

# Establishment of a One Health Surveillance Initiative in the CA/Baja CA Border Region

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## Objective

To showcase One Border One Health, a binational, multidisciplinary initiative in the California/Baja California (CA/BC) border region whose aim is to reconfigure traditional species-specific approaches to surveillance for emerging and re-emerging pathogens.

## Introduction

The CA/BC border region encompasses a wide range of ecosystems, topography, dense urban areas, and agricultural developments that coexist in a limited geographic area and create numerous human-animal-environmental interfaces. The region is recognized for its high biodiversity, the presence of over 85 endangered plant and animal species, its importance on the Pacific migratory pathway, high levels of population mobility, and hosts the busiest international border in the world. These interfaces pose a significant risk to animal, human, and environmental health, as evidenced by frequent wildlife die offs, antibiotic resistant bacteria in streams, beach closures due to fecal contamination, pesticide toxicities, zoonotic infectious disease outbreaks, and vector borne diseases. In the marked absence of any organization comprehensively addressing the health risks posed by these complex interfaces and recognizing that these issues necessitate a binational, cross-sectoral One Health approach, the Early Warning Infectious Disease Surveillance Program (EWIDS) founded One Border One Health (OBOH) in 2011.

OBOH recognizes that early warning systems should systematically monitor animal, human, and environmental health and that early detection is key to control. Hence OBOH's primary aim is to create and integrate early warning surveillance systems that gather data from disparate sources in order to protect and improve animal, human, and environmental health. This information can be used to inform decision makers about important public health events in the CA/BC border region.

## Methods

OBOH is a unique multi-disciplinary initiative comprised of over 30 institutions from Mexico and 60 institutions from the United States, with representation from government, academia, non-profit, private and military sectors. Professionals with expertise in public health, veterinary medicine, ecology, biology, urban planning, epidemiology, wildlife health, and environmental health are working in concert rather than in the traditionally isolated human, environmental health, domestic animal and wildlife sectors. OBOH is actively

seeking to translate One Health theory into practice through its diverse, binational network. This demonstration presents OBOH's surveillance, informatics, and education activities, focusing on its strengths, challenges, and future directions.

## Conclusions

To the authors' knowledge this is the first trans-border regional network established to enhance cross border epidemiologic information exchange and surveillance using One Health concepts in North America. Despite the large disparities between health systems, cultures, languages, socioeconomics, politics, animal management strategies, industries and ecosystems in the CA/BC border region, professionals from diverse disciplines are dedicated to OBOH and to the creation of a sustainable integrated surveillance system. OBOH is building the infrastructure for an early warning system in the border region, while improving regional infectious disease surveillance capacity and educating a new cadre of students and professionals about the importance of a One Health approach. Challenges include identifying cross-sectoral/multi-disciplinary funding opportunities to support activities, systematically operationalizing One Health without such funding, identifying and involving partners from different sectors, promoting data exchange, and maintaining an equal understanding of One Health surveillance within the initiative as membership increases. This demonstration provides recommendations on how to initiate and sustain cross-border, multidisciplinary, cross-sectoral surveillance engagements in resource-constrained environments.

## Keywords

cross-border surveillance; emerging and re-emerging pathogens; One Health; collaboratives; early warning systems

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