Supplemental Table 1. Factors associated with self-reported previous LTBI testing and diagnosis among current TST positives

Factor	Testing for LTBI		Diagnosis of LTBI	
	Unadjusted OR (95% CI)	**Adjusted OR (95% CI)**	**Unadjusted OR (95% CI)**	**Adjusted OR (95% CI)**
Sex				
Male	1 (ref)	1 (ref)	1 (ref)	1 (ref)
Female	1.31 (0.59-2.90)	1.16 (0.44-3.08)	1.96 (1.01-3.82)	1.94 (0.95-3.95)
Age group				
6-14	0.52* (0.12-2.29)	0.60* (0.12-3.09)	0*	0*
15-24	0.72 (0.31-1.69)	0.71 (0.28-1.78)	0.29* (0.08-1.03)	0.33* (0.06-1.64)
25-44	1 (ref)	1 (ref)	1 (ref)	1 (ref)
45-64	0.67 (0.35-1.31)	0.67 (0.36-1.25)	1.04 (0.51-2.13)	0.90 (0.43-1.88)
65+	0.69 (0.28-1.70)	0.54 (0.18-1.62)	1.19 (0.62-2.28)	1.41 (0.71-2.83)
Race/ethnic group				
White	1* (ref)	1* (ref)	1* (ref)	1* (ref)
Non-Hispanic Black	1.23 (0.54-2.80)	1.21 (0.54-2.72)	0.83 (0.21-3.26)	0.59 (0.11-3.13)
Hispanic	0.48 (0.20-1.13)	1.13 (0.52-2.50)	0.60 (0.16-2.33)	0.50 (0.09-2.83)
Asian	0.40 (0.16-1.00)	0.73 (0.26-2.07)	0.69 (0.16-2.88)	0.64 (0.12-3.59)
Other	0.09* (0.01-0.81)	**0.07* (0.01-0.56)**	0.76* (0.07-8.57)	0.54* (0.07-4.39)
Nativity				
U.S.	1 (ref)	1 (ref)	1 (ref)	1 (ref)
Non-U.S.	0.31 (0.12-0.79)	**0.19 (0.08-0.47)**	0.65 (0.32-1.32)	0.75 (0.24-2.33)
Income				
Poverty	1.17 (0.70-1.95)	1.60 (0.88-2.91)	1.08 (0.54-2.14)	1.08 (0.44-2.64)
Non-poverty	1 (ref)	1 (ref)	1 (ref)	1 (ref)
Education				
< High school	0.60 (0.40-0.92)	0.74 (0.41-1.36)	1.12 (0.39-3.22)	1.34 (0.36-5.03)
High school graduate	1 (ref)	1 (ref)	1 (ref)	1 (ref)
Beyond high school	1.61 (0.94-2.78)	**2.70 (1.36-5.38)**	1.20 (0.59-2.46)	1.49 (0.61-3.66)
Contact of TB case	0.90* (0.23-3.43)	1.08* (0.36-3.30)	6.22* (1.88-20.64)	**6.57* (2.00-21.61)**

* indicates that at least one raw cell count was 10 or fewer in the numbers who were/were not tested or were/were not diagnosed
Table is restricted to survey participants who did not report prior TB disease

Supplemental material:

Methods:

We chose to use a positive QFT as our primary indicator of LTBI status rather than the TST because: 1) current CDC guidelines recommend or suggest using an IGRA rather than the TST in most clinical scenarios involving patients ≥ 5 years old (21) , and 2) a larger sample size of QFT positives was available in the 2011-2012 NHANES study (1, 2, 33).

For the main analyses, we further adjusted NHANES survey weights within categories of age and nativity (i.e. country of birth, categorized as US-born or non-US-born) to account for item nonresponse; that is, a missing QFT reading by using multivariate logistic regression to examine factors associated with LTBI and with not having a QFT result. We used TST as an indicator of LTBI in our sensitivity analyses to examine the effect of LTBI case definition on the analyses. Similar re-weighting for nonparticipation (lack of TST reading) was performed when using TST results to measure LTBI.

We inferred the 'knew status' variable, which was not in the NHANES dataset, by assuming that those people who reported having a test, but whose diagnosis response was missing, did not know the outcome of their test. Otherwise, they were assumed to know their test result. That is, for the "know status" variable, we categorized the response as "yes" if the respondent answered either "yes" or "no" to any of the three questions: Were you told that your (skin/blood/tine) test was positive for TB? Of note: three separate questions were asked, one for each test type: skin, blood, and tine. If responses to all three were missing, then we assumed that they did not know their status. People who reported having had a test, but whose diagnosis response was missing, were assumed not to know the result of their test. Study participants were also specifically asked whether or not they were born in the United States, if they had ever been told they had active TB or ever prescribed medicine for it, and if they had ever lived in the same household with someone sick with TB (contacts).

Numbers of persons engaged in care at each step of the cascade were estimated by multiplying prevalence estimates of that group within the total population stratum and lower and upper confidence intervals by corresponding 2011 American Community Survey (ACS) denominator totals when these were available (34). An exception was the number of people who had previously been in contact with a person with TB by virtue of living in the same household. These population numbers were estimated directly from NHANES by multiplying the total population by the corresponding NHANES-derived proportion. Consequently, they were subject to extra variability compared to fixed point estimates used from the ACS and this was taken into account in analyses. By design, variables were subject to skip patterns: survey participants who answer "no" to a particular question were not asked questions further along the cascade. These variables were re-coded as ternary (yes/no/skip) so as to ensure skip patterns were distinguished from missing responses for consistent estimation. Cascade proportions were estimated as conditional probabilities at each step of the cascade. For example, the proportion of people who initiated treatment was estimated within the subdomain of those who had received a positive diagnosis. To assess the population-level prevalence of prior testing and diagnosis, we included all NHANES participants who had any valid QFT, whereas engagement in care analyses were restricted to the domain of only those with a positive result. When restricted to positive test

results, the cascade engagement variables had negligible proportions of missingness for both QFT and TST. For QFT, 2.3% of 'tested' and 0.9% of 'initiated' responses were missing, and all other cascade variables were complete (0% missing). For TST, 1.9% of 'tested' responses were missing, and all other cascade variables were complete.

Estimation for several strata may be unreliable due to small absolute numbers of persons or large relative standard error (RSE), defined as the ratio of standard error to point estimate. We deemed estimates which were based on fewer than 10 individuals, or those for which the RSE exceeded 30%, to be unreliable and have indicated these in all tables.

RESULTS:

For the sensitivity analysis using TST to define LTBI, 6,128 (75%) had a valid TST result, 32 of whom had a history of TB disease and 25 had a missing history, leaving 6,071 for analysis when using TST as the indicator of LTBI status.

The high proportions of those who knew their test status among those who were tested, across all strata of demographic variables presented, prevented regressions from converging for the 'knew status' conditioned on 'tested' step of the cascade.