Estimating the prevalence of latent tuberculosis in a low incidence setting: Australia

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"Take home" message: Migration is a key driver of tuberculosis (TB) in many low incidence settings. Our method combines global TB infection estimates with migration data to provide useful insights into the prevalence of latent TB in a low-incidence setting, Australia.

Appendices

The probabilities of infection in the Australian-born (p_a) and in the overseas-born (p_o) are given by:

$$p_a = 1 - e^{-H_a}$$

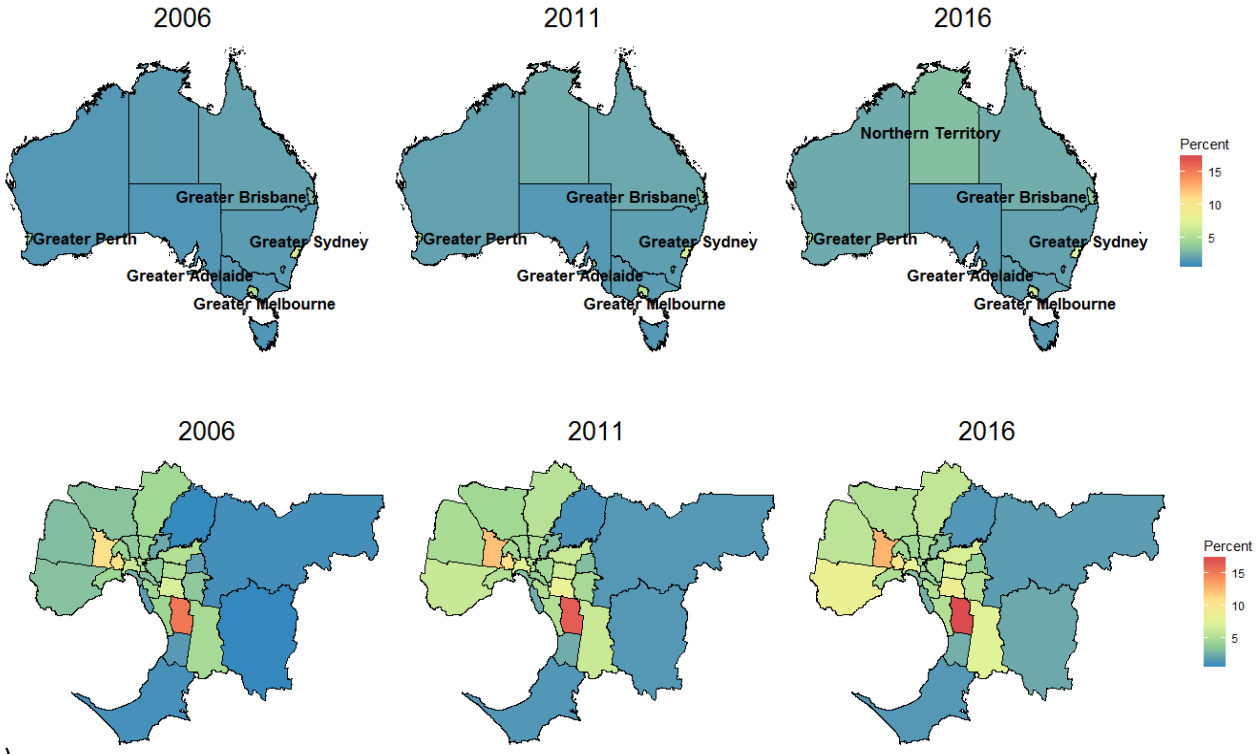
$$p_o = 1 - e^{-H_o}$$

$$H_a = {}^1/_2 FOI_{ba} + \sum_{i=b+1}^{f} FOI_{ia}$$

$$H_o = {}^1/_2 FOI_{bs} + \sum_{i=b+1}^{m-1} FOI_{is} + {}^1/_2 FOI_{ms} + {}^1/_2 FOI_{ma} + \sum_{i=m+1}^{f} FOI_{ia}$$

Where FOI indicates the force of infection that an Australian-born ($_a$) or overseas-born ($_o$) person was exposed to in a specific year and country, and *H* indicates the cumulative force of infection. The subscripts *a*, *b*, *m*, *s* and *f* refer to Australia, birth year, migration year, source country and final year of calculation respectively, and are applied to forces of infection in specific years and countries.

a)



b)

Figure S1 Estimated percentage of residents with LTBI in Australia over time by a) region of Australia and b) local government area in Greater Melbourne.