

World TB Day
March 24th

Together we can stop
Tuberculosis



TB is preventable, treatable and curable

Contact Follow-up Events

- Contact investigation = detective work
- Interviewing, re-interviewing
- Collateral histories
- Work/school records, shift schedules, etc
- Named contacts vs social networks/places
- Site visits
- Risk communication
- logistics

TB in a high-needs school

- A 17 year-old with a 1 month history of cough, fever and fatigue was diagnosed with extensive but non-cavitary, smear numerous pulmonary TB.
- Special needs high school in Scarborough
- developmental delays, physical disabilities and significant medical conditions including permanent tracheostomies
- Special programming – more mixing
- Very protective staff / parents...TDSB...trustees
- Media?

TB Contact Follow-up

- Initial and post-10 week TST: all household members and all school contacts
- follow-up IGRAs (QFT, Quantiferon Gold Test) for TST positive reactors
- Co-ordinated follow-up of all contacts was done by Toronto Public Health TB Program and the TB Clinic at the Hospital for Sick Children.

What happens?

- Several site visits: extent of contact follow-up
- Meeting / in-service with school staff
- Parent meeting – translation?
- On-site TST clinics / nursing assessment
- Referrals to TB Clinic at HSC
- Extensive coordination of transportation, scheduling of clinic appointments, and managing behavioural issues, DOPT.

Birth Countries of Positive TST & QFT contacts



Legend

- Canada (1)
- Sri Lanka (2)
- China (1)
- Afghanistan (2)
- Saudi Arabia (1)

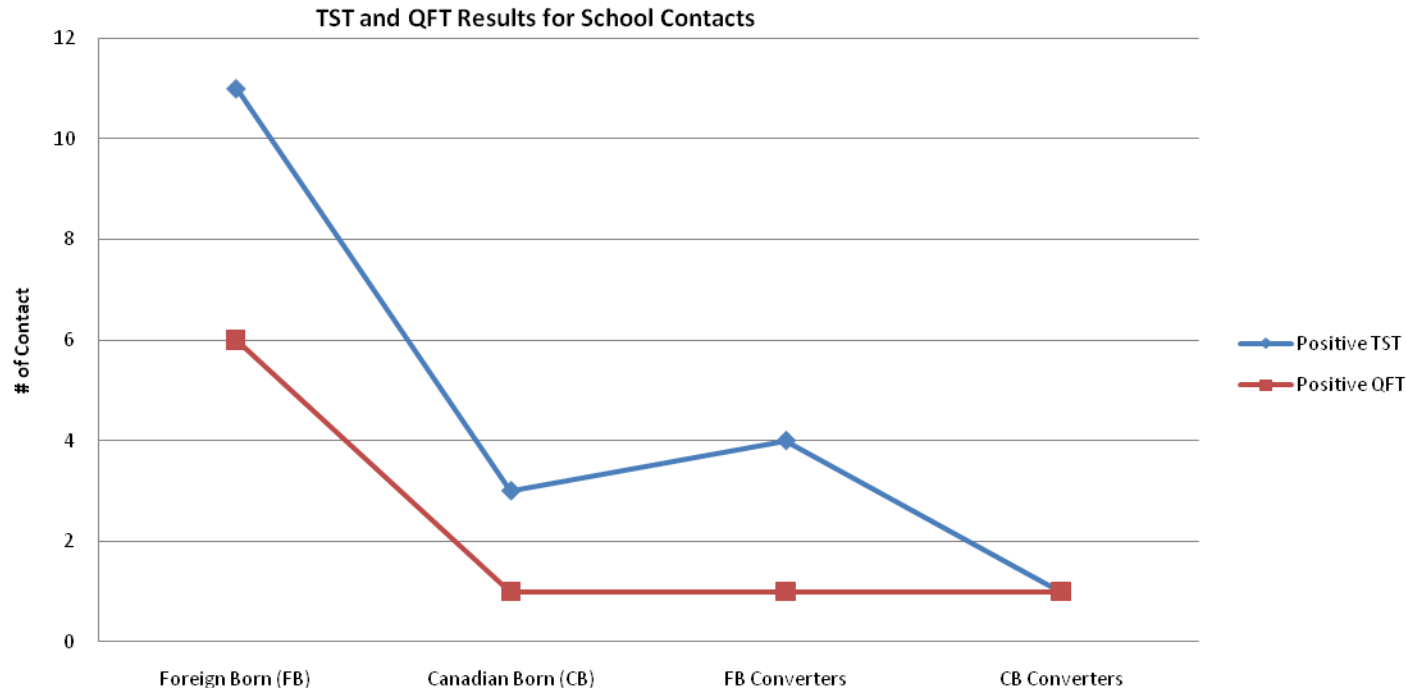
- No secondary cases
- 3/3 household members TST negative at initial and post 10-week from break in contact, and QFT negative at post-10 weeks.
- 105 of 106 school contacts (students, teachers and staff) were assessed.
- 30% (31/106) of contacts were born outside Canada (foreign-born, FB).

Results

- Seven contacts had a documented prior positive TST (2/7 CB).
- On initial testing, 7 had TST >10 mm (all FB), and 2 Canadian-born (CB) had 5-6mm TST.
- Over half (52%, 16/31) of foreign-born contacts were TST positive at >10mm; no Canadian born contacts had a TST>10mm, though 7% (5/75) had a TST between 5-9mm.

TST & QFT Results for School Contacts

- Overall, TST \geq 5mm was 20% (21/105); TST \geq 10mm was 17%(18/105).
- TST positivity did not correlate with extent of exposure to the source case.



- No clear evidence of transmission.
- results likely represent a background TST positive rate $\geq 10\text{mm}$ of 17% in this heavily immigrant neighbourhood.
- IGRA testing was helpful in evaluating potential new TB infections among contacts in Toronto and guiding treatment.

TB in jails and shelters

- 42 year old man with end-stage HIV was diagnosed with meningeal and smear 4+ pulmonary TB, and died shortly thereafter.
- treated repeatedly at different sites for “recurrent pneumonia”. On post-diagnosis review of his serial CXRs, endobronchial TB was suspected.

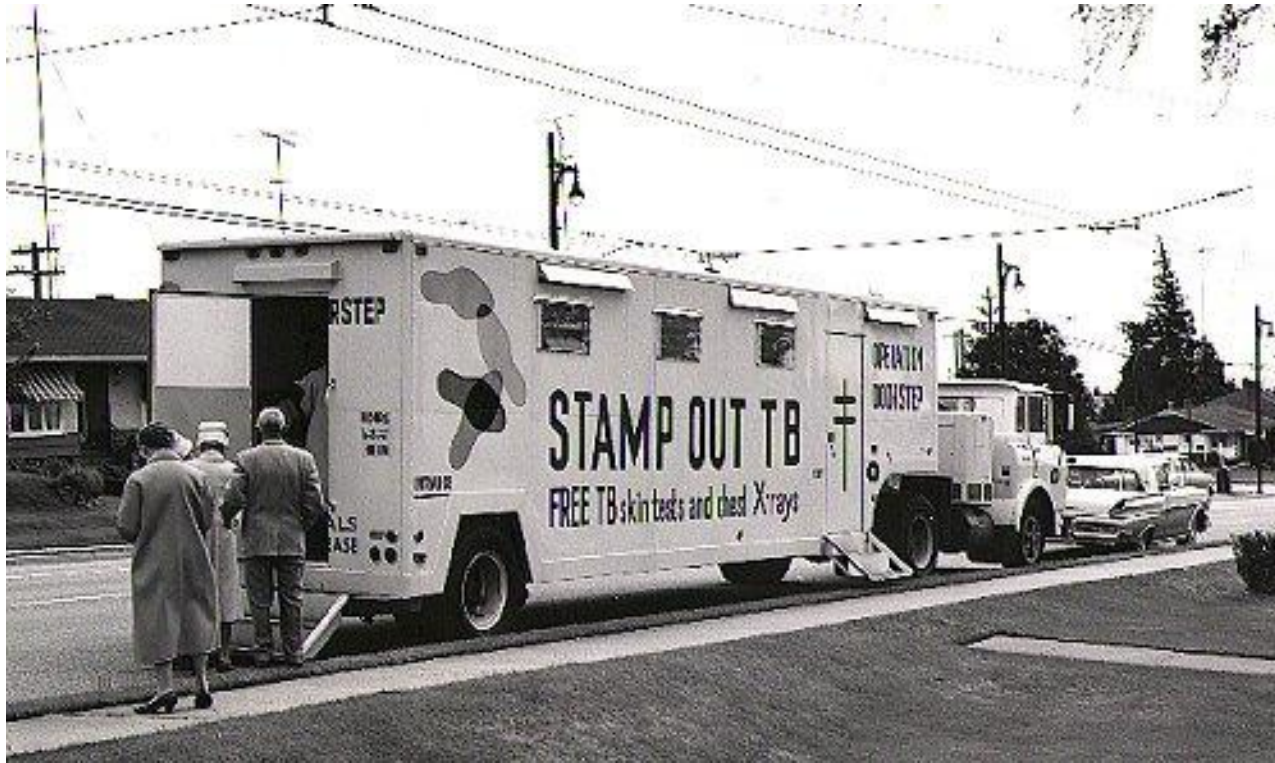


TST conversions

→ expanded follow-up

- Cell-mates and room-mates: 5/26 documented converters, all at 2 sites
- Expansion to range-mates, range staff, 4th jail, shelter floor-mates...1 more TST converter
- Communications and logistics
- Total 494 contacts investigated over 6 months
- 2 secondary cases, both shelter room-mates
- Prophylaxis – DOPT?
- Ventilation
- Endobronchial TB is pretty infectious!

Questions?



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Contact results

Location	Total contacts	Previous positive TST (%)	TST negative at >8 weeks	TST converters (% of # initial TST neg)	Secondary cases
Jail W cellmates	2	1 (50)	1	0	0
Jail T cellmates	8	2 (25)	2	3 (75)	0
Jail T rangemates	101	12 (12)	25	0	0
Jail T staff	30	1 (3)	12	0	0
Jail E cellmates	2	1 (50)	1	0	0
Jail M cellmates	6	0 (0)	4	0	0
Hospital staff	90	30 (33)	60	0	0
Hospital inpatients	27	1 (4)	10	0	0
Infirmiry staff	19	2 (11)	15	0	0
Infirmiry inpatients	18	2 (11)	3	0	0
Shelter S room-mates	7	4 (57)	1	2 (66)	1
Shelter S floor mates	127	31 (24)	29	1 (3)	0
Shelter S staff	56	13 (23)	14	0	0
Shelter M contacts	1	1 (100)	0	0	0

School Results

- Of students TST positive on initial testing, 4/8 were positive on QFT; 2 of the initial TST +ve/ QFT –ve contacts had repeat QFT testing >4 weeks later, and one converted to QFT +ve.
- Five TST converters were identified; of which one was CB (4 → 7 mm, QFT positive, not considered a close contact). Three of 4 FB converters had a negative QFT; all converted from an initial TST of 0mm to > 10mm, and 4/4 had a history of BCG – boosting?
- Most of the positive TST & QFT positive contacts (6/7, 86%) initiated prophylaxis.