Overview of the Syphilis Outbreak Detection Guidance

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June 25, 2018
Webinar Housekeeping

• Please note that today’s webinar is being recorded
  o The webinar recording will be available in the webinar library on CSTE’s website

• Please place your phone line on mute

• There will be a question-and-answer session at the end of the webinar using the chat box
Webinar Agenda

• Introduction and Overview of the Document
• Introduction to CDC’s Outbreak Coordinator Role
• Examples from Local Jurisdictions
• Question and Answer
• Issue of outbreak detection first brought up on an STD Subcommittee Call in September 2012
• Smaller workgroup convened to discuss document outline, form and content
  o Multiple contributors from CDC and state and local jurisdictions
• Near final draft reviewed during a roundtable discussion at the 2014 CSTE Conference
Background

• Long delay in collecting examples from state and local jurisdictions to be included in the document
• Regrouped on this document in the fall of 2017
• Final document produced and online in Spring 2018
“This document was developed to give STD programs a framework for understanding their epidemiology, determining if and when an outbreak might be occurring, and determining when additional resources and activities could be needed to prevent further transmission of disease.”
Introduction

• Why focus on syphilis?
  o General overview of syphilis trends
  o Impact of outbreaks
  o Document intent, applicability
Routine Activities

- Emphasizes the importance of routine review of case data
  - Establish baseline data and frequency of reports
  - Assess subpopulations of interest
  - Providers, laboratories and reporting issues
  - Importance of meeting with clinical and field staff
Defining Outbreaks

• What is an outbreak?
• Identifying data sources
• Different approaches for identifying outbreaks
  o Case counts
  o Percent change
  o Statistical analyses
  o Changes within specific groups or areas
What parameters/criteria should be included in defining an outbreak?

- Defining baselines and establishing thresholds
  - Should be done before considering an outbreak
  - Establish the time period of reference and of interest
Approaches to thinking about outbreaks

- Populations
  - MSM
  - Women
- Geography or venues
  - County, town, neighborhood
  - New club
- Clinical characteristics
  - Ocular syphilis
Appendix A

• Examples of syphilis outbreak definitions
• Five examples from state and local jurisdictions
• The heart of the document!
Appendix B

• Resources
  o Statistical analysis tools
  o Communication tools
  o CDC resources
Appendix C

- Outbreak response
- Relatively brief overview of the steps to consider once an outbreak has been established
DSTDP’s Outbreak Coordination

Alison Ridpath MD, MPH
Background

- Historically, no clear process internally at CDC for responding to outbreak technical assistance (TA) requests
  - Many CDC staff on calls
  - Lack of communication
  - No point person

- Need for sustainability and structure in DSTDP’s response
  - Improve support to jurisdictions
  - Use time efficiently

- Ensure all branches aware of and provide input for responses
My Role

- Establishing and leading the DSTDP’s outbreak group
- Coordinating CDC’s response to outbreak related TA requests
- Developing documents related to outbreak response
STD Outbreak Response and Coordination Effort (SOURCE)

- Internal DSTDP forum for developing processes and coordinate response
- All Division branches represented
- Venue for cross-branch discussions for TA requests and provides situational awareness
SOURCE’s Goals

- Establish processes and accountability within DSTDP for monitoring, responding, and addressing TA requests

- Coordinate DSTDP’s guidance and assistance to partners in discovering and responding to outbreaks

- Help partners identify outbreak response resources

- Assess the effectiveness of investigations and interventions

- Coordinate response activities with other CDC Divisions and Centers
Tools developed

- **Internal SOURCE Operational Plan**
  - Evaluation component

- **Syphilis Outbreak Detection Guide**
  - STD PCHD (PS19-1901) Strategy Area II: Conduct Disease Investigation and Intervention
    - Strategy 6: Respond to STD-related outbreaks
    - a. Review STD surveillance data by the core epidemiologic variables at regular intervals to identify outbreaks and other significant changes in STD epidemiology
Currently Working On Tools to assist jurisdictions with outbreak responses (outbreak kit)

- Outbreak investigation and response plan template
  - STD PCHD (PS19-1901) Strategy Area II: Conduct Disease Investigation and Intervention
    - Strategy 6: Respond to STD-related outbreaks
    - b. Develop and maintain an outbreak capacity plan to respond to significant changes in STD epidemiology.

- Template HANs (LGV, congenital syphilis, treatment resistant GC)
- Lab protocols
- Best practices for responses
Final thoughts

▪ Your first point of contact for any program issues or potential outbreaks should always be your prevention specialist/project officer or STD_AAPPS@cdc.gov.

▪ If you have thoughts on what other types of tools we should be considering that would be helpful to your program please feel free to contact me, aridpath@cdc.gov

▪ We plan to work collaboratively with state and local health departments on these tools and we hope to have a more active role in the future at NCDS to help meet your needs.
Syphilis Outbreak Response

HIV/STD Program
Tacoma-Pierce County Health Dept
June 25th, 2018

Evelyn Manley Rodriguez: Disease Investigation Coordinator

Corey Betz: DIS II, Team Lead
OBJECTIVE:

The purpose of the Syphilis Outbreak Response Plan is to ensure a timely, appropriate, and effective program response by the HIV/STD team at Tacoma Pierce County Health Department.
OUTBREAK THRESHOLD

Ten or more cases \((P&S, EL)\) for 3 consecutive months.

\(\text{Or}\)

Fifteen cases in one month.
OUTBREAK RESPONSE:

A. Communicate with State DOH, TPCHD Division Director & PIO
B. Inform DIS investigation team members of suspected outbreak.
   - Realign work priorities as follows:
     (1) Chlamydia: untreated cases only
     (2) Gonorrhea: untreated, pregnant, MSM cases only
     (3) HIV: no change
OUTBREAK RESPONSE:

C. Operations:

(1) Soft response plan:
   - Pull SME off clinic duties
   - Assign additional DIS to assist with case investigations

(2) Firm response plan:
   - Utilize DOH Field Representatives to assist with case investigations
   - Maximize DIS from elsewhere within the Department
OUTBREAK RESPONSE CESSATION:

A. Declaring an end to the outbreak takes place when number of new cases drops below the threshold level

B. Review with Outbreak Response Team what went well and what can be improved

C. Evaluate effectiveness, efficiency, and productivity of Response

D. Implement improvement plan to address findings

E. Communicate findings with Division, Director of Health, DOH & consider broader sharing through publication and presentation at conferences
Our Mission: To protect and improve the health and environment of all Kansans.

STI/HIV Disease Intervention
Outbreak Detection

Stephanie Green
STI/HIV Section Chief
Classification of Outbreaks

Short-Term Incident Outbreak: An increase in morbidity over 19% in any geographically defined area for a given time frame when compared to the same geographic area and a corresponding time frame.

Sustained Incidence Increase: An increase in morbidity over 19% in any geographically defined area for a given time frame, where the increase persists for a period of time longer than six months.

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Identification of Outbreaks

- **Passive Surveillance** – laboratory reports are used to monitor disease trends and is used to identify increases in morbidity by geographic areas by comparing the data with historical data from previous years.

- **DIS** – as soon as any investigator suspects that there may be an outbreak, they should immediately notify management.
Southeast Kansas Outbreak

8/14/2017 – 10/06/2017

• 21 cases of early (infectious) syphilis identified (19 ID)
• 356 contacts (contact index 4.19) cluster index (12.76)
• Counties: Allen, Cherokee, Crawford, Labette, Montgomery, Neosho, Wilson, and Woodson
• Meth use
Our Mission: To protect and improve the health and environment of all Kansans.
Questions

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NYC outbreak thresholds; Methodology and examples

Presented by:
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June 2018
Outbreak threshold

Key principles

• Quarterly examination of surveillance data

• Examine GC and Syphilis
  – By sex, borough, age group, race/ethnicity

• Compare case numbers for a given quarter, to the average number in the previous 3 time periods (“moving average”)

• Enter outbreak detection mode when > than expected number of cases is sustained over 3 time periods
Demonstration Data: Reported P&S Syphilis, NYC Jan 2012 - Mar 2018

- Number of Cases
- YEAR_Month
- Female P&S
- Avg of prev 3 time frames with 10% error bar

- P&S
- Avg of prev 3 time frames with 10% error bar
Demonstration Data: Reported P&S Syphilis, NYC Jan 2012 - Mar 2018

Number of Cases
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Number of Cases

- P&S
- Avg of prev 3 time frames with 10% error bar
Demonstration Data: Reported **P&S Syphilis**, NYC Jan 2012 - Mar 2018

- Number of Cases
- **P&S**
- Avg of prev 3 time frames with 10% error bar
Reported Male P&S Syphilis, NYC Jan 2012 - Mar 2018

- Male P&S
- Avg of prev 3 time frames with 10% error bar
Challenges

• What is the optimal observation period?
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• What is the optimal observation period?
• When do we re-define baseline?
Reported Male P&S Syphilis, NYC Jan 2012 - Mar 2018

- male P&S
- Avg of prev 3 time frames with 10% error bar
Challenges

• What is the optimal observation period?
• When do we re-define baseline?
• Beyond provider and public education, and field services, how can we act on these data?
Thanks.

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