

## **CDC Report: Investigation of Respiratory Illness in U.S. Border Patrol Facilities, December 2018—January 2019**

### **Background**

At the request of the U.S. Department of Homeland Security (DHS), following reports of respiratory illness among persons migrating across the U.S.-Mexico border, three CDC teams visited DHS Border Patrol facilities in December 2018 and January 2019 to assess and make recommendations for infectious disease surveillance and reduction of disease transmission, with special focus on respiratory diseases (particularly influenza).

Increased respiratory illness is expected during influenza season, which typically occurs between October and May in the Northern Hemisphere. Influenza activity typically peaks in the United States during January or February. Transmission of influenza and other respiratory viruses can be enhanced in crowded settings. While individuals seen in border patrol facilities are intended to be present only for short periods of time (generally  $\leq 72$  hours), processing of persons passing through these facilities may be slower during some periods, fostering increased crowding that may enhance likelihood of respiratory disease transmission.

The first CDC team visited border facilities in the El Paso and Yuma sectors on December 29-30, 2018. El Paso sector sites were the Paso Del Norte (PDT) Central Intake Station, El Paso Station 1 (Station 1), and Clint Station. Yuma sector sites were the Yuma Processing Center and the Wellton Border Station. During this period, El Paso and Yuma facilities were over capacity due to increasing numbers of family units crossing the border and prolonged length of stay (up to eight days). This team made initial recommendations for infection control practices and respiratory illness monitoring in these facilities.

The second and third CDC teams visited the El Paso Sector facilities from January 2-11 2019. The included facilities were Paso Del Norte (PDT, the central intake facility for apprehended migrants), El Paso Station 1 (Station 1, which houses family units), and Clint Station (which houses unaccompanied children [UAC] only). Team 2 conducted enhanced respiratory illness surveillance to characterize respiratory agents circulating among persons crossing the border into the El Paso Sector. Team 3 assessed the feasibility of implementing influenza antiviral treatment and influenza vaccination in these facilities.

This report focuses specifically on observations, surveillance, and recommendations related to influenza.

### **Summary of Border State Influenza Activity**

Since December, 2018 through January, 2019, the percent of respiratory specimens positive for influenza has been elevated in clinical laboratories along the US Mexico border which participate in national Surveillance (Figure 1). Most of the characterized influenza specimens at the state Public

Health laboratories are influenza A(H1N1)pdm09 viruses (Figure 2). These trends are similar to national trends (<https://www.cdc.gov/flu/weekly/index.htm>).

## **Summary of CDC Enhanced Influenza Surveillance at El Paso Sector Border Patrol Facilities, January 6-11, 2019**

### **Methods**

Enhanced respiratory illness surveillance was initiated on 6 Jan 2019 thru 11 Jan 2019 at PDT, Station 1, and the Clint Facility, among migrants apprehended daily by Border Patrol Agents. Individuals who indicated that they were ill at their initial intake and all children <18 years of age were medically evaluated and were screened to determine if they met the case definition for acute respiratory illness, defined as presence of any one of the following: fever ( $\geq 38^{\circ}\text{C}$ ), subjective fever (feverishness, chills), cough, runny nose, or nasal congestion. Individuals meeting this case definition were asked to participate in the enhanced surveillance. A short questionnaire and three specimens were collected (one oropharyngeal swab and one mid-turbinate nasal swab for a respiratory panel) and one mid-turbinate nasal swab for the influenza rapid diagnostic test.

### **Results**

A total of 65 persons were tested, 6 of whom were positive for influenza by rt-PCR (Table 1). All were identified as influenza A(H1N1)pdm09. All influenza-positive persons were males; 3 were in PDT and 3 in Station 1. There were no positive influenza virus detections among UAC tested at the Clint facility. There was no clustering of positive detections by age group or country of origin.

The team piloted the use of the Sofia2 rapid influenza diagnostic kit in the field. Only four of the five influenza positive detections using the Sofia2 kit were positive for influenza by rt-PCR; an additional two individuals with rt-PCR positive influenza were not detected using the Sofia2. Two influenza A(H1N1)pdm09 viruses were confirmed to be susceptible to neuraminidase inhibitor drugs by neuraminidase activity detection assay.

### **Summary of Observations by CDC Teams**

- 1. With inadequate DHS medical infrastructure, illness in the border patrol facilities stresses both the border patrol staff and the community medical infrastructure.**
  - Border patrol agents must accompany each ill person to the emergency room, which reduces staff available in the facility and patrolling the border.
  - Border patrol agents do not have training to triage or identify acutely ill migrants.
  - Migrants may have additional medical needs because of stress and exposures during of the journey, which may cause increased risk of illness. They may also be less likely to request medical care because of communication barriers and their vulnerable migrant status.

- During influenza season, local emergency rooms are often at capacity taking care of acutely ill persons, and may be unable to absorb an increased number of migrants being taken to the emergency room for evaluation.
2. **The number of individuals in each of these facilities and the duration of their stay, is dynamic and difficult to anticipate, posing unique challenges to implementing control measures.**
    - The number of individuals in custody at the three surveillance facilities varies throughout the day as migrants are moved between facilities and may not align with overall apprehension numbers. The number at the facilities changes throughout the day. Specifically, most of the migrants have their intake with Border Patrol Agents at the PDT Facility. After the migrants go through intake, they are transitioned into holding cells while they wait to be transferred to another facility for further processing.
    - The movement of individuals from PDT to these other facilities is variable and depends on the capacity and the occupancy levels at those facilities. Migrants can be moved to one of the other facilities in the El Paso Section (11 facilities total), but family units are primarily sent to Station 1, UACs are primarily sent to the Clint Facility, and prosecutable males or females are sent to Ysleta. After migrants finish the processing step, they are released from Border Patrol custody to Immigration and Customs Enforcement or are otherwise incarcerated.
  3. **Border Patrol facilities are not set up to be shelters, but during times of high occupancy and longer stays, the environment may be similar to shelters.**
    - While optimally persons entering border control facilities are there for a short time (ideally  $\leq 72$  hours), periodically transit through these facilities slows, leading to increased crowding.
    - During these periods, potential for infectious disease transmission may increase, and the facility environment is similar to a shelter from an infection control standpoint. Thus, infection control measures and syndromic surveillance to minimize infectious disease outbreaks in shelters could be useful.
    - Current infrastructure is not sufficient to assure rapid and adequate infection control measures, including limited isolation options and agent training.

## Recommendations

The complete set of recommendations below is for use during the influenza season and can be used to plan for the next season. Recommendations CDC identifies as high-priority when planning include:

- Implement screening for respiratory symptoms of individuals
- Plan for appropriate space to isolate ill migrants
- Have a sustainable plan for medical triage by trained healthcare providers

- Ensure supply of face masks and hand sanitizer in the facilities
- Ensure staff are vaccinated prior to the influenza season
- Work with local public health department to develop an approach to reporting

These recommendations reflect observations discussed above, while acknowledging that circumstances in border facilities change. They focus primarily on prevention and control of influenza, and should be considered during influenza season and periods of decreased transit time (longer holding times) and/or increased census in the El Paso sector border control facilities. The basis of this guidance rests on the assumption that during such periods, influenza transmission risk is similar to that in shelter settings.

### **1. Ensure sustainable medical infrastructure during times of increased crowding**

Based on CDC observations, temporary medical staff supporting these facilities has been very effective at providing appropriate medical triage and management of respiratory illness. Therefore, CDC recommends continuing this support. Additional resources may be needed during periods of increased crowding.

- a. Establish/maintain sustainable infrastructure at the larger border patrol stations (ideally those with capacity  $\geq 100$  persons) to support medical screening, monitoring, prevention strategies and treatment of persons with uncomplicated illness.
  - i. This infrastructure should ideally remain in place throughout the influenza season and as long as migrants are residing in border stations for  $>72$  hours, particularly when facilities are over capacity and crowding is increased.
  - ii. If unable to establish infrastructure at stations with capacity  $\geq 100$  persons, efforts should be made to sustain these services at stations with the highest immigration volume.
- b. Routine collection of vital signs including temperature, respiratory rate, heart rate, blood pressure and oxygen saturation should be implemented during medical evaluations to identify/triage ill persons and detect severe illness including sepsis.
- c. In addition to the intake screening, consider a daily walk-through of the holding facility by medical personnel who can identify potential ill persons that need further evaluation.

### **2. Infection Prevention Measures**

- a. Implement administrative controls to rapidly assess respiratory symptoms at intake and immediately separate (cohort) and/or mask symptomatic persons. Adding specific questions to identify respiratory and infectious symptoms to initial intake questionnaire (cough, chills, diarrhea, rash, etc.) will increase likelihood of identifying persons with illness.

- b. Ensure availability of personal protective equipment for staff and ill migrants. Persons with respiratory symptoms should wear a facemask until they are able to be isolated.
- c. Ensure adequate handwashing or hand sanitation is available.
- d. Use simple health education and communication messaging around hand washing or hand sanitizer, use of facemasks, and awareness of respiratory symptoms for staff and migrants.
- e. As feasible, reduce the time individuals are held at border stations.
- f. Determine a feasible approach to isolate or cohort individuals and/or families with members with respiratory symptoms, including consideration of temporary structures to provide additional space for isolation and to keep family members together.

### **3. Influenza Vaccination of Facility Staff**

- a. We recommend that all staff at all facilities who are not yet vaccinated this season and who have no contraindications to vaccination be offered an age-appropriate influenza vaccine according to current CDC/ACIP recommendations. Ideally, influenza vaccination should be offered to staff each season.

### **4. Syndromic (Symptom-based) Surveillance**

- a. Conduct syndromic (symptom-based) surveillance to monitor prevalence of acute respiratory illness
  - i. Screening evaluations should include specific questions to identify signs and symptoms (fever, chills, cough, etc.) to increase likelihood of identifying persons with acute respiratory illness.
  - ii. Ongoing daily monitoring for new onset of acute respiratory illness signs and symptoms should be instituted after the initial screening, as long as migrants are residing within the border stations.
  - iii. Develop a system to monitor data to establish baseline and flag changes in the proportion of evaluated persons with illness if feasible. This could be centralized or conducted at selected high-volume facilities.
- b. Monitor proportion of people in each facility that are taken to the emergency department or hospital for evaluation, and the reason for the visit. This information should be transmitted to the state health department.
- c. If not currently in place, electronic systems to capture syndromic surveillance and medical visit information would be preferable and enhance communication with DHS, health departments and ICE and ORR facilities.
- d. Recommend continuation of syndromic surveillance year-round, for respiratory illness as well as other infectious syndromes (e.g. gastrointestinal, rash, and neurologic).

### **5. Surveillance and reporting to the state health department**

- a. Implement a mechanism for reporting to health departments information concerning migrants who are sent to emergency departments or healthcare providers outside the facility. This can range from a report on each case or a daily summary report, depending on the needs of the health department.

- b. Implement a mechanism for assuring reportable diseases are reported to the state/local health department.

#### 6. Monitoring of ill migrants

- a. Provide ongoing monitoring by medical personnel of the health of ill persons in the facilities (e.g., those noted to be ill on initial screening but not judged to need outside care, and those discharged from outside care back to the facility), so that further appropriate care can be provided for those whose condition deteriorates.
- b. Discharge information from hospital stays/ED visits should be provided back to on-site medical personnel (or other responsible trained DHS staff).
- c. Medical records of migrants should follow the individual as they progress to another facility or into the community.
- d. To facilitate control of communicable illnesses and prevent spread among different facilities, develop criteria to determine when ill persons may be transferred to the next facility or to ICE custody.

#### 7. Influenza Antiviral Treatment

Early antiviral treatment can shorten the duration of influenza-associated illness and may reduce the risk of complications from influenza, as well as reduce need for referrals to outside medical facilities. CDC recommends use of antivirals, as feasible, in facilities with medical infrastructure.

- a. Given current levels of influenza circulation and crowded conditions, empiric treatment with an approved influenza antiviral of all persons with acute respiratory illness suspected to be due to influenza is recommended as soon as possible within the week of illness onset, if this can be reliably discerned.
  - a. Acute respiratory illness may be defined as
    - i. fever or feverishness **and** cough for those  $\geq 2$  years old
    - ii. fever or feverishness **or** cough or rhinorrhea or nasal congestion for those  $< 2$  years old
  - b. This is consistent with CDC recommendations for facilities providing temporary or longer term group housing such as shelters for displaced persons experiencing influenza outbreaks.
- b. Through the end of the influenza season, clinical suspicion of influenza, without diagnostic confirmation, is sufficient to initiate antiviral treatment. Sources for influenza activity include Fluview and local/state health department communications.
- c. If crowding within facilities is alleviated and occurrence of respiratory illness in facilities has decreased, antiviral treatment decisions may be made using a narrower case definition of influenza-like illness based on clinical judgement or directed by the results of clinical influenza testing, in settings where available.
  - a. For persons with suspected or confirmed influenza, antiviral treatment would then be recommended as early as possible for persons at high risk for influenza complications, including children  $< 5$  years (particularly those  $< 2$  years), adults  $\geq 65$  years, pregnant females, and those with certain chronic medical conditions.

## 8. Influenza Vaccination of Migrants

Influenza vaccination should be implemented at the earliest feasible point of entry to allow for maximum protection of migrant and potential to reduce transmission in Border Patrol Facilities.

- a. Annual influenza vaccination for all persons  $\geq 6$  months of age is recommended (no influenza vaccines are licensed for children  $< 6$  months).
- b. In facilities with medical infrastructure, all migrants present for sufficient time for vaccination who do not have contraindications should be offered an age-appropriate influenza vaccine.
  - i. All migrants should be presumed unvaccinated unless records indicating vaccination are available.
  - ii. For persons with moderate or severe acute illness, with or without fever, due to any cause, vaccination should be deferred until the acute illness has resolved.
- c. Priority groups for vaccination include children aged 6 months through 18 years and pregnant women.
  - i. All children 6 months to  $< 9$  years should receive the first dose of vaccine at the border patrol station and a second dose  $\geq 4$  weeks later.
- d. Vaccination may be considered for adults  $> 18$  years of age if feasible.

## 9. Diagnostic Test-Based Surveillance

- a. Given ongoing risk of influenza transmission, CDC recommends that the decision to treat with antivirals be based upon clinical suspicion for influenza, and should not be based upon diagnostic testing.
- b. However, where feasible, in order to assess ongoing circulation of influenza viruses, periodic (e.g. once weekly or biweekly or monthly) diagnostic testing on a sample of symptomatic persons may be considered for surveillance purposes:
  - i. Rapid diagnostics for influenza screening (using nasal swabs) to determine presence of influenza virus circulation among migrant population (note that rapid molecular influenza testing would be preferred over rapid antigen detection tests, if feasible).
  - ii. In addition, or as an alternative, consider sending swabs collected from ill persons to a public health laboratory for influenza diagnosis, as well as antigenic and genetic characterization.

### **Additional considerations for influenza vaccine implementation:**

- Influenza vaccination of migrants may be most feasible at the border stations with current existing medical infrastructure.
- Implement vaccination programs at border stations that will maximize contact with the greatest number of people.
- Local community partnerships should be explored to support vaccination efforts.
- Establish a working relationship with the Texas State Immunization Program (or other state health department) for technical assistance regarding issues related to vaccine supply, storage and handling requirements including maintenance of cold chain, and quality control measures.
- Vaccination records should follow migrants as they progress to other facilities or the community.
  - This may be accomplished through forming a relationship with the Texas State Immunization Information System (IIS) for stations inside the Texas borders, along with providing paper documentation.
- Identify personnel qualified to administer vaccines and establish training and documentation protocols and procedures for vaccine administration.
- Appropriate refrigeration units will need to be procured and monitored with temperature data loggers to provide for vaccination storage.
- Vaccine information should be provided to the all vaccine recipients  $\geq 18$  years of age and to guardians of those  $< 18$  years of age, in the recipient's primary language.



**Table 1. Demographics of Individuals Surveyed**

Demographics	All N= 65		Influenza PCR/TAC Positive Infections* N=6		Non-Influenza Enrollees <sup>‡</sup> N=59	
	N	%	N	%	N	%
<b>Age, y, median (IQR)</b>	16 (19)		16.5 (13)		16 (21)	
0-4	8	12.3	1	16.7	7	11.9
5-12	16	24.6	1	16.7	15	25.4
13-17	16	24.6	2	33.3	14	23.7
18-49	25	38.5	2	33.3	23	39.0
<b>Sex</b>						
Male	39	60.0	6	100.0	33	55.9
Female	26	40.0	0	0.0	26	44.1
<b>Country of Origin</b>						
El Salvador	8	12.3	0	0.0	8	13.6
Guatemala	38	58.5	3	50.0	35	59.3
Honduras	16	24.6	3	50.0	13	22.0
Mexico	3	4.6	0	0.0	3	5.1
<b>Border Patrol Facility</b>						
Central Intake Facility	41	63.1	3	50.0	38	64.4
Family Units Facility	18	27.7	3	50.0	15	25.4
Unaccompanied Minor Facility	6	9.2	0	0.0	6	10.2

\*Among influenza positive samples, 6 identified as H1N1pdm09.

<sup>‡</sup> 29 individuals had no viral agents identified by PCR or TAC. 23 had only 1 viral agent identified by PCR or TAC (Rhinovirus, Adenovirus, Human Metapneumovirus, Human Coronavirus 3), 7 had 2 viral agents identified by PCR or TAC (Rhinovirus/Human Coronavirus 1, Rhinovirus/Parainfluenza Virus 1, Rhinovirus/Cytomegalovirus, Rhinovirus/Enterovirus, and 3 individuals with Rhinovirus/Human Coronavirus 3).

Figure 1

Clinical laboratory influenza positives – border states Influenza CDC

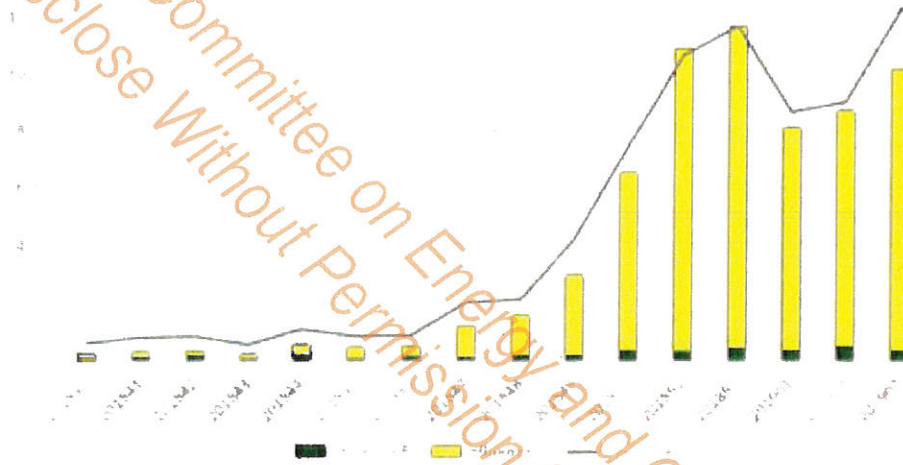


Figure 2:

PHL influenza positives – border states Influenza CDC

