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To: U.S. State and Territorial Epidemiologists

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Subject: 2018 Changes to the National Notifiable Diseases Surveillance System and other relevant updates

This memorandum summarizes changes to the National Notifiable Diseases Surveillance System (NNDSS) based upon position statements approved by the Council of State and Territorial Epidemiologists (CSTE) at their annual meeting in June 2017, as well as other relevant updates. Please share this letter with surveillance and informatics staff in your jurisdictions who are responsible for collection or submission of NNDSS data to CDC. The NNDSS web site (<https://wwwn.cdc.gov/nndss/>) is expected to be updated with information relevant to surveillance year 2018 in mid-December 2017, and will include the 2018 list of national notifiable diseases, the 2018 event code list, and new and revised national surveillance case definitions. The 2018 NNDSS event code list will include information about new and revised disease-specific event codes for submission of data to CDC's NNDSS (<https://wwwn.cdc.gov/nndss/case-notification/related-documentation.html>). The following list summarizes the topics covered in the three sections of this memorandum:

- Section I has four Parts:
 - Part A includes the addition of two new diseases to the list of national notifiable diseases beginning in surveillance year 2018 and Message Mapping Guide (MMG) efforts currently underway for these conditions.
 - Part B includes revisions to national surveillance case definitions for three conditions that are currently nationally notifiable, and related MMG efforts.

- Part C includes two conditions that CSTE has placed under standardized surveillance that are not being added to the list of national notifiable conditions. However, since the CDC programs would like to receive data for these conditions, surveillance case definitions will be posted to the NNDSS web site (<https://wwwn.cdc.gov/nndss/>) for these conditions.
- Part D includes two conditions CSTE has placed under standardized surveillance that are not being added to the list of national notifiable conditions. Because CDC programs have not requested data for these conditions be sent to CDC, surveillance case definitions for these conditions will not be displayed on the NNDSS web site.
- Section II provides a summary of implementation efforts for the Foodborne and Diarrheal Diseases (FDD) MMG, which we expect to implement in 2018 to support NNDSS. It also includes related changes to event codes and the weekly NNDSS table display to better support program data needs.
- Section III summarizes the transition of NNDSS weekly data from the *Morbidity and Mortality Weekly Report (MMWR)* to the NNDSS Data and Statistics webpage <https://wwwn.cdc.gov/nndss/data-and-statistics.html> and changes in table format and content of the NNDSS weekly tables.

Section I, Part A: Summary of 2017 CSTE position statements requesting the addition of two new diseases to the list of national notifiable diseases beginning in 2018 for 2018 cases, and related MMG efforts:

a. Carbapenemase Producing Carbapenem-Resistant *Enterobacteriaceae* (CP-CRE):

Position Statement 17-ID-04 titled *Public Health Reporting and National Notification of Carbapenemase Producing Carbapenem-Resistant Enterobacteriaceae (CP-CRE) for E. coli, Klebsiella spp. and Enterobacter spp.* (<http://c.ymcdn.com/sites/www.cste.org/resource/resmgr/2017PS/2017PSFinal/17-ID-04.pdf>) recommends CP-CRE and its subtypes be added to the national notifiable conditions list and it adopts a new national surveillance case definition for these conditions. CP-CRE are an emerging public health problem in the

United States. Early detection and aggressive implementation of infection prevention and control strategies are necessary to prevent further spread of CP-CRE, especially novel CP-CRE. Application of a standardized definition through active public health surveillance will allow for timely public health action.

To help facilitate implementation of this position statement, a CSTE-CDC working group was established to identify the data elements needed for the creation of a CP-CRE disease-specific MMG. The CP-CRE working group expects to have the data element list finished by December 2017 and we anticipate being able to start MMG development in January 2018 and to publish the MMG later in 2018.

CDC does not have Office of Management and Budget Paperwork Reduction Act (OMB PRA) approval to receive data for these conditions yet, but we are working to obtain approval. We will inform you when we have OMB PRA approval and can request data be sent to CDC for these conditions. Because we expect OMB PRA approval to receive case notifications for CP-CRE before the disease-specific MMG is ready, you will be asked to begin sending CP-CRE case notifications using the generic v2 HL7 case notification message.

b. Perinatal hepatitis C virus infection

Position statement 17-ID-08 titled *Public Health Reporting and National Notification of Perinatal Hepatitis C Virus Infection*

(<http://c.ymcdn.com/sites/www.cste.org/resource/resmgr/2017PS/2017PSFinal/17-ID-08.pdf>) establishes a standardized case definition for perinatal hepatitis C

virus (HCV) infection that would assist in quantifying the scope of the increase in perinatal HCV transmission that was noted by a number of jurisdictions, ensure appropriate classification of perinatally exposed cases, and support identification of cases which require additional follow-up and investigation. The current position statement also adds perinatal HCV to the national notifiable condition list.

CDC is currently working to finish revisions to the finalized hepatitis MMG by the end of December 2017, to enable jurisdictions to report data for this new national notifiable condition through disease-specific hepatitis HL7 case notifications beginning in January 2018. Jurisdictions who have already transitioned to hepatitis HL7 case notifications should update their messages so they can send perinatal hepatitis C data to CDC. Refer to the revision history tab in the revised hepatitis MMG for the details about the specific changes made to this MMG. Jurisdictions that have not transitioned to HL7 case notifications, should submit data for this new condition using core data elements in legacy hepatitis National Electronic Telecommunications System for Surveillance (NETSS) records, the NEDSS Base System master message, or generic v1 MMG.

Section I, Part B: Summary of 2017 CSTE position statements requesting revisions to the national surveillance case definitions (beginning in 2018 for new 2018 cases), for three conditions that are currently nationally notifiable, and related MMG efforts:

a. Anthrax

Position statement 17-ID-02 titled *Revision for the Standardized Case Definition, Case Classification, and National Surveillance for Anthrax*

(<http://c.ymcdn.com/sites/www.cste.org/resource/resmgr/2017PS/2017PSFinal/17-ID-02.pdf>) updates anthrax case definition and its application to national

surveillance. These updates include revisions to the laboratory diagnostics criteria, improvements in the consistency in terms used for the types of anthrax, refinements to the symptoms and signs to improve sensitivity and specificity of case descriptions for each disease type, and the addition of infections with *Bacillus cereus* strains that express anthrax toxin genes.

The development of a disease-specific MMG for anthrax has not been given a high priority at this time. Jurisdictions should continue to send anthrax data to CDC using the generic v2 MMG and if they have not transitioned to HL7 case

notifications, they should continue to submit data through their current legacy reporting mechanisms.

b. Shiga Toxin-Producing *Escherichia coli* (STEC)

Position statement 17-ID-10 titled *Public Health Reporting and National Notification for Shiga Toxin-Producing Escherichia coli (STEC)*

(<http://c.ymcdn.com/sites/www.cste.org/resource/resmgr/2017PS/2017PSFinal/17-ID-10.pdf>) updates the current case definition to prevent an increase in

underreporting of Shiga toxin-producing *Escherichia coli* (STEC) infection cases and to make case definitions for enteric bacterial pathogens more consistent. Key updates include making the detection of Shiga toxin, Shiga toxin genes, *E. coli* O157 or STEC/EHEC by CIDT without culture-confirmation in a clinically compatible person classified as a probable STEC case and making illnesses among persons who are epidemiologically linked to a confirmed or laboratory-diagnosed probable case classified as probable epidemiologically-linked cases.

The 2014 (STEC) case definition (which is based upon CSTE position statement 13-ID-01) classifies a positive culture-independent diagnostic testing (CIDT) result detecting Shiga toxin, which is not culture-confirmed, as a suspected case.

These cases were not reported to CDC prior to 2018 for use in national surveillance. As the use of CIDT increases, counting only culture-confirmed cases will grossly underestimate the total number of laboratory-diagnosed STEC cases leading to the need to modify the current case definition.

Currently, the Foodborne and Diarrheal Diseases (FDD) MMG, which is under development, includes disease-specific data for STEC. This MMG is currently being pilot-tested and is expected to be finalized in June 2018.

c. Syphilis

Position statement 17-ID-11 titled *Update to Public Health Reporting and National Notification for Syphilis*

(<http://c.ymcdn.com/sites/www.cste.org/resource/resmgr/2017PS/2017PSFinal/17-ID-11.pdf>) updates the syphilis case definition to ensure consistent and accurate

reporting of cases, accurate capture of manifestations of syphilis and to

appropriately characterize the current epidemic and any future changes. Changes to nomenclature were made to more accurately describe the different stages of syphilis including the following:

- Rename “Syphilis, early latent” to “Syphilis, early non-primary, non-secondary”
- Create a new category, “Syphilis, unknown duration or late”; this category comprises cases previously categorized as “Syphilis, late latent” and “Syphilis, late with clinical manifestations”
- Retire “Syphilis, late latent”; these cases should be reported as “Syphilis, unknown duration or late”
- Retire “Syphilis, late with clinical manifestations (including late benign syphilis and cardiovascular syphilis)”; these cases should be reported as “Syphilis, unknown duration or late” and the late clinical manifestations should be noted using the new “Late Clinical Manifestations” variable.

The Sexually Transmitted Diseases MMG is being updated to support the revised case definition and updated nomenclature. The revisions history tab of the STD MMG will provide more detail on the changes made to the MMG. The STD MMG is currently being pilot-tested.

Section I, Part C: Summary of 2017 CSTE position statements requesting two conditions be placed under standardized surveillance but not be added to national notifiable list.

Beginning in 2018, the following two conditions are under standardized surveillance and while these conditions are not nationally notifiable, CDC programs are requesting data for these conditions be sent to the NNDSS. Event codes for the following conditions are included in the 2018 NNDSS event code list

a. Acute Flaccid Myelitis

Position statement 17-ID-01 titled *Revision to the Standardized Surveillance and Case Definition for Acute Flaccid Myelitis*

<http://c.ymcdn.com/sites/www.cste.org/resource/resmgr/2017PS/2017PSFinal/17-ID-01.pdf>) revises the standardized case definition and surveillance for Acute Flaccid Myelitis (AFM). The revision provides clarification by separating laboratory criteria from clinical criteria. The case classifications are confirmed and probable. A confirmed case is one that is clinically compatible and has confirmatory laboratory evidence, i.e. MRI showing spinal cord lesion largely restricted to gray matter and spanning one or more spinal segments. A probable case is clinically compatible and has supportive laboratory evidence, i.e. CSF showing pleocytosis (white blood cell count >5 cells/mm³).

Jurisdictions should send AFM data to CDC using the generic v2 MMG and if they have not transitioned to HL7 case notifications, they should submit data through their current legacy reporting mechanisms.

b. *Candida auris*

Position statement 17-ID-03 titled *Standardized case definition for Candida auris causing clinical infection and colonization in people*

<http://c.ymcdn.com/sites/www.cste.org/resource/resmgr/2017PS/2017PSFinal/17-ID-03.pdf>) establishes a standardized case definition to allow for public health tracking of *Candida auris* cases which will be helpful in containing its spread within healthcare facilities and networks. *Candida auris* has caused numerous healthcare-associated outbreaks with high mortality that have been difficult to control.

Jurisdictions should send *Candida auris* data to CDC using the generic v2 MMG and if they have not transitioned to HL7 case notifications, they should submit data through their current legacy reporting mechanisms.

Section I, Part D: Summary of 2017 CSTE position statements requesting two conditions be placed under standardized surveillance (but not be added to national notifiable list) that CDC programs have not requested data for and their surveillance case definitions will not be displayed on the NNDSS web site.

- a. Extrapulmonary Nontuberculous Mycobacteria Infections: Refer to position statement 17-ID-07 titled *Standardized Case Definition for Extrapulmonary Nontuberculous Mycobacteria (NTM) Infections* (<http://c.ymcdn.com/sites/www.cste.org/resource/resmgr/2017PS/2017PSFinal/17-ID-07.pdf>). Please classify cases using the case definition described in this position statement.

- a. Latent TB Infection: Refer to position statement 17-ID-09 titled *Establishing a Case Definition for Latent TB Infection (TB Infection)* (<http://c.ymcdn.com/sites/www.cste.org/resource/resmgr/2017PS/2017PSFinal/17-ID-09.pdf>). Please classify cases using the case definition described in this position statement.

The Division of TB Elimination will be working with us to develop a TB MMG which will include data elements for Latent TB Infection as well as for active TB infection. We expect to begin work on the TB MMG in January 2018 and to have an MMG in production by January 2020.

Section II: Summary of implementation efforts for the Foodborne and Diarrheal Diseases (FDD) MMG which we expect to implement in 2018 in NNDSS and changes to event codes and the weekly NNDSS table display to better support program data needs.

We are working with staff in the National Center for Emerging and Zoonotic Infectious Diseases (NCEZID) to prepare the FDD MMG, which will be used to support case notifications for NNDSS and data submissions for FoodNeT. In order to support program data needs and fully support HL7 transmission of appropriate data elements, paratyphoid fever must be separated from the salmonellosis condition code. The following changes in event codes and in the NNDSS tables will be implemented in January 2018:

Event Code Changes:

- A new event code for Paratyphoid fever (50236) should be used beginning with your 2018 cases.

- The current Salmonellosis event code (11000) will be retired in 2017 and after December 2017, should only be used for closing out your 2017 cases. Do not report 2018 cases with this event code.
- A new event code (50242) for “Salmonellosis (excluding paratyphoid fever and typhoid fever)” should be used beginning with your 2018 cases.

Changes in data display in the weekly NNDSS tables for these conditions:

Beginning with the 2018 NNDSS data, Paratyphoid fever data will appear in Table I and “Salmonellosis (excluding paratyphoid fever and typhoid fever)” will appear in Table II. To obtain data that is comparable to previous years, you will need to sum the paratyphoid case count with the “salmonellosis (excluding paratyphoid fever and typhoid fever)” case count.

Section III: Transition of display of NNDSS weekly data from the *Morbidity and Mortality Weekly Report (MMWR)* to the NNDSS Data and Statistics webpage

<https://wwwn.cdc.gov/nndss/data-and-statistics.html> and changes to the table format and content.

Beginning with the 2018 NNDSS data, CDC is transitioning the display of NNDSS weekly data from the *MMWR* to the NNDSS Data and Statistics page <https://wwwn.cdc.gov/nndss/data-and-statistics.html>. On this page, you can navigate to the weekly NNDSS tables by clicking “Links to the Data” under the “Notifiable Infectious Diseases and Conditions” banner. As was mentioned in Section II of this report, beginning in surveillance year 2018, Paratyphoid fever will be added to Table I. The most notable changes to the display of data in weekly Table II are as follows:

- Addition of CP-CRE *Klebsiella* spp., CP-CRE *Escherichia coli*, and CP-CRE *Enterobacter* spp.
- Replacement of salmonellosis with “salmonellosis (excluding paratyphoid fever and typhoid fever).” Refer to Section II of this memo above for more information about this.

While perinatal hepatitis C (a new national notifiable condition beginning in 2018) will not be included in the weekly NNDSS, it will be analyzed regularly and only published in the annual NNDSS tables and in the annual Summary of the Viral Hepatitis, published online by CDC’s

Division of Viral Hepatitis, available at

<https://www.cdc.gov/hepatitis/statistics/2015surveillance/index.htm>.

Chronic hepatitis B and C data are not included in NNDSS tables but reported case counts are included in the annual Summary of Viral Hepatitis, published online by CDC's Division of Viral Hepatitis, available at: <https://www.cdc.gov/hepatitis/statistics/2015surveillance/index.htm>.

A copy of this memorandum will be available on the "Downloads and Resources" section of the NNDSS web site at: <https://wwwn.cdc.gov/nndss/downloads.html>

Thank you very much for your reporting efforts throughout the year. Your input is essential as we continue to work together to prevent and control these diseases.

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