

A Geographical Analysis of Tuberculosis Class B Arrivers to Establish Impactful External Partnerships, Los Angeles County, California, 2013-2017



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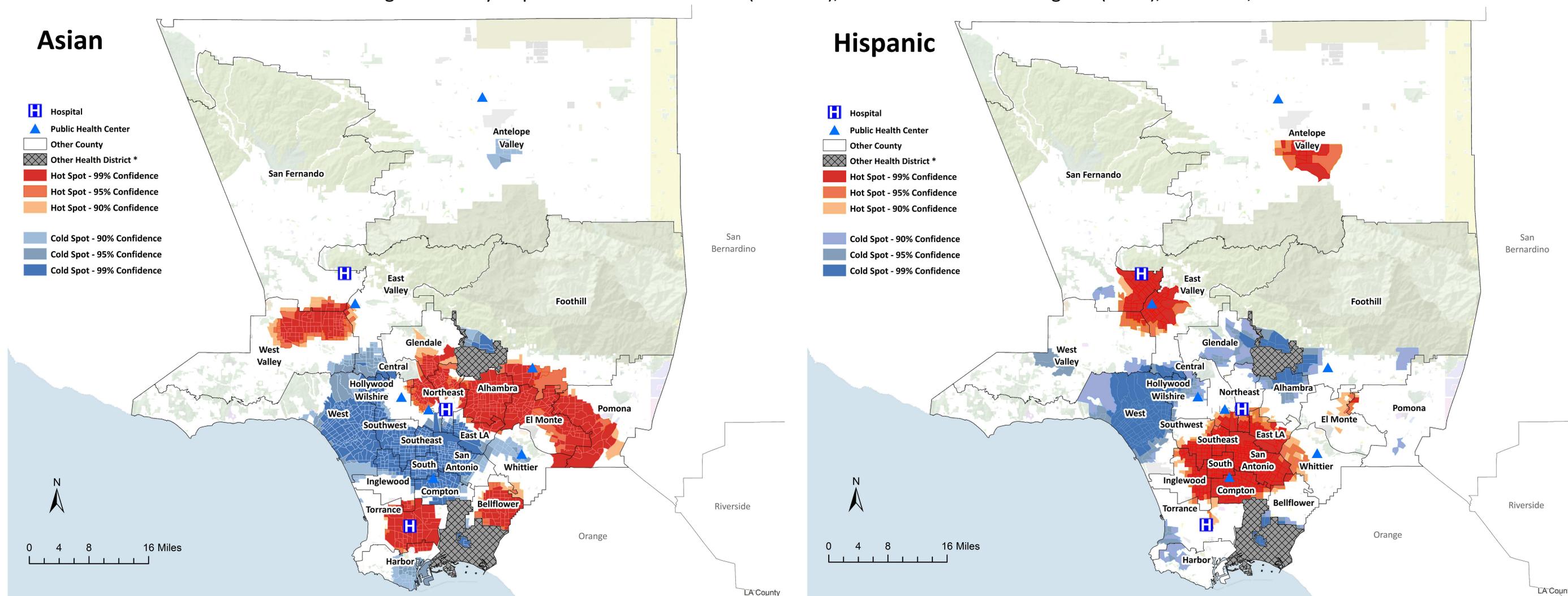


Figure 1. Optimized hotspot analysis of B1 and B2 arrivers among Asian and Hispanic race-ethnicities in LA County, 2013-2017. Asian race/ethnicity category includes persons who reported being Asian or Pacific Islander. Hispanic race/ethnicity includes persons of Hispanic origin of any race. Census tracts with statistically significant elevated burden are represented by hotspots ($p < 0.05$); census tracts with statistically significant lower burden are represented by coldspots ($p < 0.05$). LA County health district map overlays are applied to the hotspot maps. *Data exclude TB cases from other health districts, i.e., Long Beach and Pasadena, as these cities have their own health departments.

BACKGROUND & OBJECTIVE:

- **More than 80% of persons with active TB during 2013-2017 were non-United States-born in Los Angeles County (LAC).**
- The Centers for Disease Control and Prevention pre-immigration TB screening program identifies persons at risk for TB disease prior to arrival to the US.
- Class B1 arrivers are individuals who had an abnormal chest x-ray (CXR) with evidence of TB and/or history of treatment for active TB.
- Class B2 arrivers are individuals diagnosed with latent TB. These are typically children whose tuberculin skin test result was positive and CXR was normal.
- Examining the geographic distribution of TB Class B1 and B2 arrivers will identify target areas for Public Health to establish external partnerships with health care providers to extend TB services and enhance the effort towards TB prevention and elimination.

METHODS:

- TB Class B1 and B2 arrivers, which includes Immigrants, Refugees, Asylees, and Parolees, with arrival dates in LAC between 1/1/2013 and 12/31/2017 were identified from the LAC-DPH TB Registry database.
- Descriptive statistics were performed with SAS 9.4 to summarize the study population.
- Patient addresses at the time of arrival were geocoded using ArcMap 10.3.1 to obtain longitude and latitude coordinates.
- The "Optimized Hot Spot Analysis" tool, utilizing the Getis-Ord G_i^* statistic, was used to identify statistically significant hotspots of B1 and B2 arrivers.
- **Maps shown focus on Asian and Hispanic cases as 80-90% of LAC TB cases are in these race-ethnicities.**

RESULTS & DISCUSSION:

- Statistically significant geographical variations of Class B arrivers identified geographic areas to target local health care providers as partners in characterizing and overcoming challenges of TB prevention and elimination.
- **5,053 B1 arrivers (74% Asian, 17% Hispanic)**
- **2,349 B2 arrivers (68% Asian, 21% Hispanic)**
- **Recognizing Asian and Hispanic hotspots can begin the process of tailoring culturally & linguistically appropriate interventions to reduce and prevent TB.**
- Some Class B arrivers have addresses associated with law offices or resettlement agencies which may not reflect residence at time of arrival.

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