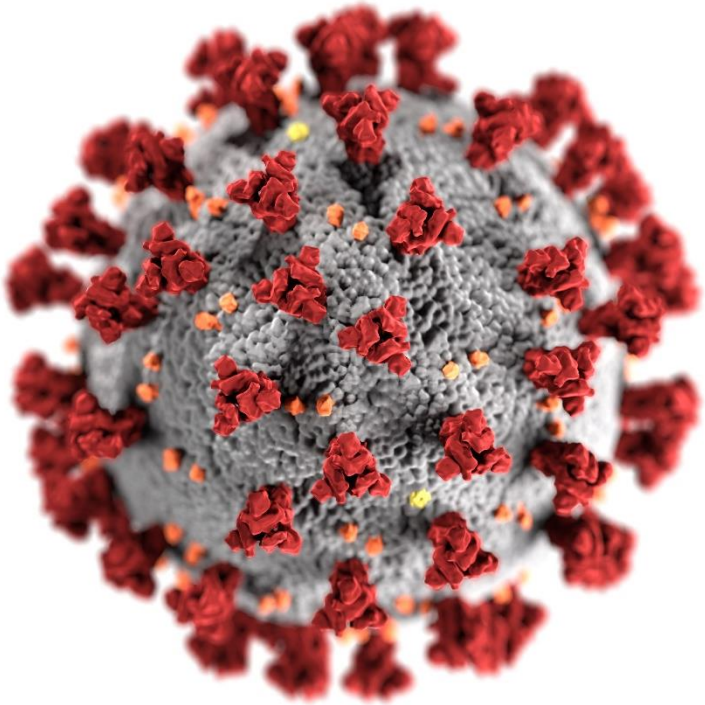
Border Health Strategies for Mitigating the International Spread of COVID-19

Sadie Ward, MPH

Technical Advisor

2019 Novel Coronavirus Response

April 2021



cdc.gov/coronavirus

www.cdc.gov/coronavirus/2019-ncov/global-covid-19

Objectives

- Describe travel-associated spread of SARS-CoV-2
- Discuss limitations of screening at Points of Entry (POEs) with regards to COVID-19
- Describe border health strategies for COVID-19

Travel-associated cases

- "Travel-associated" refers to a probable or confirmed case of COVID-19 in which
  - The person travelled from another country while contagious or during the incubation period
  - The person could have acquired the infection in another country
  - The person had close contact with sick or infected travellers
  - The person has imminent plans to travel to another country
- Collaboration with other countries is needed for investigation and control of the disease

Travel associated exposure guidelines from CDC: https://www.cdc.gov/coronavirus/2019-ncov/php/risk-assessment.html

Travel-associated exposures

- Global spread of SARS-CoV-2, the virus that causes COVID-19, places travellers at risk for acquiring or transmitting the virus during or after travel
- Travellers should monitor themselves for signs and symptoms of COVID-19 and limit international spread by following local public health authority's guidance

Travel associated exposure guidelines from CDC: https://www.cdc.gov/coronavirus/2019-ncov/php/risk-assessment.html

Travel-associated case surveillance and reporting

- Responses during an investigation that should alert the surveillance system to take additional steps
  - Responds yes to having travelled from another country
  - Responds yes to having contact with someone who has recently travelled from another country
  - Has plans to travel to another country
- Recommended steps to follow if above criteria are met
  - Surveillance officer conducts a follow-up interview to gather more information about travel history or intent to travel and provide COVID-19 travel recommendations
  - Regional and/or national authorities are notified, according to protocol
  - Counterparts in other countries are notified, according to protocol

Travel associated exposure guidelines from CDC: https://www.cdc.gov/coronavirus/2019-ncov/php/risk-assessment.html

Rapid assessment of POE Capacity (RAPC) Tool

- A qualitative assessment tool for determining the needs and capacities at a POE to address COVID-19
- The tool can be:
  - Tailored to all types of POE
  - Used by Ministry of Health (MOH), port health leaders, as well as national and local stakeholders
  - Used to develop action plans to further develop capacities at POE
- The RAPC tool is available in six languages: Arabic, English, French, Portuguese, Russian, and Spanish

RAPC can be accessed at CDC: https://www.cdc.gov/coronavirus/2019-ncov/global-covid-19/rapid-poe-assessment.html

Screening at Point of Entry (POE)

- May be useful for diseases with only symptomatic transmission (e.g., Ebola)
  - Potentially infected travellers can be detected at POE by presence of compatible signs and symptoms
- Screening may not be useful for infections that can be transmitted asymptomatically or pre-symptomatically (e.g., COVID-19)
  - People do not always present with signs and symptoms of disease, but may still spread infection across borders without being detected at POE

POE screening recommendations from CDC: https://www.cdc.gov/coronavirus/2019-ncov/global-covid-19/migration-border-health.html

Limitations of screening for COVID-19 at POE

- Large-scale symptom screening may not be an effective way to prevent the spread of COVID-19
- Symptom screening can only detect overtly ill travellers
  - May miss infected people who are asymptomatic, presymptomatic, or have only mild symptoms
    - Incubation period of COVID-19 is 2-14 days
  - Will detect people with other illnesses that have similar signs/symptoms
- Travellers may:
  - Deny their illness
  - Take medicine to mask symptoms (e.g., fever or cough suppressants)
  - Fail to disclose exposure history

Mitigation strategies for travel-associated spread

Community mitigation measures

- Community mitigation measures are actions that are taken to slow the spread of infectious diseases such as:
  - Personal protective measures (e.g., wear masks and maintain physical distance during travel)
  - Water, sanitation, and hygiene (e.g., border communities establish handwashing stations)
  - Cleaning and disinfection (e.g., enhanced cleaning of frequently touched surfaces)
- Strategies can be scaled up or down depending on capacities
- Adapt interventions to POE, border communities, and mobile population needs

Community mitigation considerations from CDC: https://www.cdc.gov/coronavirus/2019-ncov/global-covid-19/community-mitigation-measures.html

CORONAVIRUS DISEASE 2019 (COVID-19)

International Travel RECOMMENDATIONS AND REQUIREMENTS	Not Vaccinated	Fully Vaccinated
Get tested 1-3 days before traveling out of the US	✓	
Mandatory test required before flying to US	✓	✓
Get tested 3-5 days after travel	✓	✓
Self-quarantine after travel for 7 days with a negative test or 10 days without test	✓	
Self-monitor for symptoms	✓	✓
Wear a mask and take other precautions during travel	✓	✓

CDC

cdc.gov/coronavirus

CS323515-A 04/02/2021

COVID testing information from CD C: https://www.cdc.gov/coronavirus/2019-ncov/travelers/international-travel-during-covid19.html

Testing for COVID

- Options to test for current infection include nucleic acid amplification tests (NAAT) and antigen tests (viral tests)
  - When establishing testing requirements or recommendations, MoH should consider test availability, time to obtain results, sensitivity, specificity, cost, and other factors
  - Antibody (serology) tests should not be used for detection of current infection
- CDC does not recommend testing for people who have tested positive for COVID in the past 3 months unless symptomatic
- Removing testing requirements or recommendations for fully vaccinated travellers may be considered

COVID testing information from CD C: https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/testing.html

Predeparture testing

- Predeparture testing (1-3 days before travel) may detect infected travellers before they travel
  - Test results should be available prior to travel
  - Testing should be combined with education about protective behaviors:
    - Self-monitoring for symptoms
    - Wearing a mask
    - Maintaining physical distance
    - Hand hygiene
  - Travel should be postponed or cancelled if test results are positive
- Travellers should follow testing requirements for their destination

Pre-departure testing information from CDC: https://www.cdc.gov/coronavirus/2019-ncov/php/risk-assessment.html

COVID-19: TESTING BEFORE TRAVEL

Get tested no more than 3 days before you travel.
Postpone travel if you are waiting for test results.
Watch for symptoms of COVID-19.

If you test NEGATIVE…

- Keep a copy of your test results with you during travel
- Take precautions to protect yourself and others from getting COVID-19

If you test POSITIVE or develop symptoms of COVID-19…

- Do NOT travel
- Immediately isolate yourself
- Follow public health recommendations

CDC

www.cdc.gov/covid19travel

CS321935-A 2/16/2021 2PM

When Not to Travel to Avoid Spreading COVID-19

- People should not travel if they:
  - Are sick with symptoms of COVID-19, even if fully vaccinated or have recovered from COVID within the past 3 months
  - Tested positive for SARS-CoV-2, even if asymptomatic
  - Have had close contact someone with suspected or diagnosed COVID, unless they are fully vaccinated or recovered from COVID-19 in the past 3 months

Travel postponement advice from CDC: https://www.cdc.gov/coronavirus/2019-ncov/travelers/when-to-delay-travel.html

Post-arrival testing

- Post-arrival testing (3-5 days after arrival at destination) can detect people who were incubating infection during travel.
- Testing should be combined with other precautions, including:
  - Maintaining physical distance outside of home
  - Wearing a mask outside of home
  - Hand hygiene
  - Self-monitoring for symptoms of COVID-19
  - Avoiding contact with people at higher risk for severe illness
- Can combine with a stay-at-home period to reduce travel-associated spread
  - CDC recommends 7 days with testing, 10 days without testing

Post-arrival testing information from CDC: https://www.cdc.gov/coronavirus/2019-ncov/php/risk-assessment.html

COVID-19: TESTING AFTER TRAVEL

Get tested **3-5 days after** you travel.

If you test **NEGATIVE**…

- 7 — Stay home for 7 days and self-quarantine
- Watch for symptoms of COVID-19
- Take precautions to protect others

If you test **POSITIVE** or develop symptoms of COVID-19…

- Do NOT travel
- Immediately isolate yourself
- Follow public health recommendations

If you don't get tested…

- 10 — Stay home for 10 days and self-quarantine
- Watch for symptoms of COVID-19
- Take precautions to protect others

www.cdc.gov/covid19travel

CS321936-A 2/16/2021 11AM

Risk communication

- One of the most important and effective interventions when responding to a public health event
- Prevents
  - excessive amount of information that can lead to confusion
  - spread of incorrect information
- Builds trust in the response
  - Increases the likelihood that advice will be followed
- Regular communication and engagement with the community and travelling public can avoid misunderstandings and minimize social disruption

Risk communication guidelines from WHO: https://www.who.int/publications/i/item/risk-communication-and-community-engagement-readiness-and-initial-response-for-novel-coronaviruses

Communication at POE

- Alerts travellers to signs and symptoms of COVID-19 and what to do if they are sick
- Provides an opportunity to educate travellers on how to protect themselves and others during and after travel
- Informs travellers how to access local health resources
- Ensures travellers receive accurate information

Risk communication guidelines from WHO: https://www.who.int/publications/i/item/risk-communication-and-community-engagement-readiness-and-initial-response-for-novel-coronaviruses

Communication at POE examples

- Health information cards to arriving or departing travellers
- Health messages posted at POE
- Audio or video messages about signs, symptoms, and what to do if sick
- Social media campaigns to share information about current guidance for travel

Example CDC Travel Health Alert Notice for distribution to arriving travellers regarding COVID-19

Traveller Health Alert Notice from CDC: https://www.cdc.gov/coronavirus/2019-ncov/communication/print-resources.html?Sort=Date%3A%3Adesc&Search=symptoms

Assessing individual-level risk in mobile populations

- Develop procedures for assessing individual-level risk to inform appropriate risk-mitigation intervention (monitoring or movement restrictions)
  - Lower risk
    - No history of being in an area with ongoing community transmission
    - Negative molecular or antigen test for SARS-CoV-2 within a timeframe before departure as defined by the receiving country or upon arrival
  - Intermediate risk
    - Traveller arriving from or with recent travel to a country with a high level of COVID-19
    - History of attending a mass gathering or large social gathering
  - Higher risk
    - Close contact with a person with confirmed COVID-19
    - Symptomatic or positive test result

CDC guidance: https://www.cdc.gov/coronavirus/2019-ncov/global-covid-19/exposure-mobile-populations.html

Monitoring approaches

- Ability to monitor potentially exposed individuals for symptoms and test post-arrival routinely or if symptoms develop

Monitoring Approaches

Less restrictive	*No intervention*	*Health education Self-monitoring*	*Remote monitoring by the health authority*	*In-person monitoring by the health authority*	More restrictive

Risk mitigation level (moving from lower-level intervention on the left to higher-level intervention on the right)

CDC guidance: https://www.cdc.gov/coronavirus/2019-ncov/global-covid-19/exposure-mobile-populations.html

Monitoring approaches

- Recommend travellers self-monitor for symptoms of COVID-19 for a specific period of time
- Conduct in-person monitoring at interval sites along approved routes, e.g., at truck weigh stations or designated trucker lodgings
- Link workers with public health authorities for remote monitoring via a phone application or SMS system for daily reporting while in country
- Develop strategies for post-arrival testing
- Establish multi-country regional surveillance systems for critical infrastructure workers who cross borders to allow for rapid notification of positive test results and facilitate contact tracing

CDC guidance: https://www.cdc.gov/coronavirus/2019-ncov/global-covid-19/exposure-mobile-populations.html

Movement restrictions approaches

- Consider restricting movement into or out of country
- Consider restricting movement of travellers to facilitate surveillance once admitted into the country
  - Follow local requirements for quarantine after arrival

Movement Restriction Approaches

Risk mitigation level (moving from lower-level intervention on the left to higher-level intervention on the right)

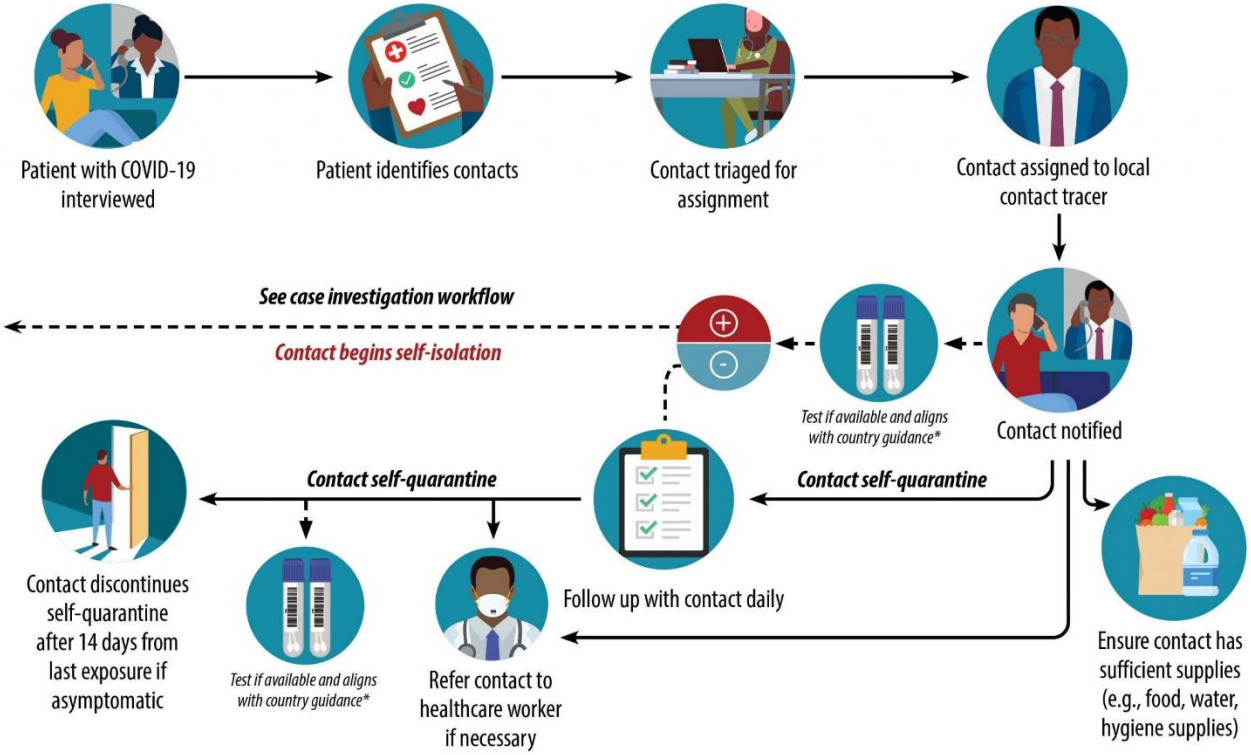
CDC guidance: https://www.cdc.gov/coronavirus/2019-ncov/global-covid-19/exposure-mobile-populations.html

Movement restrictions approaches

- Recommend limiting time spent in public places or travelling
- Require mandatory quarantine in government-approved locations
- Identify specific routes, stops along the route, and lodgings that workers are allowed to use
- For cargo transports: Offload trucks from other countries at the POE then load contents onto a local truck for transport into the country (this approach may not be suitable for all types of cargo)

CDC guidance: https://www.cdc.gov/coronavirus/2019-ncov/global-covid-19/exposure-mobile-populations.html

Case investigation and contact tracing



Case investigation and contact tracing from CDC: https://www.cdc.gov/coronavirus/2019-ncov/global-covid-19/contact-tracing-workflow.html

Case investigation and contact tracing

- Assess the capacity for contact tracing and adaptations to fit the situation
  - Workforce adaptations
    - Who will do case investigations and contact tracing?
  - Epidemiologic adaptations
    - Which contacts will be followed?
  - System adaptations
    - How will cases and contacts be notified and monitored?
  - Operational adaptations
    - What resources will be available to support the system?
  - Border health adaptations
    - How will contacts on conveyances be identified (e.g., manifests, passenger locator forms)?
    - Will international notifications need to be made?

Adapting a contact tracing program: https://www.cdc.gov/coronavirus/2019-ncov/global-covid-19/operational-considerations-contact-tracing.html

Understanding population mobility

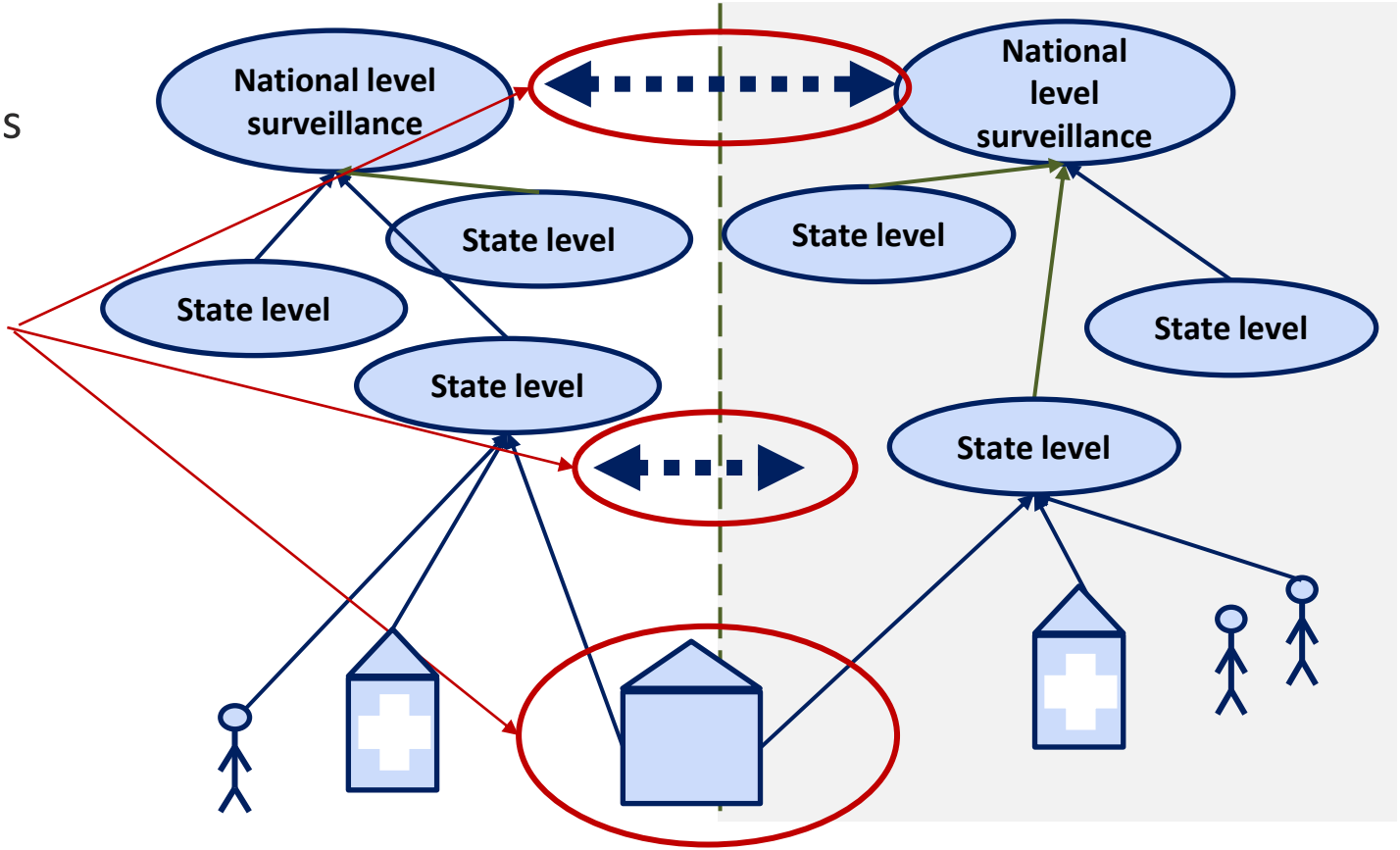
- Human population movement is common, complex, and can increase the risk of geographic spread of communicable diseases, like COVID-19
- Understanding characteristics of population mobility patterns and connectivity:
  - Allow for effective allocation of resources
  - Inform tailored interventions to respond to public health events
  - Inform prioritization of POE for COVID-19 interventions, capacity building, reopening
  - Highlight at-risk communities within and across borders
  - Identify priority areas or infrastructure for sentinel and community surveillance
  - Enhance national and regional collaboration to strengthen cross-border information sharing and coordination

Strengthening cross-border coordination

- Improve procedures for public health information sharing
- Create a coordinated approach for preparedness and response activities across borders
- Develop relationships with cross-border counterparts
- Develop operational procedures for public health information sharing and coordination

Public health cross-border coordination

- Develop procedures for information sharing:
  - **When** to share
  - **Who** will share
  - **What** to share
  - **How** to share

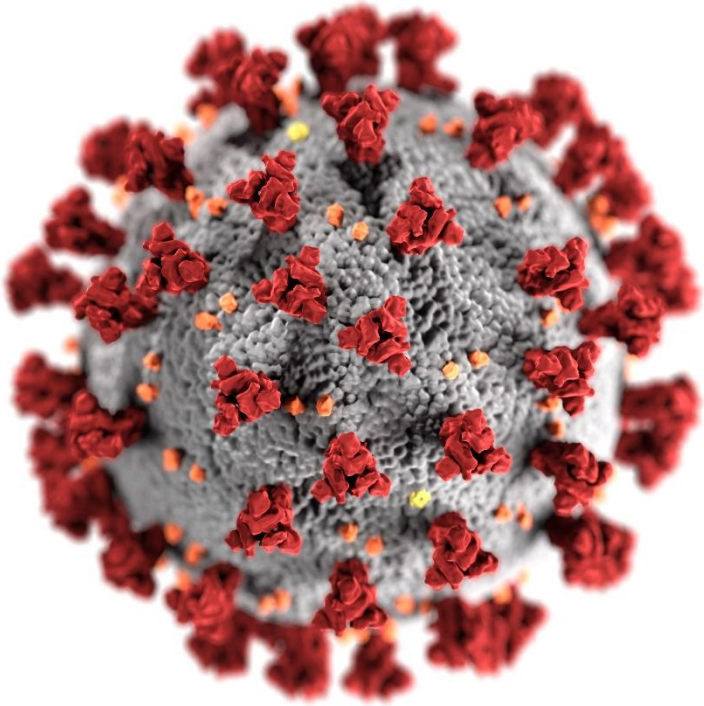


Summary

- Travel-related exposure and spread of COVID-19 can be reduced through border health strategies and mitigation efforts, including:
  - Community mitigation and risk communications at POE
  - Testing (before or after travel)
  - Monitoring or restriction of movement
  - Case investigation and contact tracing
  - Strengthening of cross border collaborations
- Usefulness of symptom screening at POE for detecting COVID-19 cases is limited
- Determining the best use of border health resources involves many considerations
- Border health strategies complement other measures (e.g., community mitigation) in controlling spread of COVID-19

Contact information

- Presentation created by the Global Border Health Team, Centers for Disease Control and Prevention, April 2021
- Point of Contact: Sadie Ward-seward1@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.