



# US – Mexico Border Region 2012-2013 Influenza Season Report

## Introduction

This report is a summary of surveillance for outpatient influenza-like illness (ILI), severe acute respiratory infection (SARI), and pediatric deaths reported by various US sources within 100 km of the US-Mexico border from September 30, 2012, to May 18, 2013. The report also includes state-level virologic data from the 4 US border states.

## Season Synopsis

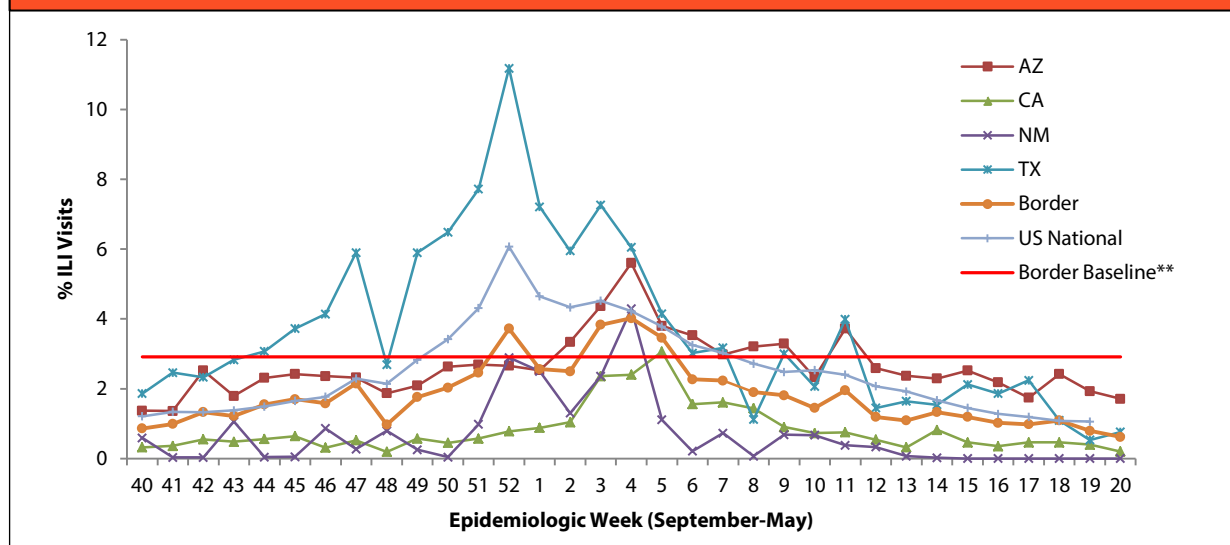
Outpatient visits for ILI peaked at 4% in week 4 of the influenza season. Overall, 22% of respiratory specimens from border states tested positive for influenza. Specimens were predominately positive for influenza A.

## Outpatient ILI Surveillance

ILI is defined as illness in persons presenting with fever ( $\geq 100^{\circ}\text{F}$  [ $37.8^{\circ}\text{C}$ ], oral or equivalent) AND cough and/or sore throat in the absence of a known cause other than influenza. ILI data are reported by US border county sentinel providers located within 100 km of the US-Mexico border, through the CDC's US Outpatient Influenza-like Illness Surveillance Network (ILINet), a sentinel surveillance system. ILINet sentinel providers report number of visits due to ILI by age group, and total visits to the provider for any reason, on a weekly basis.

The proportion of outpatient visits for ILI in the border region increased from 0.9% in week 40 of the influenza season to 4% in week 4, after which it steadily declined to 0.6% (Figure 1). Over the entire influenza season, ILI patients in the border region were predominately 5-24 years of age (Figure 2).

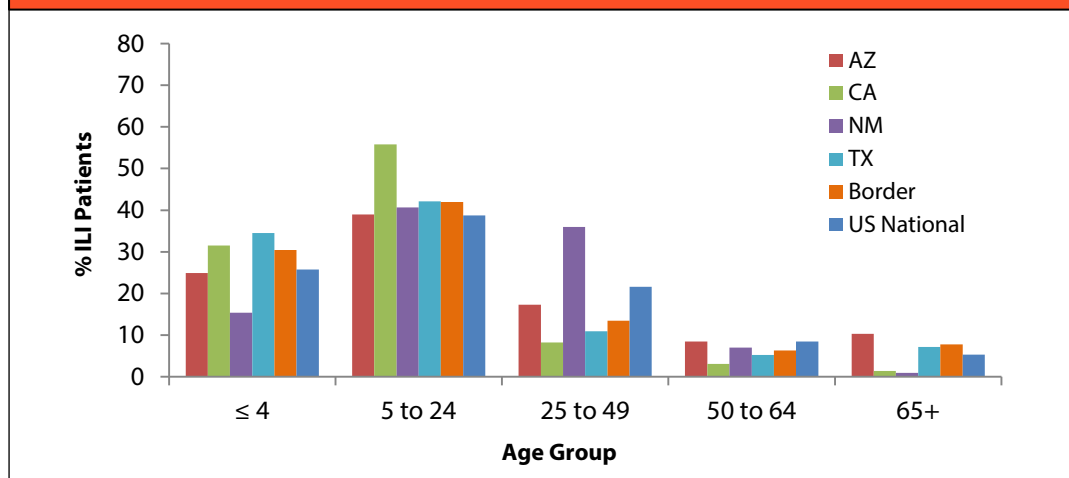
**Figure 1. Percentage of outpatient visits due to ILI\* at border county ILINet sites, by state and region, 2012-13 season**



\*Data collected in ILINet may not accurately depict influenza activity for state border regions.

\*\*The border baseline should only be used for comparison to the border total.

**Figure 2. Age distribution of ILI patients seen in US border county ILINet reporting sites, by state and region, 2012-13 influenza season**



### **Virologic Surveillance**

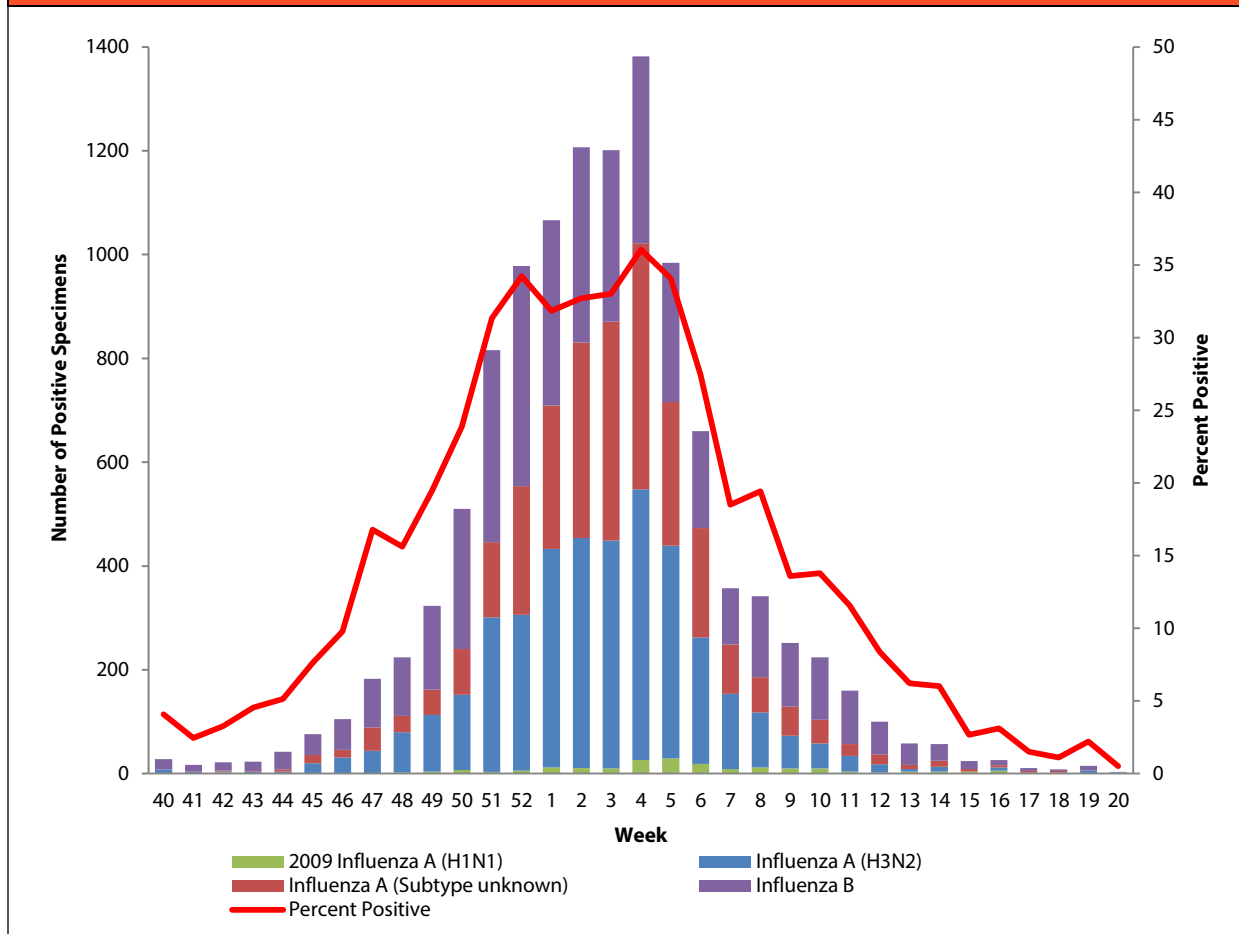
Virologic data are state-level data reported by the National Respiratory and Enteric Virus Surveillance System (NREVSS) and World Health Organization (WHO) collaborating laboratories. This surveillance network includes all state public health laboratories, a number of county public health laboratories, sentinel medical centers, and hospital laboratories. Specimens tested are not necessarily those from ILI case-patients identified by ILINet surveillance. Specimens may be reported positive by polymerase chain reaction (PCR), culture, direct (DFA) and indirect (IFA) immunofluorescence assay, or rapid antigen test.

Overall, 22% of respiratory specimens tested by border states' collaborating laboratories were influenza positive. Of these, 63% were influenza A, and 37% were influenza B. Of influenza A positive specimens, 55% were H3N2, 42% subtype unknown, and 3% 2009 H1N1 (Table 1). The percent of influenza positive specimens across border states peaked in week 4 of the influenza season (Figure 3).

**Table 1. Influenza testing results, by influenza type and subtype, NREVSS collaborating laboratories, border states, 2012-13 influenza season**

<b>Border State Results</b>	<b>AZ</b>	<b>CA</b>	<b>NM</b>	<b>TX</b>	<b>All</b>
Specimens Tested	4,587	13,460	1,032	33,746	52,825
Positive Specimens [n (%)]	2,180 (48)	2,011 (15)	428 (41)	6,865 (20)	11,484 (22)
Influenza A [n(%)]	1,733 (79)	1,466 (73)	300 (70)	3,685 (54)	7,184 (63)
H3N2 [n(% of influenza A)]	1,637 (94)	817 (56)	280 (93)	1,226 (33)	3,960 (55)
2009 H1N1 [n(% of influenza A)]	64 (4)	78 (5)	17 (6)	41 (1)	200 (3)
Unknown [n(% of influenza A)]	32 (2)	571 (39)	3 (1)	2,418 (66)	3,024 (42)
Influenza B [n (%)]	447 (21)	545 (27)	128 (30)	3,180 (46)	4,300 (37)

**Figure 3. Influenza-positive tests reported to CDC by US WHO/ NREVSS collaborating laboratories, border states, 2012-13 influenza season**



### **SARI Surveillance**

Hospital-based sentinel surveillance for SARI is a collaboration between CDC's Binational Border Infectious Disease Surveillance (BIDS) project and the Naval Health Research Center (Table 2). SARI case-patients are defined as persons ages  $\geq 5$  years with fever ( $\geq 100^{\circ}\text{F}$  [ $37.8^{\circ}\text{C}$ ]) or feverish, AND cough or sore throat, AND requiring hospital admission; children  $< 5$  years with clinical suspicion of pneumonia or severe/very severe pneumonia, AND requiring hospital admission. The Naval Health Research Center tests specimens from SARI case-patients admitted to BIDS sentinel hospitals by PCR. There were 51 influenza positive specimens from 294 hospitalized SARI case-patients at California and Arizona border sentinel sites (Table 2).

**Table 2. SARI virologic surveillance results, 6 border county hospitals<sup>†</sup>, 2012-13 influenza season**

<b>Virologic Results</b>	<b>AZ</b>	<b>CA</b>	<b>All</b>
Specimens Tested	52	242	294
Positive Specimens [n (%)]	10 (19)	41 (15)	51 (17)
Influenza A [n (%)]	8 (80)	29 (70)	37 (76)
H3N2 [n (% of influenza A)]	8 (100)	26 (90)	34 (92)
2009 H1N1 [n (% of influenza A)]	0 (0)	1 (3)	1 (3)
Unknown [n (% of influenza A)]	0 (0)	2 (7)	2 (5)
Influenza B [n (%)]	2 (20)	12 (30)	14 (29)

<sup>†</sup>Participating hospitals in San Diego County, CA, Imperial County, CA, and Pima County, AZ

### **Influenza-associated Pediatric Deaths**

Influenza-associated pediatric deaths are nationally notifiable. States report pediatric deaths to CDC via the Influenza-associated Pediatric Mortality Surveillance System. Data are preliminary and subject to change.

There were 4 influenza-associated pediatric deaths in border counties over the 2012-2013 influenza season (Table 3).

**Table 3. Influenza-associated pediatric deaths, border states, 2012-13 influenza season**

<b>State</b>	<b>Total Pediatric Deaths Reported</b>	
	<b>Border County</b>	<b>Non-Border County</b>
AZ	0	4
CA	2	5
NM	0	3
TX	2	16

### **Acknowledgments**

Data from the following US border counties were used to generate this report:

**Arizona:** Cochise, Pima, Yuma

**California:** San Diego, Imperial

**New Mexico:** Doña Ana, Hidalgo, Luna

**Texas:** Brewster, Brooks, Cameron, Duval, El Paso, Hidalgo, Pecos, Presidio, Starr, Val Verde, Webb

This report is compiled by CDC's US-Mexico Unit, in collaboration with the above listed local health departments, the California Department of Public Health, Arizona Department of Health Services, New Mexico Department of Health, Texas Department of State Health Services, and CDC's ILINet Team.