United States Affiliated
Pacific Islands, 2011
**Tuberculosis in the U.S.-affiliated Pacific Island Jurisdictions (USAPI), 2011**

The US-affiliated Pacific Islands consist of six jurisdictions that cover an area within the Pacific Ocean that is larger than the continental United States. Three are U.S. flag territories: American Samoa, the Commonwealth of the Northern Mariana Islands (CNMI), and Guam. The other three — Federated States of Micronesia (FSM), Republic of the Marshall Islands (RMI), and Republic of Palau — are independent countries but are also freely associated with the United States. These independent countries have Compacts of Free Association with the United States; under these compacts, the countries are fully sovereign in domestic and foreign affairs, but give responsibility for their health, education, defense, and other essential operations to the United States. Through these agreements, citizens residing in these three countries are able to immigrate to the United States without the usual overseas screening for health conditions that is required of those permanently resettling from other foreign countries.

As a result of their affiliations with the United States, the USAPIs are among the recipients of U.S. federal government funding, including CDC cooperative agreement funding for domestic TB control program activities.

**How do the USAPI TB programs differ from the 50 U.S. state programs?**

- Geographically, the USAPI constitutes a total land area equivalent to two-thirds of Rhode Island (1,545 square miles). While there are 10 population centers, many Pacific Islanders live on surrounding islands, creating challenges for diagnosis and treatment of TB. Across these jurisdictions, basic infrastructure needs are not uniformly available; several of these jurisdictions are in close proximity to countries with higher rates of endemic TB.

- There is a consistent shortage of health care providers in all job classes, and continuing education opportunities are limited, often requiring staff to travel off-island for significant amounts of time. These challenges impact the delivery of health care.

- The region grapples with health problems common to developed countries (diabetes, obesity, cancer) as well as those common to developing countries; infant mortality rates in this region exceed the national average, in some areas as much as 5 times greater.

- While case counts in this region are similar to low-incidence states, the burden of disease is much greater when compared to U.S. areas with similar case counts. The burden of disease in the region far exceeds that of any metropolitan statistical area with a population of 500,000 or greater. The USAPI regional TB case rate (87.7/100,000) is almost 10 times greater than that of the State of Hawaii (8.9/100,000) and 26 times greater than the U.S. national rate (3.4/100,000).
Table 1. Tuberculosis Cases and Case Rates for USAPIs, Hawaii, and the United States, 2010

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Cases</th>
<th>Rate</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>USAPI Regional Total</td>
<td>405</td>
<td>87.7</td>
<td>461,939</td>
</tr>
<tr>
<td>American Samoa</td>
<td>3</td>
<td>5.4</td>
<td>55,198</td>
</tr>
<tr>
<td>Northern Mariana Islands</td>
<td>27</td>
<td>51.8</td>
<td>52,167</td>
</tr>
<tr>
<td>Federated States of Micronesia</td>
<td>140</td>
<td>131</td>
<td>106,836</td>
</tr>
<tr>
<td>Guam</td>
<td>78</td>
<td>48.9</td>
<td>159,600</td>
</tr>
<tr>
<td>Marshall Islands</td>
<td>149</td>
<td>221.8</td>
<td>67,182</td>
</tr>
<tr>
<td>Palau</td>
<td>8</td>
<td>38.2</td>
<td>20,956</td>
</tr>
<tr>
<td>Hawaii¹</td>
<td>123</td>
<td>8.9</td>
<td>1,374,810</td>
</tr>
<tr>
<td>United States¹</td>
<td>10,528</td>
<td>3.4</td>
<td>311,591,917</td>
</tr>
</tbody>
</table>

¹Not included in USAPI regional total.

USAPI TB Surveillance Data Highlights, 2011 (N=405)

- 94 (23%) age less than 15 years
- 99 (24%) age 25–44 years
- 221 (55%) male
- 84 (21%) not born in the USAPI jurisdictions or the United States
  - 50 (60%) of these emigrating from the Republic of the Philippines
- 272 (67%) diagnosed with pulmonary disease only
- 180 (44%) positive culture for *Mycobacterium tuberculosis*
- 2 (<1%) with MDR TB; no cases of XDR TB
- 137 (34%) were unemployed

The data reported here reflect cases reported to the CDC National TB Surveillance System using the Report of Verified Case of Tuberculosis (RVCT). Denominators for computing 2011 rates for the United States and Hawaii were obtained from Annual Estimates of the Population for the United States and States, and for Puerto Rico; for all other areas, from IDB Summary Demographic Data (http://www.census.gov/population/international/data/idb/informationGateway.php) accessed August 10, 2012.
Map of U.S.-Affiliated Pacific Islands by TB Case Rates, * 2011

*Cases per 100,000
TB Case Rates,* U.S.-Affiliated Pacific Islands, 2011

- Northern Mariana Islands: 51.8
- Federated States of Micronesia: 131
- Guam: 48.9
- Marshall Islands: 221.8
- Palau: 38.2
- American Samoa: 5.4
- Hawaii: 8.9
- United States overall: 3.4

*Cases per 100,000
Reported TB Cases by Age Group, U.S.-Affiliated Pacific Islands, 2011

- 25-44 yrs (25%)
- 45-64 yrs (29%)
- 15-24 yrs (16%)
- <15 yrs (23%)
- >65 yrs (7%)

Note: Excludes missing or unknown
TB Case Rates* by Age Group and Sex, U.S.-Affiliated Pacific Islands, 2011

*Cases per 100,000

- Susceptible to first-line* anti-TB drugs (92.2%)
- Any INH resistance, not MDR (4.2%)
- Other** (2.4%)
- MDR (INH and RIF resistance) (1.2%)

*INH, RIF, PZA, EMB
**Other resistance (not MDR or INH resistant) or missing testing to at least one first-line drug
Note: Data reflect results for 2011 for 167 culture-positive isolates for which drug sensitivity testing results were available.
This page intentionally left blank
Slide Narratives for US Affiliated Pacific Islands:

Slide 1 - USAPI. Map of U.S.-Affiliated Pacific Islands by TB Case Rates, 2011. This map of the Pacific region shows the case rates by jurisdiction.

Slide 2 - TB Case rates, U.S.-Affiliated Pacific Islands, 2011. This bar chart shows TB rates for the U.S. Pacific Islands for reported cases in 2011. These case rates from 5.4 per 100,000 in American Samoa to 221.8 per 100,000 in the Republic of the Marshall Islands. The overall case rate for the United States (3.4 per 100,000) and for Hawaii (8.9 per 100,000) are also shown.

Slide 2 - USAPI. Reported TB Cases by Age Group, U.S.-Affiliated Pacific Islands, 2011. This pie chart shows the age distribution of persons reported with TB in the U.S. Pacific Islands in 2011. Twenty three percent were children under 15 years of age and 16% were among 15 to 24 year-olds, whereas 25% were among 25 to 44 years of age, 29% were among 45 to 64 year-olds, and 7% were among those at least 65 years old.

Slide 3 - USAPI. TB Case Rates by Age Group and Sex, U.S.-Affiliated Pacific Islands, 2011. This slide graphs the rates in 2011 of persons reported with TB in the U.S. Pacific Islands in 2011 by age group and sex. Children under 15 years old had a rate of approximately 48 per 100,000 for females and approximately 45 per 100,000 for males. In those between the ages of 25-44 years old females accounted for 47 per 100,000 and males were approximately 52 per 100,000.

Slide 4 - USAPI. Anti-TB Drug Susceptibility, U.S.-Affiliated Pacific Islands, 2011. This pie chart shows the level of drug susceptibility for culture positive cases for in the U.S. Pacific Islands in 2011. Data were available for 92.2% of culture-positive cases for which drug susceptibility testing was available for 2011. Any isoniazid resistance that was not multi-drug resistance was 4.2%. Resistance to at least isoniazid and rifampin, known as multidrug-resistant TB (MDR TB), was 1.2%. Other resistance (Not MDR or INH resistant) or missing testing to at least one first-line drug was 2.4%.