

Distribution and Determinants of Tuberculosis, Kingdom of Saudi Arabia, 2005 – 2012

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Introduction

- Tuberculosis (TB) remains a public health threat in KSA with challenges that limit its prevention and control.
- Laboratory diagnosis plays a key role in an effective TB program.

Methods

- Estimated the TB incidence rates (IR) and 95% confidence interval (CI) stratified by nationality, gender, and administrative regions from 2005 – 2012
- Calculated proportion of TB cases, by age category, employment status, and nationality
- Assess laboratory capabilities by determining the proportion of laboratory-confirmed TB cases

Figure 1. Incidence Rates of Reported Cases of Tuberculosis, by Gender and Nationality, Kingdom of Saudi Arabia, 2005 – 2012

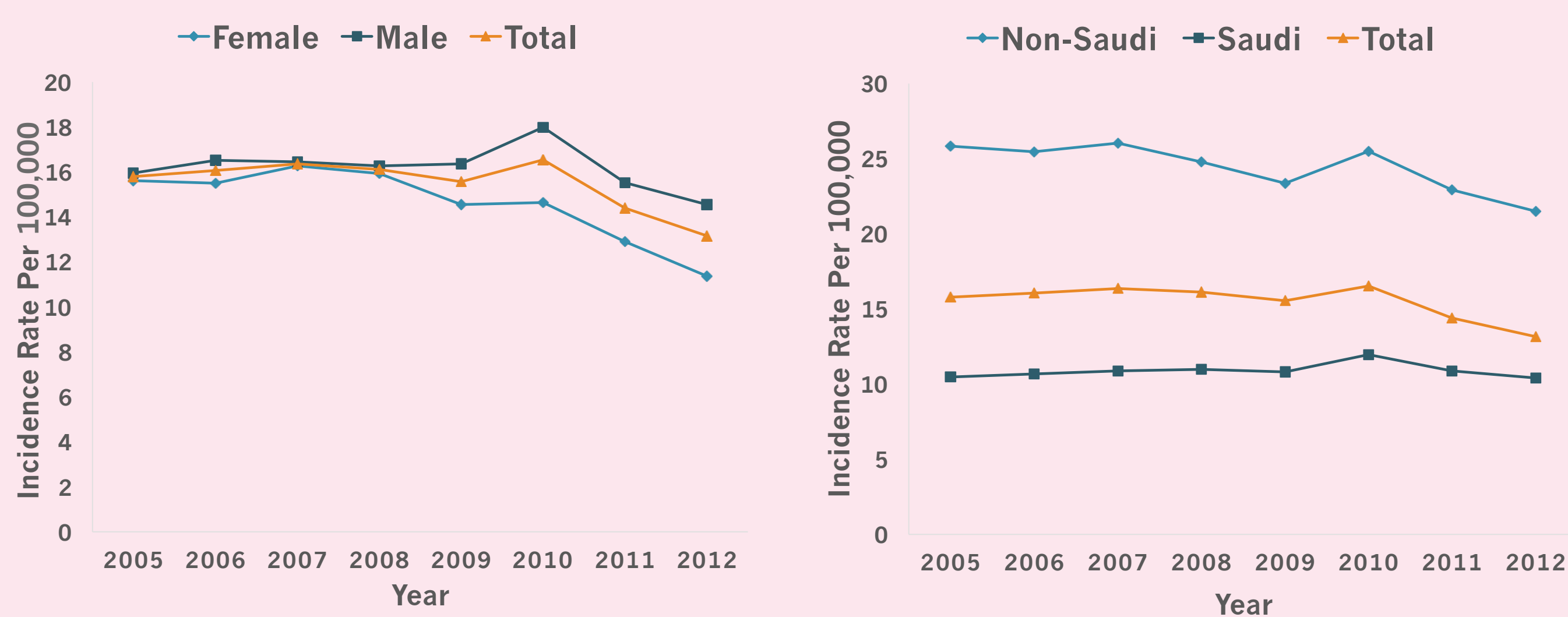


Figure 2. Number and Proportion of Reported Cases of Tuberculosis, by Nationality, Kingdom of Saudi Arabia, 2005 – 2012



Results

- Total of 32,345 TB cases reported from 2005 – 2012
- IRs significantly decreased from 15.8 (95%CI=15.29 – 16.31) in 2005 to 13.6 (95% CI = 12.74 – 13.58) in 2012
- IRs for males and females were similar from 2005 – 2008, but greater for males from 2009 – 2012
- IRs of non-Saudis were approximately twice those of Saudis during the study period
- Makkah region had greater IRs than others, followed by Riyadh and Jazan
- Proportion of laboratory-confirmed cases of reported TB was 57%

Figure 3. Proportion of Reported Cases of Tuberculosis, By Age Group and Gender, Kingdom of Saudi Arabia, 2005 – 2012

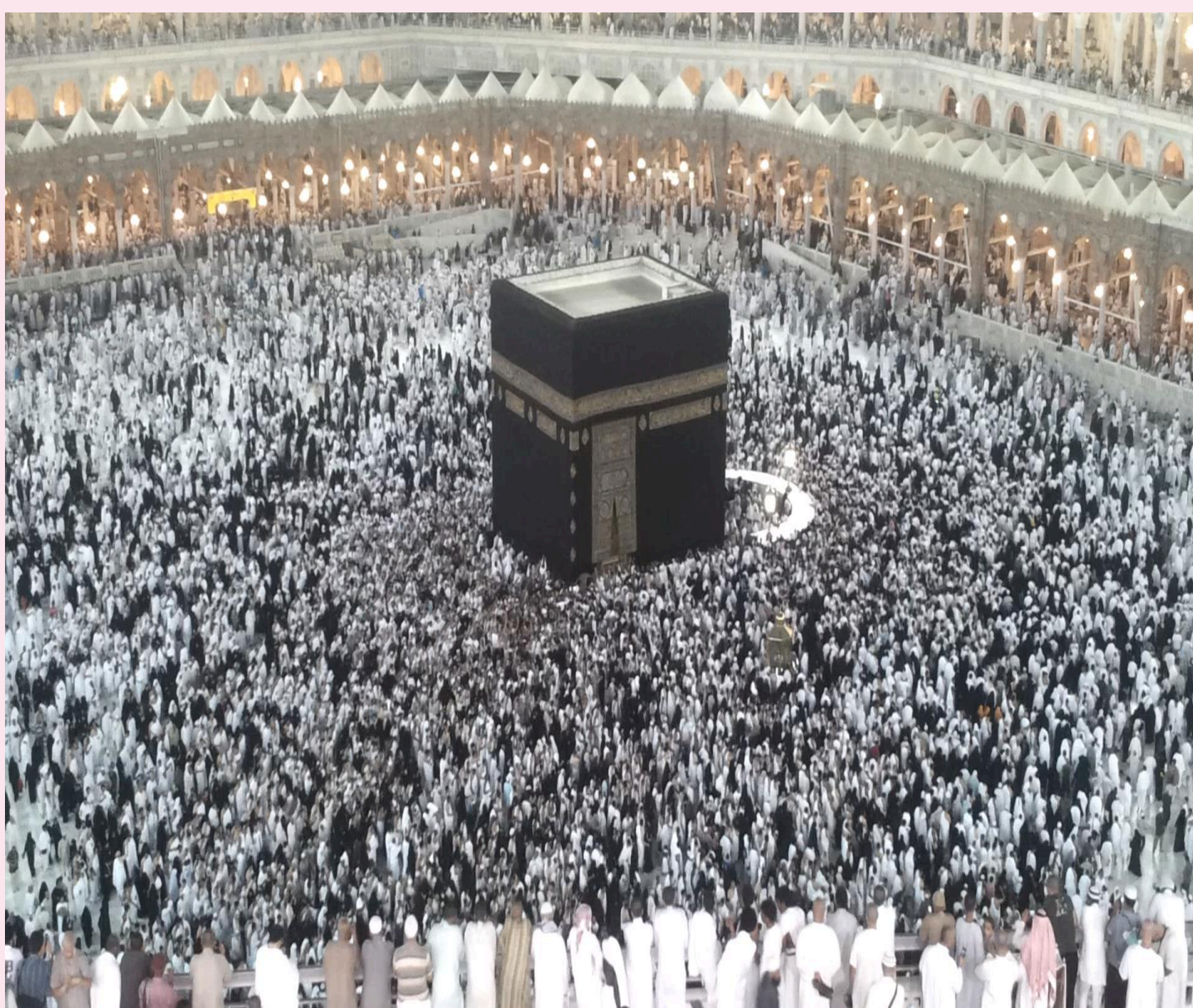
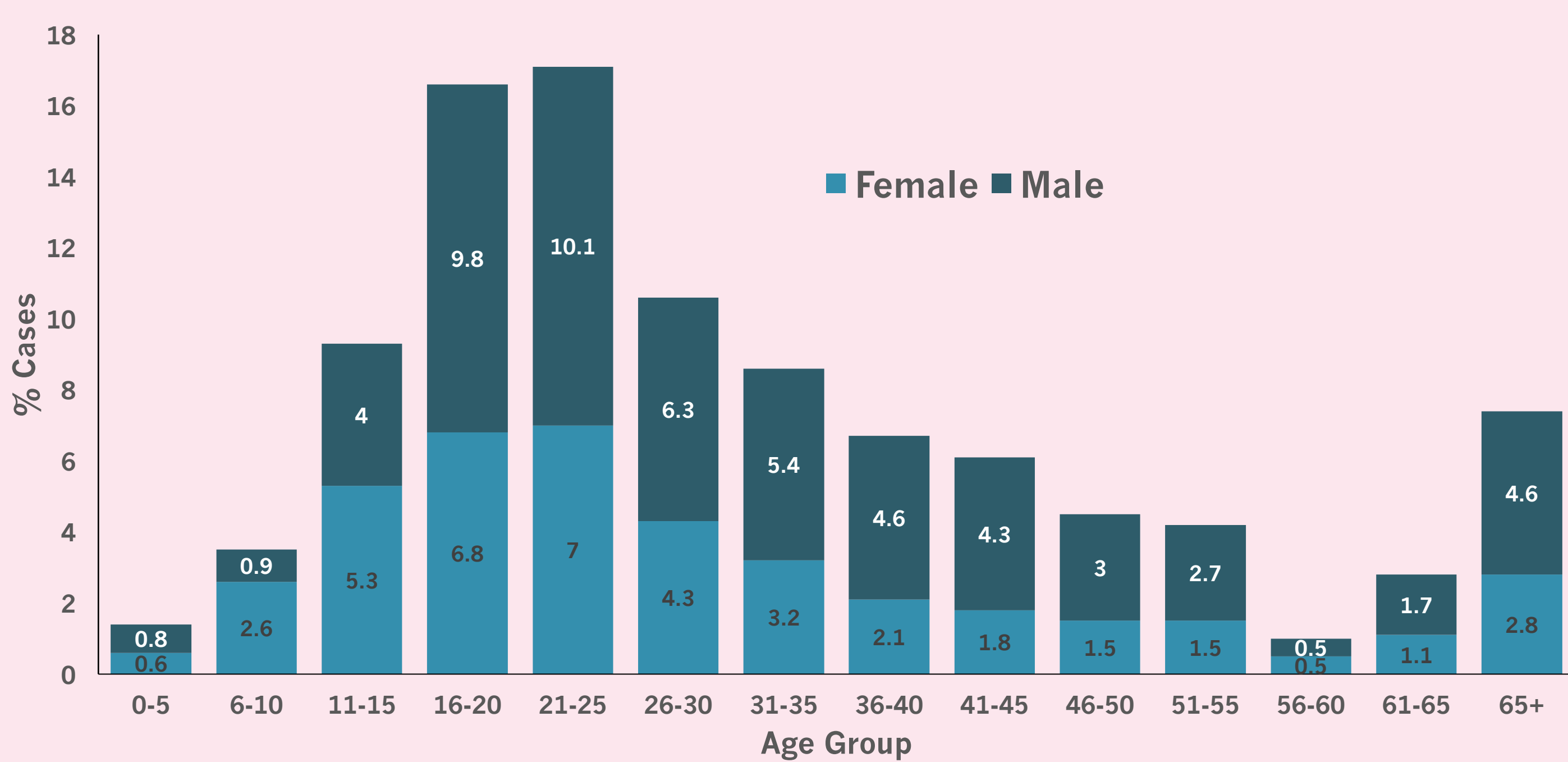
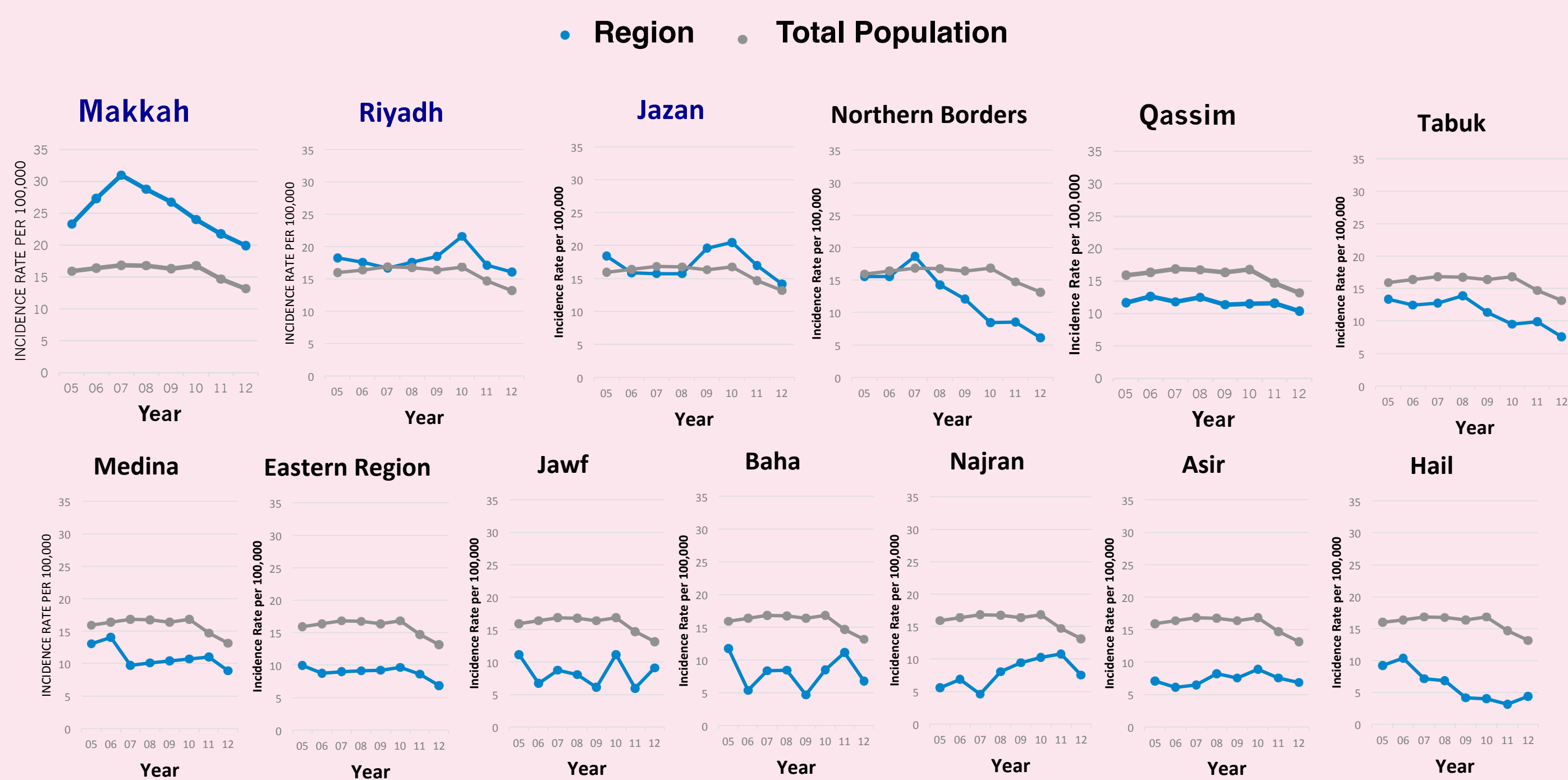


Figure 4. Incidence Rates of Reported Cases of Tuberculosis, by Region, Kingdom of Saudi Arabia, 2005 – 2012



Discussion

- Although the overall TB IRs significantly decreased from 2005 – 2012, it remains a public health threat in KSA
- TB IRs were greater among non-Saudis compared to Saudis, and greater among males than females
- IRs were highest in Makkah region, followed by Riyadh and Jazan

Table 1. Culture and Smear Test Results for Reported Cases of TB, Kingdom of Saudi Arabia, 2005 – 2012

Culture	Smear Test	#	Outcome	Final Outcomes		
Positive	Positive	874	Positive	Outcome	#	(%)
	Negative	627	Positive	Positive	18,429	57
	Not Done	82	Positive			
Negative	Positive	93	Positive	Negative	8,474	26
	Negative	253	Negative			
	Not Done	26	Negative			
Not Done	Positive	16,753	Positive	Not done	5,505	17
	Negative	8,195	Negative			
	Not Done	5,505	Not Done	Total	32,435	100

Recommendations

- TB screening should be implemented for all non-Saudi workers at ports of entry
- Laboratory-screening should be evaluated throughout the country and strengthened