Quarantine Activity Reporting System (QARS)
Ramesh Krishnamurthy, PhD, MPH, Martha Remis, MS, Leonora Brooke MS, Charles Miller, MS, Ava Navin, MA, and Marta Guerra, DVM, PhD

1 Public Health Informatics Fellowship Program, Career Development Division, Office of Workforce and Career Development, Centers for Disease Control and Prevention Atlanta GA 30333;
2 National Center for Infectious Diseases, Centers for Disease Control and Prevention, Atlanta GA 30333

Abstract: This poster describes the Quarantine Activity Reporting System (QARS), a new web-based, secure electronic system which enables tracking the presence of ill persons on inbound flights and vessels and at land border crossings, infectious disease threats, or actions related to imported pathogens.

Introduction: The Centers for Disease Control and Prevention (CDC) has the responsibility for preventing the introduction, transmission, and spread of communicable diseases in the United States from outside its territorial boundary and for preventing and controlling infectious diseases spread between states. CDC’s Division of Global Migration and Quarantine administers the quarantine regulations by monitoring the international movement of persons, animals, and cargo.

This poster describes the Quarantine Activity Reporting System (QARS), a new web-based and secure electronic system which enables tracking the presence of ill persons on inbound flights and vessels and at land border crossings; infectious disease threats, or actions related to imported pathogens. Currently, 18 quarantine stations at the ports of entry in the continental United States, Alaska, Hawaii, and Puerto Rico are using the system to record their daily activities, tracking potential diseases transported through airlines, maritime traffic and land border crossings.

System Overview: Using uniform coding of values, QARS allows the quarantine station staff to enter electronic incident reports. QARS has the potential to link data with other applications to facilitate the inclusion of lists of exposed passengers derived from airplane manifests, to send ill persons to appropriate hospitals, record passengers quarantined, to supply with the correct passenger information, to monitor the importation of animals and animal products into the US, to analyze data for disease pattern recognition, and to prevent the double entry of immigration and refugee information.

QARS database architecture is relational and is based on the Public Health Informatics Network (PHIN) data model. The data fields are created by look-up tables with controlled vocabularies. With over 1000 data fields, QARS allows gathering of data pertaining to illness and death among travelers, post-arrival investigations of ill persons, importation of animals, active surveillance of conveyances arriving in the US, and emergency shipments of some antitoxins.

QARS has improved the communications network between various stakeholders and has enabled the tracking of the notification of passengers potentially exposed to infectious diseases.

Summary: Through QARS, the centralized storage of the quarantine activity information enables CDC to provide timely responses to disease-related emergencies and emerging illness surveillance. The flexible format of the QARS allows responding to diseases of interest during an outbreak by customizing and tracking versions of the standard questions and disease specific questions of the emerging disease.

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