

Enhancing surveillance for infectious disease in the United States–Mexico border region of Arizona

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Objective

To establish and maintain an active binational sentinel hospital-site surveillance system and to enhance border region epidemiology and laboratory infrastructure.

Introduction

The Border Infectious Disease Surveillance (BIDS) program was established in 1999 by the Centers for Disease Control and Prevention and Mexico Secretariat of Health, following mandates from the Council of State and Territorial Epidemiologists (CSTE) and the United States–Mexico border health association to improve border surveillance. The BIDS program is a binational public health collaboration to create an active sentinel-site surveillance of infectious disease among the United States–Mexico border. It is a collaborative effort between local, state, federal and international public health agencies throughout both countries in the border region. This project is aimed at using the best aspects of both countries surveillance system.

Methods

We established a network of sentinel clinic and hospital sites along the geographical United States–Mexico border region. We utilized a shared syndromic case definition that is compatible between both countries. Standardized data collection instruments allows for exchange of surveillance data. We increased the laboratory capacity for to test for diseases of public health importance.

Results

This effort has been successful at building a regional surveillance system. In the 2010, three pilot hospital sites were enrolled to conduct severe acute respiratory infection (SARI) surveillance. These patients were tested for viral, bacterial and important fungal infections that cause respiratory disease. Fig. 1 includes results of the 74 hospitalized SARI patients who were enrolled in the 2010–2011 influenza season. The SARI patients were 54% ($n=40$) male and had a median age of was 62.5 years (range, 0–87 years). The expansion of this surveillance system requires additional sentinel hospital-sites and additional syndromes. A syndrome of acute diarrheal illness will be the focus of surveillance at one new pilot sentinel site, with potential to expand in the future.

Conclusions

A surveillance system using syndromic and CSTE case definitions allows for comparison of morbidity in the United States/Mexico border region, increased communication and bidirectional sharing of information across the border. Creating and expanding a regional surveillance system that crosses an

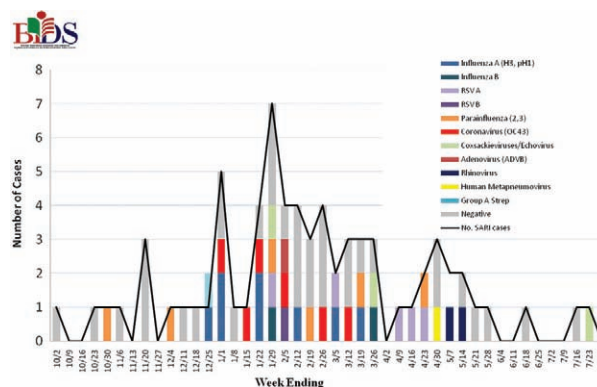


Fig. 1. RT-PCR Test Results Among SARI Cases from All Sites by Week, October 2010 to August 2011.

international boundary requires coordination and collaboration from all agencies involved. These surveillance data allow for examination of the border region as one epidemiologic unit. Consistent communication with clinicians and hospital staff helps to build credibility and interest. Simplicity in surveillance procedures encourages compliance. These surveillance efforts can guide vaccine allocation planning and efficiency in evaluating illnesses that maybe vaccine preventable. Systems to share information between various states in the United States–Mexico border region are important to develop binational control strategies.

Keywords

Surveillance; syndromic; border; binational; Mexico

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References

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