Agenda

- National Surveillance Perspective, Mike Hughes
- Epidemiology Capacity and Resources, Erin Stokes
- FoodNet Surveillance Perspective, Ellyn Marder
- Oregon Perspective, June Bancroft
- Questions & Discussion, All
Acknowledgements

- EIP
  - Jason Hall
  - Megan Light
  - Erroll Rosser
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  - Heather Houston
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- CDC FoodNet
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  - Ellyn Marder
  - Hazel Shah
  - Max Harrigan

- CDC CSELS
  - Mary Hamilton
  - Heather Patrick
  - Loretta Foster
  - Michele Hoover
  - Andrew Kuehl

- FoodNet Sites
  - Suzanne McGuire (NY)
  - Allison Muse (NY)
  - Frank Murphy (NY)
  - Dina Hoefer (NY)
  - Candace Noonan-Toly (NY)
  - Jacquelin Griffin (NY)
  - Stephanie Meyer (MN)
  - Ann Kaysar (MN)
  - Sarah Solarz (MN)

- MMG Pilot Sites
  - Teresa Schillo (MN)
  - Juan Carlos (MN)
  - June Bancroft (OR)
  - Julie Hatch (OR)
  - Michelle Barber (OR)
  - Cedric Cicogani (OR)
FDD MMG: National Surveillance Perspective
Context of foodborne, waterborne, and parasitic disease surveillance

- Some surveillance systems rely on 1) “legacy” modes of data transmission (e.g. paper CRFs, CSVs) and 2) basic demographic and clinical information supplied by public health surveillance partners via NNDSS
- Standardize vocabulary, data elements, data structure
- Transpose CRFs and position statements where available to form the FDD MMG
Foodborne and Diarrheal Diseases Message Mapping Guide (FDD MMG) Overview

- Guide for **all jurisdictions** sending data elements via HL7 for multiple nationally notifiable conditions
  - STEC, salmonellosis, shigellosis, campylobacteriosis, cryptosporidiosis, cyclosporiasis, cholera/vibriosis, typhi/paratyphi infection
- Contains subset of data elements sent by **EIP sites only** to FoodNet
  - Includes HUS and yersiniosis
- Designed to be used in conjunction with Generic v2 MMG
How to use the FDD MMG

- Each case notification will pull data elements from Gen V2 and FDD MMG

One HL7 message
Progress Report

- **Phase 1: Drafting**
  - Transcribed data elements from CRFs and select CSTE-approved variables

- **Phase 2: Feedback**
  - NMI Webinar
  - Public comments, consolidated feedback

- **Phase 3: Revisions**
  - Response and reconciliation
  - Harmonization (e.g. lab interpretive repeating groups, travel)

- **Phase 4: Pilot**
  - Pre-onboarding, implementation, mapping
  - Software user acceptance testing

- **Launch!**
Available online: cdc.gov/nmi/index.html

Onboarding: March 2019
Surveillance Pathways in 2019

- State Public Health Database
  - FDD MMG
  - MVPS
- Paper CRF
- Data entry
- Processing/import
- National Surveillance Program
- National Database
Surveillance Pathways in 2019

- State Public Health Database
- FDD MMG
- MVPS
- CSV File
- Paper CRF
- National Surveillance Program
- Export/processing
- Processing/import
- Data entry
- National Database
Onboarding & Implementation

- To begin work toward replacing paper-based case reporting (e.g. COVIS, NTPFS) with **electronic line lists**, contact national surveillance team. If you’re unsure: Mike Hughes (wuw8@cdc.gov)

- To begin onboarding the **FDD guide**, contact edx@cdc.gov

- *Implementation* is a process that occurs simultaneously with onboarding
  - Ability to supplant legacy enhanced data transmission (NTPFS, COVIS, CryptoNet)
  - Meet data completeness and quality criteria
NBS Page Builder Templates

- Page builder templates will be developed for all conditions in the FDD MMG
- Page templates will be release as they are completed following review by surveillance community
- Get involved: NEDSS Base System SME calls
- Questions: edx@cdc.gov
FDD MMG: ELC Activities

Erin Stokes
Resources for FDD MMG Implementation

- NNDSS Modernization Initiative onboarding support
  - [www.cdc.gov/nmi/](http://www.cdc.gov/nmi/)
- ELC Cooperative Agreement
- State staff and resources
- National Surveillance Team SME support
  - Annotated case report forms
Routine Enteric Disease Surveillance ELC Activities

- Added to the Foodborne Disease Activities for BP5 (2018)
  - 39 applicant sites identified activities and/or milestones for the funding cycle

- Enhance timeliness and efficiency of surveillance, through improvements to:
  - Data collection
  - Data transmission

- Funding strategy: use for resources to electronically collect and transmit routine surveillance data (FDD MMG)
Data Collection

- Routine data for cases of enteric disease using **standard questionnaires** or **data elements**
  - All current data elements are incorporated in the FDD MMG
  - Laboratory-based Enteric Disease Surveillance (LEDS) will continue to be collected separately

- Possible uses of funds: Integrating data elements into a disease surveillance system, building data entry screens, personnel required for building systems
Data Transmission

- Transmission of routinely collected enteric disease data through:
  - **HL7 electronic reporting** of Generic Version 2 and condition-specific data elements (FDD MMG)
  - If HL7 is **not** currently feasible:
    - Electronic tabular data transmission (linelists)
    - Fax or email case report forms (not applicable for all pathogens)

- Possible uses of funds: Creating data exports, HL7 implementation activities, IT/informatics personnel
Foodborne and Diarrheal Diseases Message Mapping Guide – Foodborne Diseases Active Surveillance Network Perspective

Ellyn Marder, MPH

PulseNet/OutbreakNet West Coast Regional Meeting
San Diego, CA
February 6, 2019
Foodborne Diseases Active Surveillance Network (FoodNet)

- Collaboration among CDC, 10 state health departments, USDA-FSIS, and FDA
- Component of Emerging Infections Program (EIP)
- Laboratory-based active surveillance for *Campylobacter, Cyclospora, Listeria, Salmonella*, Shiga toxin-producing *E. coli* (STEC), *Shigella*, *Yersinia*, and *Vibrio*; pediatric hemolytic uremic syndrome
- Collects information on:
  - Clinical outcomes
  - Antibiotic use
  - Outbreak
  - Travel
  - Exposures
  - Laboratory

15% of U.S. population (48 million people)
EIP Messaging services provides a platform for faster access to more robust, higher quality data, while reducing reporting burden on our partners.
EIP Messaging Services

- **Goal 1: Create FDD Message Mapping Guide (MMG)**
  - Create a guide to include all the pathogens included in FoodNet (multiple conditions and multiple programs)
  - Obtain content and implementation feedback from EIP sites
  - Final guide released end of Dec 2018

- **Goal 2: Pilot with 3 EIP sites**
  - Send APHL technical assistance (TA) team to help map the data elements
  - Package and create HL7 messages with State data
  - Send the data to AIMS Hub
  - Confirm receipt and validation in EIP Plus (User Acceptance Testing)

- **Goal 3: Provisioning data for FoodNet**
  - Data quality
  - Create FoodNet’s flat trends file
  - Create relational database
Data Provisioning – 3 Phases of Transition

Onboarding to EIP+Messaging

**Onboarded States:**
- Send EIP+M Feed
- Send Legacy Feed

**Programs:**
- Perform Legacy Processing to meet current requirements
- EIP+M Feed provisioned as export on Portal only

Merging Feeds and Historical Data

**Onboarded States:**
- Send EIP+M Feed only

**Programs:**
- EIP+M Feed continuously merged with Legacy Feeds; Historical Data merged (one time only)
- Legacy View for Data and Analytics available across all States
- Enhanced View for Data and Analytics available for Onboarded States only
- Services for applying Business rules, Catchment, Epi Case classifications, Exports, etc

Consolidated Provisioning

**All States:**
- Send EIP+M Feed only

**Programs:**
- EIP+M Feed continuously provisioned for new data
- Legacy View for Data and Analytics available across all States
- Enhanced View for Data and Analytics available across all states
- Services for applying Business rules, Catchment, Epi Case classifications, Exports, etc
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Facilitating FDD MMG Implementation

- Mapped the FoodNet legacy variables and value sets to FDD MMG to assist with gap analysis performed at the sites
- Standardized value sets across programs
- Drafted a FoodNet guidance in collaboration with the other programs to address:
  - nuances in reporting
  - value set mapping
  - required vs preferred variables for FoodNet
- Updating requirements for case determination
FDD MMG Pilot Lessons Learned

- Data use agreement needs
- Data quality concerns
- Workarounds to mapping conflicts across FoodNet and other tabs
- Change requests managed by CSELS could be a lengthy process
- EIP databases or other data might be stored separate from state databases
  - Transition these databases into state databases
  - FoodNet-specific page vs pathogen page with FoodNet elements and other non-FoodNet elements included
  - More local access to all fields
- States are beginning to build informatics capacity