

Strategies to Improve Provider Access to US Refugee Vaccination Records

Deborah Lee, MPH

American Immunization Registry Association Conference 2018

Salt Lake City, UT

August 16, 2018

Overview

- Background
 - US immunization information
 - Vaccination program for US-bound refugees
 - Overseas vaccination information
 - CDC's Electronic Disease Notification System (EDN)
- Strategies
- Next steps

Background

Immunization information in the United States

- Every state requires children to be vaccinated before attending school
- There is no national immunization database or information system
- All 50 states and US territories have immunization information systems (IIS)

<https://www.cdc.gov/vaccines/programs/iis/about.html>

[CDC > IIS Home](#)

IIS State/Territory/City Registry Staff - Main & Technical Contacts



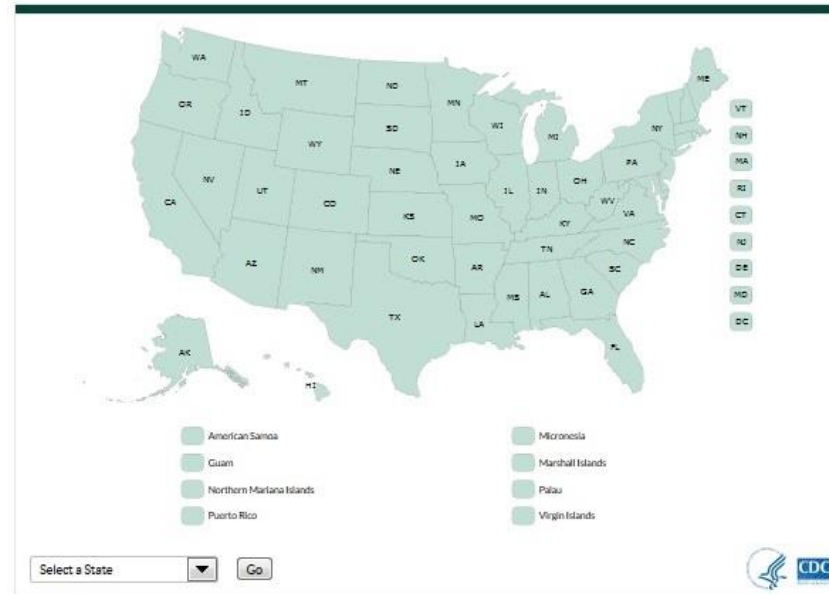
 [Get Email Updates](#)

Note: This contact page also can be used by providers to contact a state's IIS to request immunization information. For example, a patient moves from one state to another.

Note: Any IIS related questions or updates/errors to this contact list should go to iisinfo@cdc.gov.

CDC does NOT have immunization record information!

Click on the map or in the box below to access the state contacts.



US Immunization Information Systems (IIS)

- Confidential, population-based, computerized databases
 - record all immunization doses administered by participating providers to people residing within a given geopolitical area
- At the *point of clinical care*:
 - consolidate immunization histories for use by a provider in determining appropriate client vaccinations
- At the *population level*:
 - aggregate data on vaccinations for use in surveillance and program operations, and in guiding public health action to improve vaccination rates and reduce vaccine-preventable disease.

<https://www.cdc.gov/vaccines/programs/iis/about.html>

Increase use and functionality of IIS

- American Reinvestment & Recovery Act, 2009
 - Increase ‘meaningful’ use of Electronic Health Records (EHR) systems among medical providers
 - Centers of Medicare & Medicaid Services (CMS) → incentive funds to encourage providers to use EHR
 - Criteria set for EHR to connect to IIS
- Increase use of message standard for EHR to connect to IIS such as Health Level 7 (i.e., HL7 version 2.5.1)

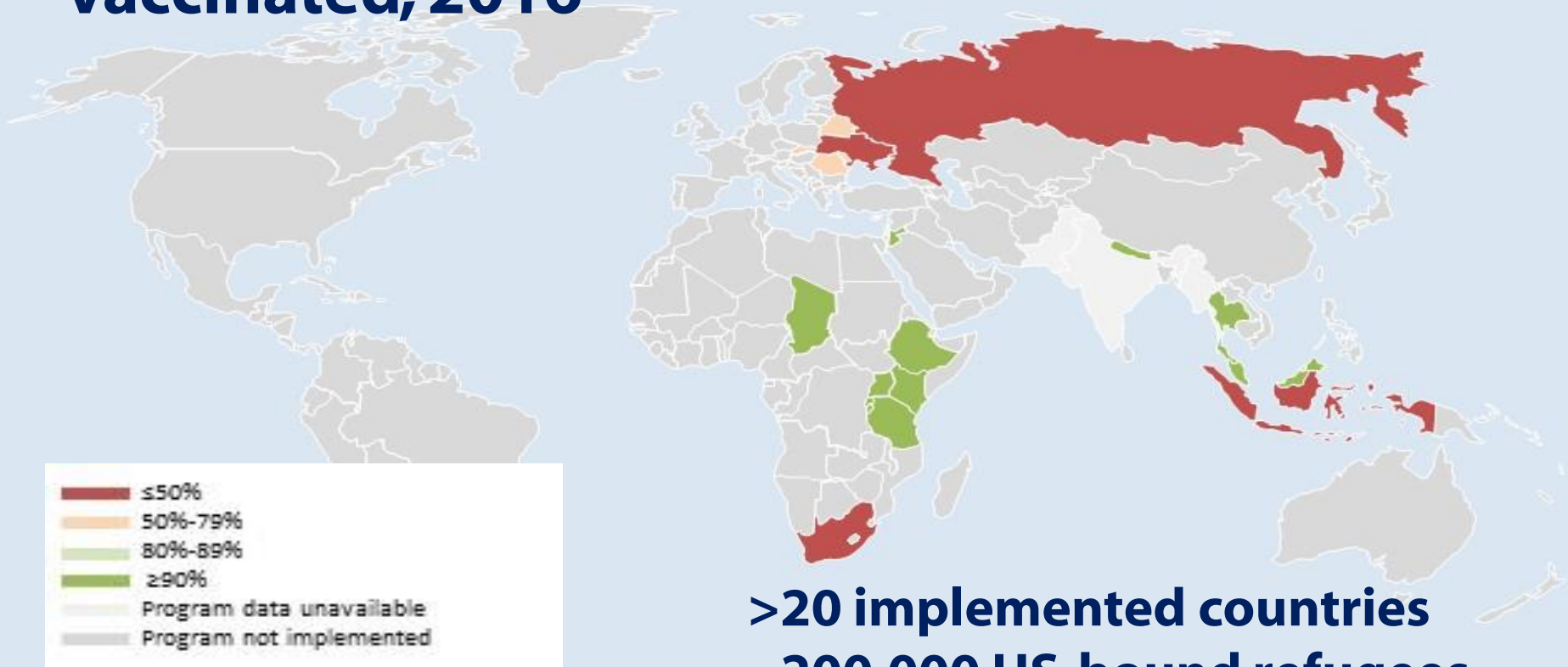
US-bound Refugees

- Receive a required overseas medical examination 2 to 6 months prior to arrival
- Vaccination not required for US-bound refugees
 - Refugees may be incompletely immunized
 - Outbreaks during and after resettlement
 - Travel delays
 - School entry delays for children after arrival
- In 2011, a domestic measles case was diagnosed in an unvaccinated Burmese refugee immediately following resettlement to the U.S.
 - Required multistate response; delayed resettlement

Vaccination Program for US-Bound Refugees (VPR)

- CDC collaborated with US Department of State's Bureau of Population, Refugees and Bureau (PRM) and IOM (2012)
- Initial program involved vaccinating refugees in Kenya, Ethiopia, Thailand, Malaysia, and Nepal
 - 2-3 doses of vaccine series overseas
 - First dose of all vaccines given at the overseas medical screening exam, ~2-6 months before departure

Countries participating in VPR and refugees vaccinated, 2016



CDC's Electronic Disease Notification System (EDN)

- Centralized electronic reporting system (2008)
- Collects overseas health information on all refugees as well as immigrants with Class A or B medical conditions
- Provides information to:
 - Health departments & screening clinics
 - ~1,400 EDN users to ~400 jurisdictions



Evaluation of provider use of VPR records

- Refugees are recommended to receive a post-arrival examination within 30-90 days
- CDC assessed overseas vaccination records during the US exam, 2013-2015
- 12 states, 1,118 refugee records
 - 87% of overseas vaccination records received
 - 67% EDN, 44% IOM bag
- MMR, n=972 records
 - Most 90% needed no dose
 - ~4% 'under'-vaccinated
 - ~10% 'over'-vaccinated

TABLE 1—Measles-Mumps-Rubella (MMR) Vaccination Status of Refugees and Dose Administration at US Postarrival Refugee Health Assessment Clinics in 12 States When Overseas Documentation Was Received: March 2013 to July 2015

MMR Vaccination Status	MMR Vaccine Administered at US Postarrival Refugee Health Assessment Clinics		
	No Dose, No. (%)	Dose Provided, No. (%)	Total, No. (%)
Not required	770 ^a (79.2)	106 ^b (10.9)	876 (90.1)
Required	37 (3.8)	59 (6.1)	96 (9.9)
Total	807 (83.0)	165 (17.0)	972 (100.0)

Evaluation of provider use of VPR records *continued*

- 11 of 16 post arrival examination clinics enter children and adult vaccination information into IIS
- >90 days
 - unknown over-vaccination, completion and coverage rates
- **Conclusion:** Effort needed to improve vaccination information into state IIS

**Strategies to improve uptake of refugee
vaccination records into IIS**

Improving overseas immunization information uptake into state IIS

- US Prevention and Public Health Funding 2015: Linking refugee health databases to the state IIS
- Build HL7 message for EDN vaccination information in EDN to be transferred directly to state IIS



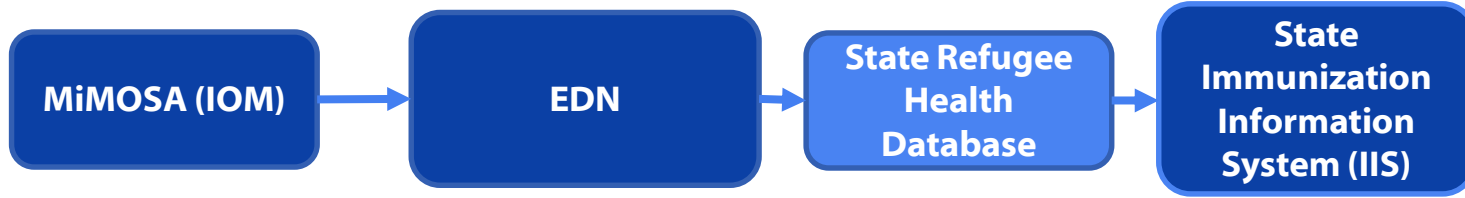
WISCONSIN DEPARTMENT
of HEALTH SERVICES



WASHINGTON STATE
IMMUNIZATION
INFORMATION SYSTEM

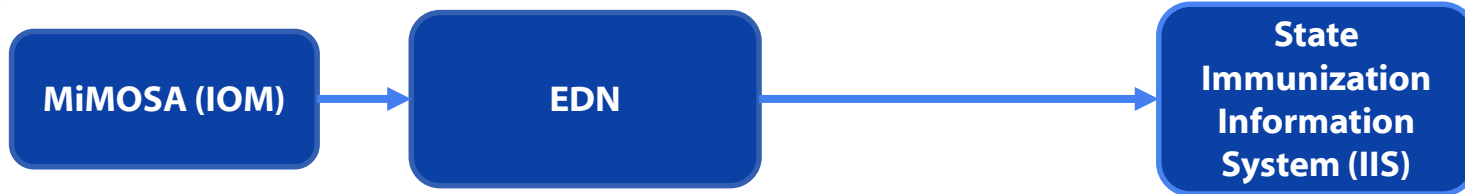
Improving overseas immunization information uptake into state IIS

1



CO
KY
MA
MN
NY

2



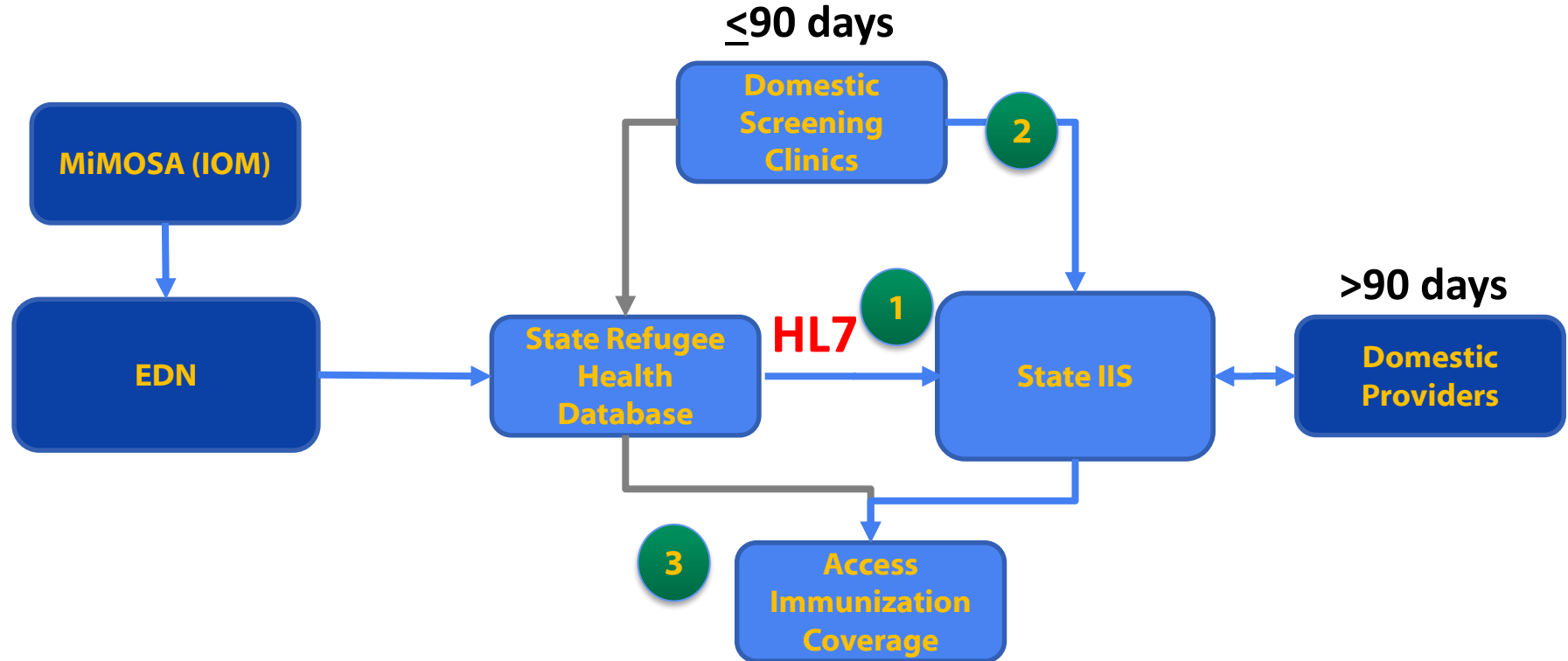
IA
NE
TN
WA
WI

Strategy 1: Linking refugee health databases to state IIS

- State refugee health program work closely with their state IIS partners
 - Electronically transmit immunization records into state IIS
 - HL7 or agreed format
 - Transmit unique refugee identifier
 - Conduct coverage and completion rate
- 5 states—CO, KY, MA, MN, NY

Strategy 1: Example

Linking refugee health databases to state IIS



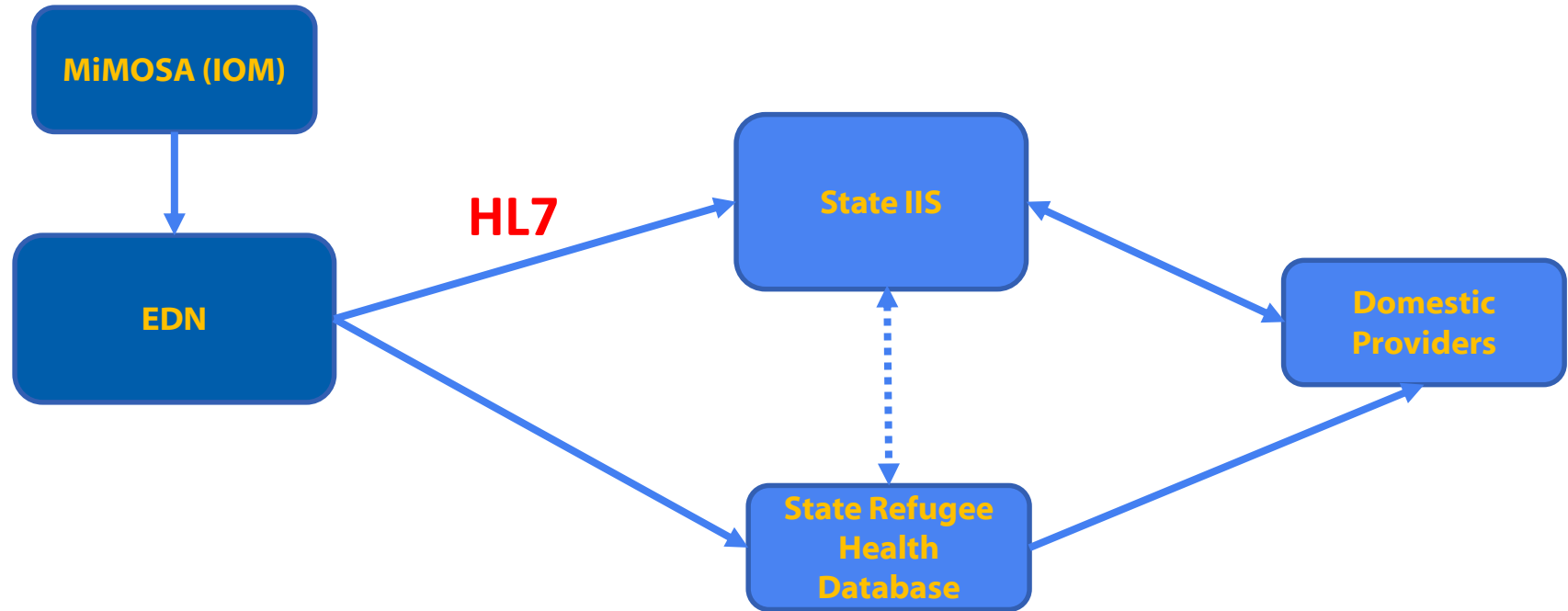
Strategy 1: Update

- NY, CO, MA, and MN transmitting records from refugee health database to IIS
- KY pending
- Reported advantages
 - Improved timeliness and access of vaccination records for school children
 - Improved quality assurance of refugee records
 - Quality control in reducing duplicate refugee records

Strategy 2: HL7 direct messaging between EDN to state IIS

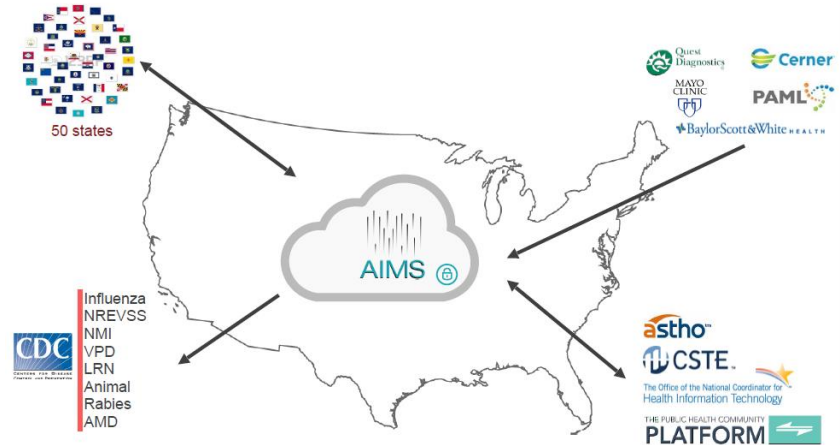
- Interest in strategy 1
 - Association of Refugee Health Coordinators (ARHC)
 - State IIS managers
- State IIS interested in receiving overseas vaccination records
- Pilot states
 - IA, NE, TN, WA, WI

Strategy 2: HL-7 direct messaging between EDN to state IIS



Strategy 2: Update

- Design—Defined national HL7 specifications by subject matter expert
- Development—Programming into HL7
- IT capacity
 - Transport of secure message protocol
 - AIMS hub—Association of Public Health Laboratories Informatics Messaging Services



Other strategies

- EDN clinic-level access
- CDC outreach to refugee health clinics regarding VPR
- Overseas vaccination data in HL7 2.5.1 format
- States RHP collaborate with IIS
 - IL, UT, MD

Next Steps

Next steps

- Strategy 1
 - All states 'go live'
 - Assess best practices, completion and coverage rates
- Strategy 2
 - Determine secure transport method
 - Testing/deployment
 - Assess best practices, completion and coverage rates
- Preliminary best practices
 - Work closely with state IIS and state refugee health programs
 - Ensure transfer of refugee unique identifier
 - Develop a communication plan to state immunization providers

Acknowledgement

- CDC
 - Jenna Beeler
 - Clelia Pezzi
 - Emily Jentes
 - Laura Pabst
- Eagle Medical Services
 - Amanda Dam
 - Yoni Haber
- Northrop Grumman
 - Mary Hamilton
 - Dan Reed
 - Abraham Daniel
- Colorado DPHE
 - Paul Gillenwater
 - Lori Kennedy
- Catholic Charities of Louisville
 - Allison Pauly
 - Bill Mattingly
- Massachusetts DPH
 - Jennifer Cochran
 - Laura Smock
- Minnesota DH
 - Blain Mamo
 - Kailey Urban
- New York State DH
 - Stephen Hughes
- Iowa DH
 - Jessica Eagan
 - Kim Tichy
- Nebraska DH
 - Kristin Gall
 - Michelle Hood
- Tennessee DH
 - Kelly Moore
 - Nathalie Hartert
- Washington State DH
 - Jasmine Matheson
 - Michael Bin
- Wisconsin DHS
 - Salvitri Tsing
 - Matthew Verdon

THANK YOU!!!

Migration Health Information Nexus

MHINx@cdc.gov

DLee1@cdc.gov

EJentes@cdc.gov

For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

