

Industry and Occupation

CSTE DSWG Data Element Specific Team

10/20/2023



Council of State and Territorial Epidemiologists

Please mute phone/ headset/ computer audio!

Agenda

- Welcome & Announcements
- Industry and Occupation Discussion/Polling
- Next Steps
- Wrap-Up & Adjourn

Meeting ground rules



- Discussion Guidelines
 - "Raise" your hand
 - Use the chat to provide feedback and ask questions
 - When called, state your name and affiliation
 - Stay on point, be brief, and within the context of the discussion in progress
 - 80/20 consensus
 - Co-Chairs/moderators' prerogative to move the discussion forward as needed
 - [Post-meeting input form](#) is always available for additional comment
 - Be courteous and be open to new ideas

Active participation encouraged for all!

- Chats, voting, comments, etc.
- Includes STLT jurisdictions + CDC Programs + CSTE, etc.

Data Element-Specific Teams



Team Member Expectations

- Attend monthly Team meeting(s) regularly to discuss data element(s)
- Participate actively during and between meetings
- Provide feedback on how your jurisdiction or program (if applicable) collects and uses information related to the data element prior to the first Team meeting
 - All DSWG members are invited to participate in this step, but expectation is higher for Team members
- Respond to polls conducted between Team meetings
- Review and provide input and comments between meetings on any draft documentation using shared Word documents

There is **NO** expectation for Team members to write documents, lead meetings, or prepare slides.

Core Data: In Scope for DSWG



- Identify core data elements for surveillance **for transmission to CDC**
 - For situational awareness or routine, cross-condition case surveillance
 - For case-based surveillance (not syndromic, not aggregate reporting)
 - Within *selected* data classes (e.g., hospitalization, travel history) that are used for multiple conditions
- Identify common definitions, value sets/code sets, structure, and interpretation notes for those core data elements
- Recommend best practices for how selected data elements are collected, structured or populated within PHA surveillance systems, if/when that will affect the interpretation of the data transmitted to CDC

Core for CDC Transmission ≠ Required

Even if a data element or class is identified as appropriate for transmission to CDC, this does *not* mean we need to fill in or send an answer for every core element for every case!

- It is okay to leave the data field as blank or Unknown if the information is not available, not a priority, or not useful for particular conditions.

Data elements and data classes should be considered for core if they are relevant for many conditions

- There is no set number that defines "many".
- Would you rather see the element in (for example) a GenV3 MMG? or in the applicable disease-specific MMGs?

Industry and Occupation



Potential data elements related to Industry and Occupation



- **Current Industry**
- **Current Occupation**
- Usual Industry
- Usual Occupation
- Occupation and Industry Category
- Occupational Duties
- Employment Status
- Work Site of Exposure
- Start Date
- End Date
- Food Handler
- Case Patient a Healthcare Worker
- Type of Healthcare Occupation
- Day Care Worker Within 7 Days Before Illness
- Visit Animal Environment Within 14 Days Before Symptom Onset
- Workplace Setting
- Critical Infrastructure Workplace Setting
- Employer address and name

*Bolded data elements included in standardized Industry and Occupation Repeating Group

Case Notifications to CDC

Message Mapping Guides (MMGs)



- Template included in Carbon Monoxide, TB/LTBI, Rubella, Congenital Rubella, Measles, RIBD, Babesiosis, FDD, HAI MDRO, COVID, Hepatitis, Malaria, Mumps, Trichinellosis, and Varicella MMGs

Current Occupation (85658-3)	This data element is used to capture the narrative text of a subject's current occupation.	Text
Current Occupation Standardized (85659-1)	This data element is used to capture the CDC NIOSH standard occupation code based upon the narrative text of a subject's current occupation.	Occupation CDC Census 2010
Current Industry (85078-4)	This data element is used to capture the narrative text of a subject's current industry.	Text
Current Industry Standardized (85657-5)	This data element is used to capture the CDC NIOSH standard industry code based upon the narrative text of a subject's current industry.	Industry CDC Census 2010

Case Notifications to CDC

Message Mapping Guides (MMGs)



- Rubella, Measles, Pertussis, Varicella, COVID-19, Hepatitis

Data Element Name	Data Element Description	Value Set
Case Patient a Healthcare Worker	Hep A: Was the patient employed as a healthcare worker during the TWO WEEKS prior to onset of symptoms to ONE WEEK after onset of JAUNDICE? (If no jaundice, use two weeks after onset of symptoms.) Others: Was patient healthcare personnel (HCP) at illness onset?	1. Yes 2. No 3. Unknown

Prior work on Industry and Occupation



NIOSH Guidance

- Use the template provided in HL7 v2.9, HL7 CDA, and FHIR resources
- Collecting
 - Both industry and occupation should be collected as they are related, but different
 - Collect free text descriptions; do not use drop down lists
 - Collect detailed information
 - Each occupation and industry has a specific standardized code assigned to analyze the data
- Coding
 - Industry and occupation codes are standardized
 - Review/decide the classification systems to use before coding data
 - Use an autocoder to code your data, such as NIOCCS
 - You can code data as you collect it or after collection is complete

Advantages of NAICS/SOC over Census codes

- Broader use
 - NAICS/SOC are more broadly used than the Census codes
- Hierarchical and detailed structure
 - Hierarchical nature of NAICS/SOC provides additional information
 - NAICS/SOC codes offer more detailed classification
- Clarity and independence in classification
 - Independence of NAICS/SOC providing clear and unambiguous coding
- Simplified mapping and crosswalk
 - Mapping from NAICS/SOC to Census codes is simple

Industry and Occupation Discussion



Potential Core Data Elements



Data Element	Number of NNDSS MMGs?	NNDSS value set or coding system	Potential for Electronic Data Capture
Current Industry	15	Industry CDC Census 2010	• Present in eICR IG v3.1, “Past or Present Industry Observation” [Value set = Industry CDC Census 2010, Translation = Industry NAICS Detail (ODH)]
Current Occupation	15	Occupation CDC Census 2010	• Present in eICR IG v3.1, “Past or Present Occupation Observation” [Value set = Occupation CDC Census 2010, Translation = Occupation ONETSOC Detail (ODH)]
Employed in Specific Setting? [Template for specific conditions.]	N/A	N/A	• N/A • Would create a template for use in specific conditions, not define the employment settings. "If you were going to ask about employment in a specific setting, here's how to word it."

Potential Core Data Elements



Data Element	Definition	Value set or coding system	Abstracted/ Derived/ Created	Potential Input Data Source(s)
Current Industry	Case's current industry. <i>Better as "Case's current industry at the time of event (CCCD)?"</i>	Both a free-text field and a standardized field using Industry CDC Census 2010. Switch to 2017 NAICS?	Abstracted Derived	• Case investigation • eCR
Current Occupation	Case's current occupation. <i>Better as "Case's current industry at the time of event (CCCD)?"</i>	Both a free-text field and a standardized field using Occupation CDC Census 2010. Switch to 2018 SOCS?	Abstracted Derived	• Case investigation • eCR
Employed in Specific Setting? [Template for specific conditions.]	During the incubation period or infectious period of the case, was the case working as a _____? (Healthcare worker, Food handler, etc.)	Yes/No/Unknown	Derived	• Case investigation

In previous work, the DSWG has defined a Calculated Case Counting Date (CCCD) for use by jurisdictions.

The CCCD is defined as the earliest available of six component dates associated with a case. (All component dates may not be available, relevant, or collected for each case.)

- Symptom Onset Date
- Clinical Diagnosis Date
- Earliest Specimen Collection Date Associated with a Positive Lab Result
- Earliest Result Date of a Positive Lab Result
- Date First Received by Public Health Agency
- Date Entered/Record Initiated

Current I/O



Is the standard template of a repeating group for I/O present in 15 MMGs working?

Does the definition need a time element in relation to the case? Utilize CCCD as the "time of event"?

Value set conversation on the next slide...

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Current Occupation	Case's current occupation. <i>Better as "Case's current industry at the time of event (CCCD)?"</i>	Both a free-text field and a standardized field using Occupation CDC Census 2010. Switch to 2018 SOCS?	Abstracted Derived	•Case investigation •eCR

Should the value sets in the standardized fields be updated to NIOSH's recommendation?

Standardized field may be coded by jurisdictions using NIOCCS or free-text will be coded by CDC after receipt.

Complete List of Industry and Occupation Code Returned by NIOCCS

NIOCCS codes to:

- Census Industry and Occupation 2018 codes with several added non-standard codes to address non-paid workers, military and insufficient information,
- a subset of NAICS 2017 codes along with several added non-standard codes to address non-paid workers, military and insufficient information,
- a subset of SOC 2018 codes along with several added non-standard codes to address non-paid workers, military and insufficient information.

NIOCCS uses:

- 273 different Census Industry codes
- 574 different Census Occupation codes
- 365 different NAICS codes
- 808 different SOC codes

[CDC - NIOSH Industry and Occupation Computerized Coding System \(NIOCCS\) - Help Coding Schemes](#)

Polling process



- Poll questions will be shown first on a slide before poll opens
 - Opportunity for clarifications & questions
- Questions will be mostly Yes/No
 - Feel free to abstain if you don't have a preference or don't feel strongly
- Opportunity for limited discussion on questions with a big split

Core for CDC Transmission ≠ Required

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Data elements and data classes should be considered for core if they are relevant for many conditions

- There is no set number that defines "many".
- Would you rather see the element in (for example) a GenV3 MMG? or in the applicable disease-specific MMGs?

Polling – Current Industry



Should Current Industry be considered core data for surveillance?

(Two elements- free-text and standardized code.)

- Yes – Case's current Industry.
- Yes – Case's current Industry at the CCCC.
- No

Reminder:

Core data for surveillance = Data classes or elements used for situational awareness or routine, cross-condition case surveillance for transmission to CDC. These elements may remain empty for cases/conditions where not applicable or unavailable.

Polling – Current Occupation



Should Current Occupation be considered core data for surveillance?

(Two elements- free-text and standardized code.)

- Yes – Case's current Occupation.
- Yes – Case's current Occupation at the CCCD.
- No

Reminder:

Core data for surveillance = Data classes or elements used for situational awareness or routine, cross-condition case surveillance for transmission to CDC. These elements may remain empty for cases/conditions where not applicable or unavailable.

Polling – Current I/O



Which value sets should be used for Current Industry/Occupation?

- Current value sets: CDC Census 2010
- New NIOSH recommendation: 2017 NAICS & 2018 SOCS

Reminder:

Core data for surveillance = Data classes or elements used for situational awareness or routine, cross-condition case surveillance for transmission to CDC. These elements may remain empty for cases/conditions where not applicable or unavailable.

Template Case Notification Work-Related Data Element



For discussion:

Many MMGs have specific work-related questions that are disease dependent. Is there any need to create a template for a data element that can be utilized by specific conditions to capture condition-specific occupation information?

Data Element	Definition	Value set or coding system	Abstracted/ Derived/ Created	Potential Input Data Source(s)
Employed in specific setting during incubation period? <i>[Template for specific conditions.]</i>	During the incubation period of the case, did the case work as a _____? (Healthcare worker, Food handler, etc.)	Yes/No/Unknown	Derived	Case investigation
Employed in specific setting during infectious period? <i>[Template for specific conditions.]</i>	During the infectious period of the case, did the case work as a _____? (Healthcare worker, Food handler, etc.)	Yes/No/Unknown	Derived	Case investigation

Next Steps



- Look out for next steps via email. Poll? Draft document?
- Upcoming team meetings:
 - **11/17 12-1pm ET**– SOGI meeting 2 (*moved due to Veteran's Day*)
 - 11/17 1-2pm ET– I/O or Exposure/Risk?
 - [Link to Sign Up](#)
- The next large DSWG call will be the beginning of December.