTE provides up to \$1,000 in reimbursement to help offset relocation expenses.

General guidance follows:

Household goods and personal effects. You can deduct the cost of packing, crating, and transporting your household goods and personal effects and those of the members of your household from your former home to your new home.

You can deduct any costs of connecting or disconnecting utilities required because you are moving your household goods, appliances, or personal effects.

You can deduct the cost of moving your household goods and personal effects from a place other than your former home. Your deduction is limited to the amount it would have cost to move them from your former home.

You cannot deduct the cost of moving furniture you buy on the way to your new home.

Storage expenses. You can include the cost of storing and insuring household goods and personal effects within any period of 30 consecutive days after the day your things are moved from your former home and before they are delivered to your new home.

Travel expenses. You can deduct the cost of transportation and lodging for yourself and members of your household while traveling from your former home to your new home. This includes expenses for the day you arrive. You can include any lodging expenses you had in the geographical area of your former home within one day after you could no longer live in your former home because your furniture had been moved. You can deduct expenses for only one trip to your new home for yourself and members of your household.

CSTE follows the guidance of the OMB Circular A-122:

OMB Circular A-122

42. Relocation costs.

A. Relocation costs are costs incident to the permanent change of duty assignment (for an indefinite period or for a stated period of not less than 12 months) of an existing employee or upon recruitment of a new employee. Relocation costs are allowable, subject to the limitation described in subparagraphs b, c, and d, provided that:

- (1) The move is for the benefit of the employer.
- (2) Reimbursement to the employee is in accordance with an established written policy consistently followed by the employer.
- (3) The reimbursement does not exceed the employee's actual (or reasonably estimated) expenses.

B. Allowable relocation costs for current employees are limited to the following:

(1) The costs of transportation of the employee, members of his immediate family and his household, and personal effects to the new location.

(2) The costs of finding a new home, such as advance trips by employees and spouses to locate living quarters and temporary lodging during the transition period, up to maximum period of 30 days, including advance trip time.

(3) Closing costs, such as brokerage, legal, and appraisal fees, incident to the disposition of the employee's former home.

These costs, together with those described in (4), are limited to 8 percent of the sales price of the employee's former home.

(4) The continuing costs of ownership of the vacant former home after the settlement or lease date of the employee's new permanent home, such as maintenance of buildings and grounds (exclusive of fixing up expenses), utilities, taxes, and property insurance.

(5) Other necessary and reasonable expenses normally incident to relocation, such as the costs of canceling an unexpired lease, disconnecting and reinstalling household appliances, and purchasing insurance against loss of or damages to personal property. The cost of canceling an unexpired lease is limited to three times the monthly rental.

c. Allowable relocation costs for new employees are limited to those described in (1) and (2) of subparagraph b. When relocation costs incurred incident to the recruitment of new employees have been allowed either as a direct or indirect cost and the employee resigns for reasons within his control within 12 months after hire, the organization shall refund or credit the Federal Government for its share of the cost. However, the costs of travel to an overseas location shall be considered travel costs in accordance with paragraph 50 and not relocation costs for the purpose of this paragraph if dependents are not permitted at the location for any reason and the costs do not include costs of transporting household goods.

d. The following costs related to relocation are unallowable:

(1) Fees and other costs associated with acquiring a new home.

(2) A loss on the sale of a former home.

(3) Continuing mortgage principal and interest payments on a home being sold.

(4) Income taxes paid by an employee related to reimbursed relocation costs.

APPENDIX B

Appendix B: Example Fellow Projects

- Developing a program evaluation plan to enhance the STEPS surveillance system, a five year project focused on the prevention and management of asthma, diabetes, and obesity in schools and communities
- Evaluating the Washington Asthma Initiative
- Utilizing the Washington State Cancer Registry Records to conduct data linkage and a field study involving adjuvant therapy for colorectal cancer
- Characterizing the health status of young adults in Maine
- Evaluating a child health assessment monitoring tool (The Child Health Assessment and Monitoring Program-CHAMP) for North Carolina
- Estimating the burden of asthma in Maine and Florida
- Organizing and disseminating the Massachusetts Behavioral Risk Factor Surveillance System (BRFSS) Annual Report
- Linking birth defects certificate data with a subset from the Diabetes Outreach Network database
- Conducting assisted reproductive technology surveillance in Massachusetts
- Conducting surveillance of the leading causes of cancer and trends in cancer incidence and mortality in Washington State
- Conducting an analysis of demographic factors related to screening for breast, cervical, colorectal and prostate cancers in Washington State
- Conducting the Washington Adult Health Survey, a door-to-door survey, to assess the prevalence of cardiovascular disease among adults
- Designing a module to address worksite health promotion activities and attitudes about worksite emergency preparedness activities for the Behavioral Risk Factor Surveillance System of Georgia (BRFSS)
- Conducting an evaluation of the Georgia Comprehensive Cancer Registry (GCCR)
- Utilizing the Perinatal Periods of Risk (PPOR) technique to decompose and assess the rates of infant mortality to help elucidate disparities in infant mortality in Pennsylvania
- Assessing the impact of the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) on access to prenatal health services and the risk of adverse perinatal outcomes among low income women in Pennsylvania
- Developing and implementing a protocol for the surveillance of asthma, Fetal Alcohol Syndrome, and Cerebral Palsy in Washington State
- Developing a survey instrument, protocol, database and piloting the survey for the Alaska Childhood Understanding Behaviors Survey (CUBS)
- Evaluating the Louisiana Pregnancy Risk Assessment Monitoring System (LA-PRAMS)
- Linking the special supplemental nutrition program for women, infants, and children (WIC) data with vital records certificates of live births
- Linking Colorado's birth defects registry and the universal newborn hearing screening data set to evaluate congenital hearing loss

- Designing the evaluation plan for the Virginia Congenital Anomalies Tracking and Prevention Improvement Project II
- Utilizing the National Survey of Children's Health (NSCH) to identify potential opportunities to intervene with overweight school aged children in Florida
- Utilizing the NSCH to examine the pediatric oral health needs and elucidating disparities in unmet needs
- Assessing the circumstances surrounding fatal fall injuries in the elderly
- Evaluating an HIV-exposure and partner notification surveillance system
- Evaluating a poison control center to determine if the data can predict carbon monoxide poisonings.
- Creating a cumulative exposure index for workers in the World Trade Center Registry and characterize their exposures
- Conducting surveillance of passengers arriving on international flights, goods, and other methods of conveyance to prevent the importation and spread of communicable diseases of public health significance
- Conducting tuberculosis surveillance system for migrants (immigrants, refugees, and asylees)
- Investigating cancer clusters among firefighters
- Conducting a seroprevalence and behavioral study of intravenous drug users
- Utilizing the Youth Risk Behavior Survey (YRBS) to determine gambling patterns among youth
- Evaluating a childhood lead poisoning surveillance system
- Linking data to assess birth defects to infants born to women with diabetes
- Examining the relationship between socioeconomic and demographic factors and type of treatment for colon cancer
- An Analysis of Exposure Patterns after a Release of Methylmercury in Wisconsin
- The Awareness of Outdoor Air Quality Alerts and their Impact on Outdoor Activity Level in Eight States
- Developing Tools and Methods for Routinely Linking Health Effects with Air Emissions: A pilot project with childhood cancers
- Development of Indicators and Measures for Dane County and Wisconsin Cardiovascular Disease and Chronic Obstructive Pulmonary Disease
- Conducting Surveillance for Occupational Heat Illness Among California Workers by Gathering and Analyzing Data from the Worker's Compensation Information System on "Heat Prostration" Claims from 2005-2006
- Occupational Heat Illness Tracking (OHIT) in California– A Pilot Project
- Conducting an Evaluation of Rabies Post-Exposure Prophylaxis Surveillance System in Washington State
- Investigating the role of children in influenza transmission by designing a study using the Vaccine Safety Data Unit
- Characterizing communicable diseases syndromic surveillance at US ports of entry
- Conducting population enhanced laboratory hepatitis A surveillance
- Analyzing data from the Hispanic Health Awareness and Practice Survey (HHAPS)
- Assessing pneumococcal vaccination in a hospital using the Quality Assessment

Review (QAR) tool

- Evaluating of the NYC mumps surveillance system
- Evaluation of Hepatitis A Binational Surveillance in El Paso, TX and Ciudad Juarez, MX from 1999 to 2005
- Conducting an All Terrain Vehicle (ATV) Death and Injury Pilot Surveillance Project
- Evaluating an adolescent suicide attempt data system
- Conducting a study to examine and assess the costs resulting from falls in the elderly and to determine the factors that are associated with the falls that lead to the need for long-term care
- Conducting an analysis of a public health laboratory's serum archive HIV data
- Evaluating the Michigan Syndromic Surveillance System (MSSS)
- Risk factors for extraintestinal non-typhoidal *Salmonella* infection and patient health outcomes
- Supplemental Public Health Surveillance of HIV, STI's, and Viral Hepatitis in Special Populations
- Consequences of Reporting Delays and the Resulting Incomplete Reporting on HIV Prevention and Care Services

Major Project Examples

All fellows are required to complete a Major Project during their fellowship. The Project must include a public health problem or program evaluation, use of epidemiologic methods and data analysis and interpretation. It is expected that fellows will have the opportunity to achieve many of the required core competencies while completing the Major Project. Below are examples of Major Projects from previous fellowships:

- *Explore the risk of West Nile virus transmission from birds to humans through atypical routes, such as fecal-oral or percutaneous routes.* The fellow compared pre- and post-mosquito season of WNV antibodies (IgM and IgG) in bird handlers and controls. The fellow designed a questionnaire to be administered to study groups to identify risk and protective factors, which required the fellow to seek IRB approval. Results from the study were used to recommend precautions for bird handlers such as wearing protective equipment and frequent hand washing.
- *Investigate cancer cluster among firefighters in Seattle, Washington.* The fellow performed a proportional incidence ratio (PIR) analysis to examine the proportional cancer incidence in a cohort of firefighters and that of the general population in three surrounding counties. While completing this project, the fellow experienced working with the local health department, presenting information to a non-technical audience, presenting information in a highly political and emotional situation, and becoming familiar with the department's cluster analysis protocol. The fellow also gained experience in preparing and submitting IRB applications for appropriate reviews.
- *Conduct an evaluation of a Newborn Screening (NBS) program using the CDC guidelines for evaluating a surveillance system.* The state ran a matching program between Newborn Screening data and birth certificates. The fellow determined the

rate of participation in NBS, as well as the coverage rate of birth certificates by matching NBS data with birth certificates. The fellow also analyzed NBS data to determine the percent of newborns from birth certificates that have not been screened due to new 'opt out' provision and identify the provision's impact on surveillance. NBS data were analyzed by race/ethnicity, hospital, region and other demographic and/or risk factor variables as requested.

- *Design an epidemiologic investigation evaluating the potential role environmental exposures may play in hearing loss.* Environmental exposures were investigated in two stages. The first stage was an ecological investigation exploring potential correlations between aggregated level environmental exposures and hearing loss for hypothesis generating activities within the state's Environmental Public Health Tracking (EPHT) program. The second stage involved a case-control study to examine hearing loss and environmental exposures using a survey questionnaire.
- *Conduct a 3-4 month pilot of the Pregnancy Risk Assessment Monitoring System (PRAMS).* The state in which the fellow was working planned to submit a grant to CDC for PRAMS and wanted to demonstrate a successful commitment to PRAMS. The fellow implemented the pilot project following the standardized PRAMS procedures developed by CDC. The Fellow prepared a protocol, budget, and IRB proposal. The fellow also worked with vital records department to develop a sampling frame from total live births to in-state residents from birth certificates and select a sample of women to survey. The fellow handled most of the administrative aspects of PRAMS pilot project, participating in training programs, sampling procedures, data collection, data analysis, and data dissemination. Results from this pilot project were used to prepare for CDC funding for PRAMS in 2005.
- *Assess pertussis vaccine using a case-control study.* The fellow conducted a study to evaluate pertussis vaccine effectiveness by number of vaccine doses, to determine if vaccine type (i.e. DTP, DTaP, or Td) is associated with acquisition of pertussis, and to identify potential factors contributing to a regional outbreak in the state in which the fellow worked. Cases were matched to controls on school and possibly classroom. Cases were identified using line lists from the four counties in which the outbreak originated and controls were identified by school rosters, with the assistance of school administrators. Vaccination records were obtained from the schools and if information was not complete, records will be verified with the child's health care provider.

- *Complete a retroactive exposure assessment pertaining to rescue recovery, and clean-up work at the World Trade Center following the attacks of 9/11/01 using the World Trade Center Registry Data.* The fellow compared two indices: one based on an industrial hygiene panel's ranking of various exposure variables available in the Registry and one based on the results of univariate modeling with each of these exposure variables for the outcome of three or more illnesses. The fellow then characterized the workers' exposures using a deterministic model (exposures to specific substances measured at one point in time are used to describe historic exposure levels based on the knowledge of changes in the worksite over time). For this model, the fellow described a timeline of the natural history of the recovery/clean-up process to document changes in the worksite and utilized environmental sampling data taken from the WTC site over time.

APPENDIX C

Appendix C: SAMPLE: Fellow Plan of Action

Name:

Program Area: Infectious Disease

Primary Mentor:

Secondary Mentor:

1. Surveillance Activity

Perinatal Group B *Streptococcus* Disease (Mentor:)

Major Competencies: Design a surveillance system, design an epidemiologic study, interpret findings, and recommend control measures

Since its emergence in the 1970s, group B streptococcal (GBS) disease had been the leading bacterial infection associated with illness and death among newborns in the United States until 1996, when CDC issued prevention strategies. Newborns at increased risk for GBS disease are those born to women who are colonized with GBS in the genital or rectal areas.

In 1996, CDC recommended the use of one of two prevention strategies for the prevention of invasive Group B Streptococcal disease. In the first strategy, intrapartum antibiotic prophylaxis is offered to women identified as GBS carriers through prenatal screening cultures collected at 35–37 weeks' gestation and to women who develop premature onset of labor or rupture of membranes at <37 weeks' gestation. In the second strategy, intrapartum antibiotic prophylaxis is provided to women who develop one or more risk conditions at the time of labor or membrane rupture. Many perinatal GBS infections can be prevented through intrapartum antimicrobial prophylaxis. In 2008, the state received 57 reports of invasive GBS disease in neonates less than 90 days old. The goal of this project is to determine the percent of cases that may have been preventable if these two strategies had been implemented. This information will assist the Department of Health Services in developing educational campaigns and control measures to prevent additional cases.

Fellow Activities

- Review current literature on perinatal Group B Streptococcal disease, including information on the current guidelines and recommendations.
- Obtain all reports of invasive GBS disease in neonates <90 days old in the state from MEDSIS
- Conduct medical record reviews of all neonates and their mothers to determine whether patients had been screened prenatally and if CDC recommendations had been followed.

- Determine the percentage of cases that could have been preventable, and which control measures could have been implemented.
- Create a report summarizing findings of the evaluation and recommendations for implementing improvements.

2. Surveillance Evaluation

Evaluate the Sensitivity and Specificity of Serologic Testing for Pertussis (Mentor:)

Major Competencies: Evaluate surveillance systems, design a data collection tool, create a database, use statistical software to analyze epidemiologic data, write a surveillance report, oral presentation, and present a poster at a national meeting

In 2009, pertussis cases have been increasing among infants in the state with 165 cases reported year to date, including 14 cases reported in infants. In the state, health care providers are required to report all suspect cases of pertussis and laboratories are required to report positive cultures for pertussis. Despite these requirements, diagnosis and reporting of pertussis by health care providers has been unreliable and pertussis is often underreported, particularly in adults. Although not reportable, many laboratories report pertussis serologic tests to the Department. However, most local health departments do not investigate positive serologies without a supporting diagnosis or additional testing. Since serologic testing is easier and more widely available to healthcare providers, the Department is interested in evaluating the efficacy of serologic testing in identifying previously unreported pertussis cases. The goal of this project is to determine the percent of patients with serologic testing who meet the clinical case definition for pertussis. This information will assist local health departments to prioritize pertussis investigations in order to implement contact investigations as soon as possible to prevent additional cases.

Fellow Activities:

- Review current literature on pertussis testing and diagnosis, including information on the sensitivity and specificity of serology.
- Obtain all serologic tests performed by Labcorp (the second largest lab in the state)
- Create a data abstraction form to standardize data collection
- Conduct medical record reviews of all tested patients to determine whether patients had symptoms consistent with the clinical case definition of pertussis.
- Interview cases to determine whether the patient had symptoms consistent with pertussis and to assess risk factors and healthcare-seeking behaviors associated with positive results.
- Utilize the Centers for Disease Control and Prevention guidelines for evaluating a surveillance system to evaluate the pertussis surveillance system in the state.
- Determine the percentage of cases with pertussis serology that meet the case definition and calculate the sensitivity and specificity for pertussis serology.
- Submit an abstract for a poster presentation at the 2010 CSTE Annual Conference.

- Create a report summarizing findings of the evaluation and recommendations for implementing improvements.

3. Role in Bioterrorism and Response

Competencies: Understand the basics of health risk communication, Analyze data graphically

The Infectious Disease Epidemiology Section, the section where the CSTE fellow is placed, is responsible for leading epidemiologic activities under the Public Health Emergency Preparedness Cooperative Agreement and the section leads response activities during emergencies and drills. All staff in the program are required to receive training on incident command and to attend training on the Health Emergency Operation Center (HEOC). Fellow has completed trainings on the HEOC Operational Plan and has completed the following incident command systems (ICS) trainings: ICS-100, ICS - 200, and ICS-700.

The state HEOC and is currently operating under an incident command structure for H1N1 response activities. Primary Mentor is the Operations Chief for the response. Fellow has been incorporated into the H1N1 response in the operations section performing epidemiology and community mitigation. The fellow is responsible for monitoring ADHS and CDC guidance on H1N1 and has developed a matrix summarizing the current recommendations for H1N1 infection control and vaccination. This information is disseminated to the counties weekly. In addition, the fellow has been cross-trained to conduct surveillance for influenza-like illness (ILI) and to analyze school absenteeism data. She will remain involved in emergency preparedness activities as needs arise.

4. Major Project

Epidemiology of Disseminated Coccidioidomycosis (Mentor:)

Major Competencies: Design an epidemiologic study, design a data collection tool, create a database, use statistical software to analyze epidemiologic data, interpret findings write a surveillance report, oral presentation, and present a poster at a national meeting

Coccidioidomycosis is one of the most commonly reported infections in the state with 4,768 cases reported in 2008. The disease is endemic in the Southwestern United States and the state has 60% of the reported cases in the United States. *Coccidioides*, the fungus that causes coccidioidomycosis, survives in arid soils and infection is caused by inhaling spores from the aerosolized fungus. Infection usually results in mild or asymptomatic disease; however, the fungus can spread from the lungs to other body sites in about 5% of infections, resulting in disseminated disease. Limited information is

available on the causes and impact of disseminated coccidioidomycosis on the state's population.

In 2007 and 2008, the state has interviewed every 10th reported case of coccidioidomycosis (Enhanced Surveillance Project) to identify the risk factors and public health impact of coccidioidomycosis. The Department has detailed information on 493 cases of coccidioidomycosis, including 42 cases of disseminated disease. Preliminary analysis has indicated that some factors may be associated with disseminated disease including race and number of healthcare provider visits. However, data collected by the Department on the impact of coccidioidomycosis relied on self-reported site of infection and many cases did not know or were not able to provide the site of infection. Further analysis and data collection is required to validate the data obtained during the Enhanced Surveillance Project and to generate a report on the epidemiology of disseminated disease in the state.

Timeline for Major Project

October 2009:

- Develop a medical record request form to obtain medical records for cases investigated in the Enhanced Surveillance Project (ESP)
- Conduct literature review on coccidioidomycosis and disseminated disease
- Establish study protocol which includes study design, study population, and research question

November – December 2009:

- Merge ESP case data with reported cases of coccidioidomycosis in the statewide electronic surveillance system (MEDSIS)
 - ESP data include detailed information on risk factors and impact of infection on health care system and individuals.
 - MEDSIS data includes information on reporting physician and detailed laboratory testing information
 - Merged records will be used to identify reporting facilities and to request medical records
- Request medical records for ESP cases
 - Develop system to monitor response rate and request additional records, if needed
- Develop a data abstraction tool to standardize the review of disseminated coccidioidomycosis cases
 - Obtain input from key stakeholders in the coccidioidomycosis investigation at the Department, CDC, and the University

January 2010:

- Develop database to enter data from medical record abstractions
- Finalize study protocol and obtain approval for medical record abstraction tool and database

February – April 2010:

- Review medical records and enter data into the database
- Create analysis plan for study data
- Begin data cleaning and merging of ESP, MEDSIS, and study records

May – June 2010:

- Finalize medical record reviews
- Analyze data
 - Review initial data to identify additional analyses that may be useful
 - Identify missing data and finalize data cleaning

July 2010:

- Finalize data analysis
- Initiate report summarizing data findings

August – October 2010:

- Finalize report of data finding in scientific format (Abstract, Background, Methods, Result, Discussion)

November – December 2010:

- Submit manuscript for publication
- Submit abstract for presentation at 2011 CSTE Annual Conference

5. National, State, or Regional Meetings

Epidemiology and Surveillance Capacity Meeting, October 2009

Council of State and Territorial Epidemiologist Meeting, Portland, OR, June 6 – 10, 2010

National Immunization Conference, Atlanta, GA, April 19 – 22, 2010

Vector-borne and Zoonotic Disease Conference, May 2010

International Conference on Emerging Infectious Diseases, Atlanta, GA, July 11-14, 2010

Coccidioidomycosis Study Group Meeting, April 2011

Council of State and Territorial Epidemiologists Meeting, June 2011

6. Other Work-Related, Work-Group, or Steering Committee Meetings

Foodborne Illness/Food Defense Surveillance and Response Work-Group (10/20/2009, 01/19/2010, 04/20/2010, 07/20/2010, 10/20/2010)

7. Additional Projects/Activities

- Analyze tuberculosis (TB) genotyping results to identify geographical trends or risk factors associated with certain TB genotypes.

- Evaluate laboratory reports of invasive methicillin-resistant *Staphylococcus aureus* (MRSA) infections to determine the feasibility of using MRSA laboratory reports to monitor healthcare-associated infections (HAI).
 - Analyze sites of infection to determine the percentage of bloodstream infections.
 - Review reports to determine the source of collection and identify the percentage of infections that are healthcare-associated.
- Assist with investigations and environmental control measures to prevent Rocky Mountain Spotted Fever infections among Native Americans (*Competency: Write a field investigation report*)
- Assist with outbreak investigations and surveillance activities in the Office of Infectious Disease Services. (*Competency: Write a field investigation report*)
- Evaluate the long-term impact of measles vaccination of infants less than 12 months of age during a measles outbreak

In 2008, the Department of Health and a County Health Department identified a case of measles in a foreign visitor. This case visited a large hospital resulting in several nosocomial exposures. During this outbreak, 14 cases were identified and 17,000 doses of vaccine were administered to the community. As part of public health control measures, accelerated immunization schedules were recommended for several groups including infants from 6 – 11 months. The CSTE fellow will identify the number of vaccinations these children received and compare vaccination completeness for infants vaccinated during the outbreak compared with unvaccinated children born during the same period.

Activities:

- Obtain data from the State Immunization Information System (SIIS)
- Pull a cohort of children who were eligible to be vaccinated at 6 – 11 months during the outbreak period
- Identify outcomes of children who were vaccinated early including the likelihood that they completed doses, info on SES to identify differences in probability of receiving vaccine
- Review medical records to ensure validity of data recorded in SIIS
- Participate in rotating on-call duties
 - Answer and respond to calls after hours
- Fellowship progress monitoring
 - Weekly discussions with mentors to discuss project and activities progress and additional issues related to the fellowship

Fellow Progress Table:

Epidemiologic Methods:	Manner Fulfilled	Date Anticipated:
Design surveillance systems to assess health problems	<ul style="list-style-type: none"> Develop a surveillance system to capture cases of GBS in infants <90 days 	November 2011
Evaluate surveillance systems and know the limitations of surveillance data	<ul style="list-style-type: none"> Evaluate pertussis surveillance system using CDC Guidelines 	March 2010
Design an epidemiologic study to address a health problem	<ul style="list-style-type: none"> Design a study to evaluate the impact and risk factors for disseminated coccidioidomycosis 	May 2010
Design a questionnaire or other data collection tool to address a health problem	<ul style="list-style-type: none"> Develop medical record abstraction tool to collect data from medical records of suspect pertussis cases 	November 2009
Collect health data from appropriate sources (e.g. case interviews, medical records, vital statistics records, laboratory reports, or pathology reports)	<ul style="list-style-type: none"> Medical record reviews of pertussis and coccidioidomycosis cases Interview foodborne and vaccine preventable disease cases 	December 2009
Create a database for a health data set	<ul style="list-style-type: none"> Develop an EpiInfo or Access database to enter medical record abstraction data from pertussis and coccidioidomycosis study 	December 2009
Use statistical software to analyze and characterize epidemiologic data	<ul style="list-style-type: none"> Analyze pertussis surveillance data using SAS 	January 2010
Interpret findings from epidemiologic studies, including recognition of the limitations of the data and potential sources of bias and/or confounding.	<ul style="list-style-type: none"> Generate a technical report on the impact of disseminated coccidioidomycosis including preparing data for publication (if possible). Report will include limitations of study design and data collection and analysis methods 	May 2011
Recommend control measures, prevention programs, or other public health interventions based on epidemiologic findings	<ul style="list-style-type: none"> Recommend control measures for counties based on findings of pertussis evaluation Provide hospitals with findings and key recommendations from GBS study Recommend control measures for cases of infectious disease and outbreaks 	June 2010 February 2011 Ongoing

Communication	Manner Fulfilled:	Date Anticipated:
Write a field investigation report	<ul style="list-style-type: none"> Conduct an investigation of foodborne illness or other infectious disease outbreak and summarize findings 	April 2011
Write a surveillance report	<ul style="list-style-type: none"> Report on findings of pertussis surveillance evaluation 	June 2010
Make an oral presentation using appropriate media	<ul style="list-style-type: none"> Present data on coccidioidomycosis to Cocci Study Group (a team of researchers from universities) 	April 2011
Present data graphically and know how to use graphic software	<ul style="list-style-type: none"> Prepare and disseminate weekly and monthly reports on infectious diseases Generate graphs of influenza-like illness for influenza surveillance program 	Ongoing Ongoing
Understand the basics of health risk communication and communicate epidemiologic findings in a manner easily understood by lay audiences	<ul style="list-style-type: none"> Take public phone calls on infectious diseases Assist with the preparation and dissemination of guidance and recommendations for control of H1N1 influenza Coordinate messages with the Joint Information Center (JIC) 	Ongoing December 2009 December 2009
Master's level fellows: present a poster at a national or regional meeting, public a technical report, or prepare a manuscript for publication	<ul style="list-style-type: none"> Present data on pertussis surveillance evaluation at CSTE Annual Meeting 	June 2010

The plan of action will be updated periodically throughout the fellowship to reflect changes and new activities. The following participants in the CDC/CSTE Applied Epidemiology Fellowship program have approved this Plan of Action in its current form:

Fellow Signature: _____

Date: _____

Mentor Signature: _____

Date: _____

Mentor Signature: _____

Date: _____

APPENDIX D

15 Month Quarterly Progress Report

Name:

Program Area: Infectious Diseases

Host Site:

Fellowship Start Date: July 30, 2014

Report Submission Date: October 30, 2015

Primary Mentor:

Secondary Mentor:

Note: Activities since the last progress report are in bold.

1. Surveillance Activity

Chikungunya Surveillance in Florida

Major Competencies: Be able to interpret surveillance data, collect health data from appropriate sources, write a surveillance report, present data graphically and know how to use graphic software, understand the basic process for preparing a manuscript for publication

Public Health Impact

Since the first local transmission of chikungunya virus was reported in the Caribbean in December 2013, Florida has seen a large increase in the number of imported chikungunya fever cases. In addition, Florida has reported the first locally-acquired chikungunya fever cases in the continental United States. Careful review of cases is needed to initiate the proper control efforts, identify other cases, and better understand the disease and its impact on Florida.

Brief Description of Project

Chikungunya is a reportable disease in Florida, and counties report cases through Florida's reportable disease surveillance system Merlin. Once a case is reported in Merlin, it is sent to the state office for review. The review process includes making sure information about the case is complete, the correct disease status was chosen, the laboratory results are appropriate, the timing of events makes sense, the case meets the case definition, etc. If anything needs to be changed or updated, the case is sent back to the counties for more information. If not, the case is accepted. I will be helping review all chikungunya cases reported in Florida. In addition, I will help compile data to be used in the weekly surveillance report that describes all reported arboviral diseases in Florida.

Activities completed on project:

1. Performed case review on reported chikungunya cases
2. Maintained the working line list of chikungunya cases in progress and completed
3. Helped compile data and made graphs/maps for the weekly surveillance report and presentations as needed
4. Submitted an abstract on Florida's locally acquired and imported chikungunya cases in 2014 to the International Conference on Emerging Infectious

Diseases

5. Published a MMWR article on the 2014 chikungunya cases in Florida
6. Wrote two summary articles on mosquito-borne diseases in Florida for Epi Update, the Florida Department of Health's peer-reviewed publication, in September 2014 and January 2015
7. Registered to present at the annual Dodd short course of the Florida Mosquito Control Association January 29, 2015 on using Florida's syndromic surveillance system ESSENCE to identify chikungunya and other arboviral disease cases
8. Submitted an abstract to the 2015 Emerging Pathogens Institute Research Day at the University of Florida for a poster presentation on chikungunya infections in Florida
9. Submitted an abstract to the CSTE 2015 Annual Conference on Florida's locally acquired and imported chikungunya cases in 2014
10. Prepared a presentation for the CSTE 2015 Annual Conference
11. Prepared poster for local conference for doctors in Miami
12. Presented at CSTE 2015
13. Prepared poster to present at ICEID 2015
- 14. Presented at ICEID 2015**
- 15. Presented at Bureau of Epidemiology CSTE presentation series**

2. Surveillance System Evaluation

Evaluation of Cryptosporidiosis in Florida

Major competencies: Evaluate surveillance systems and understand the limitations of surveillance data, be able to interpret surveillance data, collect health data from appropriate sources, use statistical software to analyze and characterize epidemiologic data, recommend control measures, prevention programs, or other public health interventions based on epidemiologic findings, write a surveillance report, present data graphically and know how to use graphic software, present a poster at a national meeting

Public Health Impact

Cryptosporidiosis is one of the most common waterborne diseases in the United States, and Florida has recently had large outbreaks of cryptosporidiosis in several counties. A review of the current surveillance system can identify areas for improvement in order to better handle outbreaks and collect accurate data.

Brief Description of Project

All cases of cryptosporidiosis are reported by counties in Florida's notifiable disease surveillance system Merlin. However, these cases are not reviewed individually by anyone at the state office. Currently, very little information is required for a case to be reported in Merlin, and there is often no way to determine if the reported information is accurate, such as whether the correct test type or disease status was chosen. I will be performing case review on all cases reported from 2011-2013. For a select few counties, I will also be going through

the physical lab reports for each case to determine the accuracy of information reported in Merlin. This project is particularly relevant since counties will soon be required to fill out an extended data questionnaire related to potential exposures for each case.

Activities completed on project:

1. Became familiar with the case definitions that apply to cases reported between 2011 and 2013 and understood all laboratory tests for *Cryptosporidium*
2. Performed case review on all cases of cryptosporidiosis in Florida from 2011-2013
3. Visited three county health departments (Broward, Duval, and Leon Counties) to review paper copies of lab reports to evaluate the accuracy of reported test types
4. Surveyed county health departments to see what additional data, if any, they collect for cryptosporidiosis cases
5. Evaluated the surveillance system using CDC's guidelines for evaluating public health surveillance systems
6. Wrote a surveillance report
7. Submitted an abstract for the 2015 CSTE annual conference

3. Role in bioterrorism preparedness and response

Ebola Response

Major Competencies: Play a functional role in bioterrorism/emergency preparedness and response at the host agency and participate in related trainings, tabletop exercises, etc., appreciate the diversity of how epidemiology is used in different program areas

Public Health Impact

In light of recent events, Ebola has been prevalent in the media, and it is important to understand the current situation.

Brief Description of Project

Gain a better understanding of Florida's response to the 2014 Ebola outbreak

Activities completed on project:

1. Attend and take notes for Ebola meetings and conference calls
2. Actively monitored a traveler returned from West Africa for potential Ebola symptoms for three days
3. Helped monitor a traveler in contact with a Lassa fever patient

Hurricane Exercise

Major Competencies: Play a functional role in bioterrorism/emergency preparedness and response at the host agency and participate in related trainings, tabletop exercises, etc., appreciate the diversity of how epidemiology is used in different program areas, understand the basics of health-risk communication and be able to communicate epidemiologic findings in a manner that is easily understood by lay audiences

Public Health Impact

Hurricanes are an inevitable threat to Florida residents and can cause damage to human health. Ensuring the public is prepared for a hurricane and training appropriate health staff to conduct needs assessments can help save lives.

Brief Description of Project

The Bureau of Epidemiology hosts an annual training for county health department emergency response staff to ensure they are properly prepared to conduct needs assessments in the event of a hurricane. As part of the training, staff are taught how to use EpiInfo to create a survey and analyze data. During the exercise portion, staff practice deploying into the field to go door to door interviewing residents. The practice survey included questions on emergency preparedness as well as mosquito borne disease prevention.

Activities completed on project:

1. Attended planning meetings to discuss training agenda and presentations
2. Helped staff learn EpiInfo during the training
3. Acted as an evaluator when staff were deployed into the community

Other Activities

1. Participated in a FEMA virtual tabletop exercise for a chemical food contamination outbreak
2. Registered to attend the CSTE Disaster Epidemiology Workshop in May 2015
3. Attended CSTE Disaster Epidemiology Workshop
4. Attend Highly Pathogenic Avian Influenza Preparedness meeting for State and Federal Regulatory and Florida Zoo, Aquarium, and Exotic Avian Stakeholders

4. Major Project (including timeline)

Chikungunya Long-term Chronic Symptom Follow-up

Major competencies: Be able to interpret surveillance data, collect health data from appropriate sources, use statistical software to analyze and characterize epidemiologic data, interpret findings from epidemiologic studies, recommend control measures, prevention programs, or other public health interventions based on epidemiologic findings, present data graphically and know how to use graphic software, present a poster at a national meeting

Public Health Impact

Chikungunya is a relatively new disease to Florida and not much is known about its potential long-term impact on medical resources or individual quality of life. This study will allow us to quantitatively define the long-term effects of the disease so we can work to prevent future cases and be better prepared to assist current cases.

Brief Description of Major Project

In order to better understand the long-term effects of chikungunya virus, the Florida Department of Health will be following up with all chikungunya fever cases reported in Florida during 2014. Counties complete an initial interview of cases upon receipt of positive laboratory results for the virus. Now, counties are being asked to interview cases again 3 months after onset of symptoms. If cases are still symptomatic, I will be following up with them again 6 months after onset, and if necessary, 1 year after onset. I will also be assisting counties with 3 month follow-up interviews as needed. At the beginning of each month, I will send a list of cases that are ready for their 3 month follow-up interviews to each county. I will be responsible for keeping track of all interviews and for following up with counties if interviews are not completed. At the end of the study I will analyze all results and present my findings at the CSTE conference. I will also present preliminary results periodically on Biweekly Epidemiology calls with county health departments or other meetings as requested. All data will be stored and managed in Merlin, the reportable disease surveillance system.

Major Project Timeline:

Year	Month	Activities	Status (In-Progress, On-going, Complete, Cancelled)
2014	July	<ul style="list-style-type: none">• Review follow-up interview questions• Become familiar with chikungunya fever and Florida cases	<ul style="list-style-type: none">• Complete• Complete

	Aug.	<ul style="list-style-type: none"> • Present project overview on weekly Training Tuesday conference call with county health departments • Send monthly email to counties with cases ready for interview, continue to manage cases and interviews • Begin conducting 3 month interviews 	<ul style="list-style-type: none"> • Complete • Complete • Complete
	Sept.	<ul style="list-style-type: none"> • Send monthly email to counties with cases ready for interview, continue to manage cases and interviews • Continue with 3 month interviews 	<ul style="list-style-type: none"> • Complete • Complete
	Oct-Dec.	<ul style="list-style-type: none"> • Analyze preliminary data • Present project and preliminary data on the epidemiology biweekly call with county health departments • Prepare abstract for ICEID conference • Send monthly email to counties with cases ready for interview, continue to manage cases and interviews • Continue with 3 month and 6 month interviews 	<ul style="list-style-type: none"> • Complete • Complete • Complete • Complete • Complete
2015	Jan.	<ul style="list-style-type: none"> • Send monthly email to counties with cases ready for interview, continue to manage cases and interviews • Continue with 3 month and 6 month interviews 	<ul style="list-style-type: none"> • Complete • Complete

	Feb.	<ul style="list-style-type: none"> • Send monthly email to counties with cases ready for interview, continue to manage cases and interviews • Continue with 3 month and 6 month interviews 	<ul style="list-style-type: none"> • Complete • Complete
	March	<ul style="list-style-type: none"> • Send monthly email to counties with cases ready for interview, continue to manage cases and interviews • Begin 1 year interviews • Continue with 3 month and 6 month interviews • Present project and preliminary data at the Arbovirus Surveillance and Mosquito Control Workshop in St. Augustine, FL 	<ul style="list-style-type: none"> • Complete • Complete • Complete • Complete
	April	<ul style="list-style-type: none"> • Continue to manage cases and interviews • Continue with 6 month and 1 year interviews • Present preliminary results on the epidemiology biweekly call with county health departments 	<ul style="list-style-type: none"> • Complete • Complete • Complete
	May	<ul style="list-style-type: none"> • Continue to manage cases and interviews • Continue with 6 month and 1 year interviews 	<ul style="list-style-type: none"> • Complete • Complete
	June	<ul style="list-style-type: none"> • Continue with 6 month and 1 year interviews 	<ul style="list-style-type: none"> • Complete

	Jul.-Aug.	<ul style="list-style-type: none"> • Continue to manage cases and interviews • Continue with 1 year interviews • Preliminary data analysis • Prepared poster to present at ICEID • Prepared press release for ICEID • Present poster at ICEID 	<ul style="list-style-type: none"> • Complete • Complete • Complete • Complete • Complete
	Sept.	<ul style="list-style-type: none"> • Continue to manage cases and interviews • Continue with 1 year interviews 	<ul style="list-style-type: none"> • Complete • Complete
	Oct.	<ul style="list-style-type: none"> • Continue to manage cases and interviews • Continue with 1 year interviews • Present preliminary findings at annual Inter-Agency Arbovirus Task Force meeting 	<ul style="list-style-type: none"> • Ongoing • Ongoing • Ongoing
	Nov.	<ul style="list-style-type: none"> • Continue to manage cases and interviews • Continue with 1 year interviews 	<ul style="list-style-type: none"> • Ongoing
	Dec.	<ul style="list-style-type: none"> • Continue to manage cases and interviews • Continue with 1 year interviews 	<ul style="list-style-type: none"> • Ongoing • Ongoing
2016	Jan.	<ul style="list-style-type: none"> • Complete final analysis of data • Write final report • Prepare abstract for CSTE conference 	<ul style="list-style-type: none"> • Ongoing • Ongoing • Ongoing

5. Additional Projects

1. Analysis of Vaccine Exemptions in Florida

Major Competencies: Collect health data from appropriate sources, use statistical software to analyze and characterize epidemiologic data, interpret findings from epidemiologic studies, including recognition of the limitations of the data and potential sources of bias and/or confounding, recommend control measures,

prevention programs, or other public health interventions based on epidemiologic findings, give an oral presentation using appropriate media, present data graphically and know how to use graphic software, understand the basics of health-risk communication and be able to communicate epidemiologic findings in a manner that is easily understood by lay audiences

Public Health Impact

Unvaccinated individuals are at increased risk for vaccine-preventable disease, and herd immunity is decreased in areas with large numbers of unvaccinated individuals. Knowing where unvaccinated individuals live and if there are particular areas with high prevalence of vaccine exemptions can help target public health efforts and provide valuable information during outbreak investigations.

Brief Description of Project

Florida has had several outbreaks of vaccine preventable diseases among religiously exempt populations, but no previous work has been done to identify clusters of exempt populations throughout the state. Local public health decision-making could benefit from knowing geographic clustering of vaccine exemptions and their proximity to landmarks such as schools. I will be analyzing registered religious exemptions from Florida's immunization database Florida SHOTS to map exemption locations and identify areas of clustering. These maps will be shared with county health departments to help them better understand their population and make public health decisions.

Activities completed on project:

1. Performed preliminary descriptive analysis of data
2. Geocoded and mapped vaccine exemptions
3. Produced several maps showing prevalence of exemptions by census tract and county specific maps with key landmarks
4. Performed several spatial tests using various spatial analysis programs and created maps to show clustering of exemptions
5. Held meeting with heads of relevant departments including immunizations, surveillance, and acute disease to present initial findings and get feedback for future directions
6. Developed a web-based mapping application to share with county health departments
7. Held additional meetings with heads of relevant departments to discuss getting the mapping application approved for use in counties
8. Submitted an abstract to the CSTE 2015 Annual Conference
9. Began planning a training for county health departments on available immunization data sources and how to create a map to display immunization data available only at the county level
10. Presented on the bimonthly county health department director call
11. Sent out map to all county health departments
12. Submitted abstract to the Esri Health and Human Services GIS Conference

13. Helped prepare presentation for Florida Statewide meeting
14. Presented on Merlin Training Tuesday call for county health departments
15. Finished writing Python code so the map can be automatically updated with new data each month
- 16. Presented on county health department medical director monthly conference call**
- 17. Presented at Esri Health and Human Services GIS Conference**
- 18. Continue to fix bugs in program**

2. Analysis of Animal Rabies Testing and Human Prophylaxis in Florida

Major Competencies: Be able to interpret surveillance data, collect health data from appropriate sources, use statistical software to analyze and characterize epidemiologic data, recommend control measures, prevention programs, or other public health interventions based on epidemiologic findings, understand the basics of health-risk communication and be able to communicate epidemiologic findings in a manner that is easily understood by lay audiences

Public Health Impact

This project will identify areas for improvement in both rabies testing and administration of human prophylaxis, such as reducing the number of animals being killed for testing by ensuring resources are being used wisely and prophylaxis is only administered when recommended.

Brief Description of Project

This project will explore rabies testing practices and administration of prophylaxis by analyzing the data available in Florida's reportable disease surveillance system Merlin. Previous observations have noted that prophylaxis is not always accepted even when recommended and sometimes given even though it's not recommended; similarly, animals are sometimes killed and sent for testing even though they could be monitored. This analysis aims to describe current rabies practices and identify areas for improvement.

Activities completed on project:

1. Performed preliminary data analysis on cat rabies testing
2. Contacted several county health departments to learn more about ongoing rabies analysis projects at the county level
3. Completed data analysis on both laboratory testing data and human post-exposure prophylaxis data
4. Gave a Grand Rounds presentation on results to over 200 people at the state and county health departments
5. Starting investigating possible connections between adverse reactions to rabies post-exposure prophylaxis in Florida over the past several months
6. Continued monitoring adverse reactions to rabies PEP

3. Pertussis Case Review

Major Competencies: Be able to interpret surveillance data, design an epidemiologic study to address a health problem, collect health data from appropriate sources

Public Health Impact

Pertussis is a reportable disease, and all cases are reviewed by a case reviewer at the state office. Since the previous case reviewer recently left the department, there is a need for help in this area.

Brief Description of Project

Review all newly reported pertussis cases in Florida's reportable disease surveillance system Merlin to make sure information is complete and disease status has been properly assigned. If there are errors in the case, work with counties to correct them.

Activities Completed on Project:

1. Get trained on how to review pertussis cases and how to interpret the case definition
 2. Start to review all newly reported cases
 3. Give updates on weekly surveillance meeting conference call
- #### 4. Refugee Health Analysis

Major Competencies: Be able to interpret surveillance data, collect health data from appropriate sources, use statistical software to analyze and characterize epidemiologic data, present data graphically

Public Health Impact

Tens of thousands of refugees relocate to Florida every year and undergo health screenings both before and after arrival. No one has done any type of analysis of the diseases and conditions most prevalent in the refugee population to see how we could better serve their health.

Brief Description of Project

The Refugee Health Section recently became part of our division, so this project is a great way to learn more about the services they provide to refugees and to foster future collaborations. Refugees resettling in Florida have the option to undergo a health screening to obtain vaccinations, get a physical examination, and be tested for various diseases. I will be doing a descriptive analysis of this health screening data for the past 5 years to better understand the needs of the refugee population.

Activities Completed on Project:

1. Met with the Refugee Health Section to learn more about the program and the roles of each staff member
2. Worked with Refugee Health to extract relevant data from their system for the past 5 years
3. Started cleaning the data

5. Malaria Survey

Major Competencies: *Design a questionnaire or other data collection tool to address a health problem, collect health data from appropriate sources, use statistical software to analyze and characterize epidemiologic data, recommend public health interventions based on epidemiologic findings, understand the basics of health-risk communication and be able to communicate epidemiologic findings in a manner that is easily understood by lay audiences*

Public Health Impact

Assessing hospital physicians' and laboratorians' knowledge and practices regarding malaria patients will identify areas for education and hopefully improve the diagnosis, testing, and treatment of future patients.

Brief Description of Project

In light of the Ebola outbreak, hospital physicians and laboratorians have recently made significant errors in diagnosing, testing, and treating malaria patients in a timely manner. I will work with the vector-borne disease coordinator to design two surveys, one for hospital physicians and one for hospital laboratorians, to assess their knowledge and practices regarding potential malaria patients. Once we receive the results, we will provide educational materials to hospitals and share key findings.

Activities Completed on Project:

1. Wrote questions for both the physician and laboratorian surveys
2. Turned the surveys into pdf fillable forms to distribute to hospitals
3. Wrote a letter to infection control practitioners describing the project

6. CLUSTER, OUTBREAK OR FIELD INVESTIGATIONS

A. Measles Outbreak Investigation

Major Competencies: *Collect health data from appropriate sources, create a database for a health data set, use statistical software to analyze and characterize epidemiologic data, recommend control measures, prevention programs, or other public health interventions based on epidemiologic findings, write a field investigation report resulting from participation in an infectious disease outbreak investigation, understand the basics of health-risk communication and be able to*

communicate epidemiologic findings in a manner that is easily understood by lay audiences.

Public Health Impact

During this outbreak investigation we were able to identify and contact those potentially exposed to measles to determine who had evidence of immunity and who was at risk of developing measles. During the interviews, we were able to provide education about measles, encourage those at risk to get vaccinated, and identify any additional cases.

Brief Description of Project

On April 16, 2015 the Florida Department of Health in Indian River County (FDOH-Indian River) was notified of three potential measles cases, two of whom had recently returned from a mission trip to India. FDOH-Indian River requested assistance from the state office to conduct a contact investigation, so I was deployed with three other staff members to help. We worked with county staff to identify and conduct interviews with all those potentially exposed to measles and keep track of all contacts in an Epi Info database. After four days in the county, we returned to Tallahassee where we are continuing to manage data for the county.

Activities completed on project:

1. Deployed to Indian River County for four days
2. Adapted an Epi Info form for measles contacts for use in Indian River
3. Identified and conducted interviews with contacts
4. Held twice daily meetings with county and state staff
5. Managed the Epi Info database
6. Continuously updated our reportable disease surveillance system Merlin with contact investigation results
7. Continue to enter and manage data for the county

B. Carbapenem-resistant Enterobacteriaceae (CRE) Outbreak Investigation

Major Competencies: Collect health data from appropriate sources, create a database for a health data set, use statistical software to analyze and characterize epidemiologic data, recommend control measures, prevention programs, or other public health interventions based on epidemiologic findings, write a field investigation report resulting from participation in an infectious disease outbreak investigation.

Public Health Impact

CRE infections are difficult to treat since the bacteria are resistant to most antibiotics and can be deadly. This investigation aims to better understand the current outbreak to prevent future cases.

Brief Description of Project

A hospital in Miami-Dade County has noticed an increase in the number of CRE infections at their facility within the past year and has agreed to work with the state office on a joint investigation. This will be a long-term project; active CRE case finding will be conducted starting January 1, 2014. The investigation aims to describe the epidemiology of cases to determine risk factors for infection, describe the movement of CRE within the health care system, and to assess infection control practices to identify areas of concern. My role will be the data manager.

Activities completed on project:

1. Attended planning meeting
2. **Started to create a database for medical record reviews**

C. Foodborne Outbreak in Camp

Major Competencies: Collect health data from appropriate sources, create a database for a health data set, understand the basics of health-risk communication and be able to communicate epidemiologic findings in a manner that is easily understood by lay audiences.

Public Health Impact

This outbreak affects hundreds of children in multiple states and is a good opportunity to emphasize the importance of proper food handling.

Brief Description of Project

Several hundred children reported gastrointestinal illness after attending a large camp in San Destin, Florida. The camp was attended by children from multiple states. Foodborne illness is suspected based on reports of improper food storage and handling.

Activities completed on project:

1. Created Epi Info survey to send to camp attendees

Note: The camp trip was organized by a church in Alabama that refused to cooperate with public health authorities, leading to a legal battle between the church and the Alabama Department of Public Health. We were never able to obtain a list of camp attendees to distribute the survey.

D. STD Investigation

Major Competencies: Be able to interpret surveillance data, design an epidemiologic study to address a health problem, collect health data from appropriate sources, use statistical software to analyze and characterize epidemiologic data, interpret findings from epidemiologic studies, write a field investigation report resulting from participation in an infectious disease outbreak investigation, understand the basic process of preparing

a manuscript for publication, give an oral presentation using appropriate media, present data graphically.

Public Health Impact

Sexually transmitted diseases (STD) have been increasing at both the county and state level. This cluster is a good opportunity for public health officials to make connections with a vulnerable group and offer testing to enhance STD surveillance.

Brief Description of Project

During a routine STD investigation, it was discovered that over 150 people had resided at the same residential house. It was later learned that the house belongs to the producer of a small adult film production company and that it is used to house actors for short periods of time. LexisNexis Accurint was used to identify all those individuals residing in the house over the past 35 years, and PRISM was used to identify all STDs among residents. An analysis was completed to describe STD transmission in this unique group.

Activities completed on project:

- 1. Held several meetings with key staff members in the STD section***
- 2. Made a site visit to the county health department to learn more about the situation and to hear about local outreach activities to improve testing and reduce the STD rate***
- 3. Completed analysis***
- 4. Presented on CSTE peer-to-peer webinar***
- 5. Prepared slides for Grand Rounds presentation in December***
- 6. Wrote first draft of manuscript***
- 7. Continue to have meetings with key staff***
- 8. Continue to edit the manuscript***

E. Listeriosis Cluster Investigation

Major Competencies: Collect health data from appropriate sources, recommend control measures, prevention programs, or other public health interventions based on epidemiologic findings, understand the basics of health-risk communication and be able to communicate epidemiologic findings in a manner that is easily understood by lay audiences, design a questionnaire or other data collection tool to address a health problem.

Public Health Impact

Listeriosis is the third leading cause of death from foodborne illness. The Florida Department of Health has identified a cluster of listeriosis cases in Palm Beach, and it is highly likely these cases acquired listeriosis from the same source. Identifying the source can prevent future cases.

Brief Description of Project

Palm Beach has had nine listeriosis cases from September 2013 to August 2015. Specimens from eight of the cases were analyzed using pulsed-field gel electrophoresis (PFGE) and whole genome sequencing (WGS); all eight isolates had an indistinguishable PFGE pattern and were virtually identical by WGS. During initial interviews, no common food source or item was identified, so per CDC's recommendation the most recent cases were re-interviewed using a hypothesis generating questionnaire. A common grocery store was identified among two cases, so all nine cases were re-interviewed regarding exposure to that particular store. A joint investigation was initiated with the Florida Department of Agriculture and Consumer Services.

Activities completed on project:

- 1. Developed questionnaire that focused on exposures specific to the suspected grocery store***
- 2. Helped re-interview cases***
- 3. Wrote talking points for discussions with store owners and other key players***
- 4. Participated in several conferences calls with relevant partners including the CDC, Florida Department of Agriculture and Consumer Services, FDA, Florida Department of Health in Palm Beach County, FSIS, and university researchers***
- 5. Created several maps to describe the outbreak and past cases***

7. OTHER ACTIVITIES

A. Meetings, conferences, or presentations attended:

1. Toured and visited with key staff at the Bureau of Public Health Laboratories Tampa and Jacksonville
2. Attend monthly Epidemiology grand rounds, biweekly epidemiology CHD conference call, weekly surveillance investigations data review, weekly Training Tuesdays
3. Participate in CSTE subcommittee calls
4. Met with key staff at several county health departments including Hillsborough, Duval, Broward, and Leon counties
5. Participate in Epidemiology journal club
6. Participate in several workgroups including Merlin User Group, SAS Workgroup, and EpiInfo Workgroup
7. Attended Florida Statewide Epidemiology meeting
8. Attend Highly Pathogenic Avian Influenza Preparedness meeting for State and Federal Regulatory and Florida Zoo, Aquarium, and Exotic Avian Stakeholders

B. Presentations given (date, title, and forum):

1. November 2014, Preliminary data from chikungunya long-term chronic symptom follow-up, Epidemiology biweekly call with county health departments
2. January 29, 2015, Florida's syndromic surveillance system ESSENCE, Dodd short course of the Florida Mosquito Control Association
3. February 26, 2015, Chikungunya Virus Infections in Florida, 2014, University of Florida's Emerging Pathogens Institute Research Day (poster)
4. March 24, 2015, Long-Term Public Health Impacts of Chikungunya Virus Infection in Florida Residents, Arbovirus Surveillance and Mosquito Control Workshop
5. March 31, 2015, Animal Testing and Rabies Post-Exposure Prophylaxis, 2014, Grand Rounds
6. June 17, 2015, Chikungunya Virus Infections in Florida, 2014, CSTE Annual Conference
7. **August 26, 2015, Chikungunya Virus Infections—Florida, 2014, ICEID (poster)**
8. **August 26, 2015, Long-Term Impact of Chikungunya Virus Infections—Florida, 2014, ICEID (poster)**
9. **September 14, 2015, Visualized Religious Exemptions for Vaccinations Using an Interactive, Web-Based Map, Esri Health and Human Services GIS Conference**
10. **October 14, 2015, Long-Term Impact of Chikungunya Virus Infections—Florida, 2014, Annual Interagency Arbovirus Task Force Meeting**

C. Training courses, seminar series attended:

1. Esri's online course Going Places with Spatial Analysis
2. Florida Poison Control Data in ESSENCE training
3. Esri's online course Basics of Python for ArcGIS 10
4. Esri's online course Python Scripting for Geoprocessing Workflows
5. Esri's online course Python Scripting for Map Automation
6. Florida Hurricane Exercise Training

D. Web cast presentations:

1. Present chikungunya long-term chronic symptom follow-up project overview on weekly Training Tuesday conference call with county health departments
2. Present vaccine exemption mapping project on weekly Training Tuesday call
3. **Present STD investigation on CSTE fellowship peer-to-peer webinar**

E. Conference Abstracts (Title, Month Submitted, Conference, Acceptance Status)

1. Chikungunya Virus Infections in Florida, 2014, October 2014, ICEID, accepted for poster
2. Long-term Impact of Chikungunya Virus Infections in Florida, October 2014, ICEID, accepted for poster
3. Chikungunya Virus Infections in Florida, 2014, January 2015, CSTE, accepted for presentation

4. Evaluation of Cryptosporidiosis Surveillance in Florida, 2011-2013, January 2015, CSTE, not accepted
5. Chikungunya Virus Infections in Florida, 2014, January 2015, 2015 Emerging Pathogens Institute Research Day, accepted
6. Visualizing Religious Exemptions for Vaccinations Using an Interactive, Web-Based Map, March 2015, CSTE, not accepted
7. Visualized Religious Exemptions for Vaccinations Using an Interactive, Web-Based Map, June 2015, Esri Health and Human Services GIS Conference, accepted for presentation

F. Publications (Title, Month Submitted, Submitted to, Acceptance Status)

1. Notes from the Field: Transmission of Chikungunya Virus in the Continental United States—Florida, 2014, November 2014, MMWR, published

G. Other

1. Respond to public phone calls concerning *Vibrio vulnificus* in Florida waters
2. Hillsborough cryptosporidium outbreak
 - a. Assist county with data entry
 - b. Interview cases and report them in Merlin, the notifiable disease surveillance system
3. Evaluation of ESSENCE's Ability to Predict Chikungunya Cases
 - b. Trace chikungunya cases reported in Merlin back to ESSENCE
 - c. Determine the ESSENCE query that best encompasses reported cases
4. Use ESSENCE to assist EIS officer in medical record review of chikungunya and dengue cases in Miami-Dade County
5. Create Epi Info database for a chikungunya cluster investigation in St. Lucie County
6. Create maps for several epi staff
7. Participate as an actor in training exercise for county health department staff at Statewide Training Meeting
8. Help review extended data questions for Giardia case screen in Merlin
9. Called clients to set up appointments for a new screening requirement for Florida's Children's Medical Services

Competency	Manner Fulfilled	Date Anticipated	Completion Status (In-Progress, Ongoing, Complete)
Design surveillance systems to assess health problems	<ul style="list-style-type: none"> • CRE investigation 	<ul style="list-style-type: none"> • Started April 2015 	<ul style="list-style-type: none"> • Ongoing
Evaluate surveillance systems and know the limitations of surveillance data	<ul style="list-style-type: none"> • Evaluate the surveillance of cryptosporidiosis in Florida 	<ul style="list-style-type: none"> • Started September 2014 • Abstract December 2014 	<ul style="list-style-type: none"> • Complete • Complete
Design an epidemiologic study to address a health problem	<ul style="list-style-type: none"> • Long-term chikungunya project • CRE investigation 	<ul style="list-style-type: none"> • Started July 2014 • Started April 2015 	<ul style="list-style-type: none"> • Ongoing
Design a questionnaire or other data collection tool to address a health problem	<ul style="list-style-type: none"> • Updated chikungunya interview questions used for all chikungunya cases in Florida • Reviewed extended data questions for giardia cases • CRE investigation • Camp foodborne outbreak • Malaria Survey 	<ul style="list-style-type: none"> • April 2015 • May 2015 • Started April 2015 • July 2015 • October 2015 	<ul style="list-style-type: none"> • Ongoing • Completed • Ongoing • Ongoing • Ongoing

Competency	Manner Fulfilled	Date Anticipated	Completion Status (In-Progress, On-going, Complete)
Collect health data from appropriate sources (e.g. case interviews, medical records, vital statistics records, laboratory reports, or pathology reports)	<ul style="list-style-type: none"> • Perform chikungunya case review • Interview cases for long-term follow up project • Use appropriate datasets to evaluate the cryptosporidiosis surveillance system • Extracted data from ESSENCE to assist in chikungunya and dengue medical record extraction in Miami-Dade County • Vaccine Exemption Analysis • Rabies Analysis 	<ul style="list-style-type: none"> • Started August 2014 • Started August 2014 • Started September 2014 • August 2014 • Started December 2014 • Started January 2015 	<ul style="list-style-type: none"> • Ongoing • Ongoing • Complete • Complete • Ongoing • Ongoing
Create a database for a health data set	<ul style="list-style-type: none"> • Used Epi Info to create a database for a chikungunya cluster investigation in St. Lucie County • Measles investigation • Created Access database for CRE Investigation 	<ul style="list-style-type: none"> • August 2014 • April 2015 • October 2015 	<ul style="list-style-type: none"> • Complete • Ongoing • Ongoing

Competency	Manner Fulfilled	Date Anticipated	Completion Status (In-Progress, On-going, Complete)
Use statistical software to analyze and characterize epidemiologic data	<ul style="list-style-type: none"> • Analyze data from chikungunya long-term chronic symptom follow-up interviews • Analyze data from cryptosporidiosis surveillance evaluation • Vaccine Exemption Analysis • Rabies Analysis 	<ul style="list-style-type: none"> • Started August 2014 • Started September 2014 • Started December 2014 • Started January 2015 	<ul style="list-style-type: none"> • Ongoing • Complete • Ongoing • Ongoing
Interpret findings from epidemiologic studies, including recognition of the limitations of the data and potential sources of bias and/or confounding.	<ul style="list-style-type: none"> • Chikungunya long-term chronic symptom follow-up • Vaccine Exemption Analysis • Rabies Analysis • CRE investigation 	<ul style="list-style-type: none"> • Started August 2014 • Started December 2014 • Started January 2015 • Started April 2015 	<ul style="list-style-type: none"> • Ongoing • Ongoing • Ongoing • Ongoing

Competency	Manner Fulfilled	Date Anticipated	Completion Status (In-Progress, On-going, Complete)
Recommend control measures, prevention programs, or other public health interventions based on epidemiologic findings	<ul style="list-style-type: none"> • Chikungunya long-term chronic symptom follow-up • Cryptosporidiosis surveillance evaluation • Vaccine Exemption Analysis • Rabies Analysis • Measles investigation • CRE investigation 	<ul style="list-style-type: none"> • Started August 2014 • Started September 2014 • Started December 2014 • Started January 2015 • April 2015 • Started April 2015 	<ul style="list-style-type: none"> • Ongoing • Complete • Ongoing • Ongoing • Ongoing • Ongoing
Write a field investigation report resulting from participation in an outbreak investigation of either acute disease outbreak or a time-sensitive investigation	<ul style="list-style-type: none"> • Measles outbreak • CRE outbreak 	<ul style="list-style-type: none"> • Started April 2015 • Started April 2015 	<ul style="list-style-type: none"> • Ongoing • Ongoing
Write a surveillance report	<ul style="list-style-type: none"> • Write a report for the cryptosporidiosis surveillance system evaluation 	<ul style="list-style-type: none"> • Started September 2014 	<ul style="list-style-type: none"> • Complete

Competency	Manner Fulfilled	Date Anticipated	Completion Status (In-Progress, On-going, Complete)
Make an oral presentation using appropriate media	<ul style="list-style-type: none"> • Presented chikungunya long-term follow up project on weekly Training Tuesday conference call with county health departments • Presented chikungunya long-term follow up project on biweekly epidemiology call with CHDs • Presented on Florida's syndromic surveillance system ESSENCE at Dodd Mosquito Control Conference • Present on chronic chikungunya at mosquito control conference • Rabies grand rounds • Give a breakout presentation on chikungunya at 2015 CSTE conference 	<ul style="list-style-type: none"> • August 2014 • November 2014, April 2015 • January 2015 • March 2015 • March 2015 • June 2015 	<ul style="list-style-type: none"> • Complete • Complete • Complete • Complete • Complete • Complete
Present data graphically and know how to use graphic software	<ul style="list-style-type: none"> • Use GIS to assist in preparing weekly arbovirus surveillance reports • Vaccine Exemption Analysis 	<ul style="list-style-type: none"> • September 2014 • Started December 2014 	<ul style="list-style-type: none"> • Ongoing • Ongoing

Competency	Manner Fulfilled	Date Anticipated	Completion Status (In-Progress, Ongoing, Complete)
Understand the basics of health risk communication and communicate epidemiologic findings in a manner easily understood by lay audiences	<ul style="list-style-type: none"> • Responded to public phone calls concerning <i>Vibrio vulnificus</i> in Florida waters • Vaccine Exemption Analysis • Rabies Analysis • Measles investigation • Hurricane Exercise 	<ul style="list-style-type: none"> • July 2014 • Started December 2014 • Started January 2015 • April 2015 • May 2015 	<ul style="list-style-type: none"> • Complete • Ongoing • Ongoing • Ongoing • Completed
Master's level fellows: present a poster at a national or regional meeting, public a technical report, or prepare a manuscript for publication in a peer reviewed journal	<ul style="list-style-type: none"> • Wrote a MMWR article on chikungunya • Present poster on chikungunya at 2015 Emerging Pathogens Institute Research Day • Present 2 posters on chikungunya at ICEID Conference 	<ul style="list-style-type: none"> • November 2015 • February 2015 • August 2015 	<ul style="list-style-type: none"> • Completed • Completed • Ongoing
Doctoral-level fellows: prepare a manuscript for publication in a peer reviewed journal	Not Applicable	Not Applicable	
Have a basic understanding of public health law*	<ul style="list-style-type: none"> • CSTE Fellowship Training 	<ul style="list-style-type: none"> • August 2014 	<ul style="list-style-type: none"> • Complete
Understand the Health Insurance Portability and Accountability Act of 1996 (HIPPA)*	<ul style="list-style-type: none"> • CSTE Fellowship Training 	<ul style="list-style-type: none"> • August 2014 	<ul style="list-style-type: none"> • Complete
Distinguish between public health research and public health practice*	<ul style="list-style-type: none"> • CSTE Fellowship Training 	<ul style="list-style-type: none"> • August 2014 	<ul style="list-style-type: none"> • Complete

Competency	Manner Fulfilled	Date Anticipated	Completion Status (In-Progress, On-going, Complete)
Understand policies for the protection of human subjects in research and the role of an Institutional Review Board (IRB)*	<ul style="list-style-type: none"> • CSTE Fellowship Training 	<ul style="list-style-type: none"> • August 2014 	<ul style="list-style-type: none"> • Complete
Know the essential public health functions*	<ul style="list-style-type: none"> • CSTE Fellowship Training 	<ul style="list-style-type: none"> • August 2014 	<ul style="list-style-type: none"> • Complete
Understand the roles of local, state, and federal public health agencies*	<ul style="list-style-type: none"> • CSTE Fellowship Training 	<ul style="list-style-type: none"> • August 2014 	<ul style="list-style-type: none"> • Complete
Appreciate the diversity of how epidemiology is used in different program areas*	<ul style="list-style-type: none"> • CSTE Fellowship Training 	<ul style="list-style-type: none"> • August 2014 	<ul style="list-style-type: none"> • Complete
Effectively negotiate cultural sensitivity issues*	<ul style="list-style-type: none"> • CSTE Fellowship Training 	<ul style="list-style-type: none"> • August 2014 	<ul style="list-style-type: none"> • Complete

SUMMARY OF OVERALL FELLOWSHIP EXPERIENCE TO DATE

a. Fellow comments:

I am very happy with how the fellowship is going so far!

b. Mentors comments:

The following participants in the CDC/CSTE Applied Epidemiology Fellowship program have approved this Quarterly Report in its current form:

Fellow Signature: _____

Date: _____

Mentor Signature: _____

Date: _____

Mentor Signature: _____

Date: _____