

Contact investigation in children living with patients treated for DR-TB

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Outline

- Introduction
- Contact evaluation protocol
- Findings
- Challenges
- Strategies to overcome challenges
- Recommendations

The Indus Hospital Pediatric TB program



- Started in 2008
- Separate airborne infection control TB facility- 2010
- Daily pediatric TB clinics - 2011
- IPT program- 2012

Contact evaluation protocol

- Index DR-TB patient registered
- Health worker visits household-
 - identifies HH contacts, demographics etc.
 - advises to bring all children in the HH for a baseline assessment.
 - Inquires about TB symptoms monthly

Contact evaluation protocol

All <5 year olds:

1. H and P
2. Height weight
3. TST
4. CXR
5. CBC/ESR/CRP
6. If clinically indicated then a) gastric aspirate (smear, xpert, culture)
other imaging

All 5-14 year olds

1. H and P
2. Height weight
3. TST

5-14 year olds with symptoms

- a) CXR/ other imaging
- b) sputum/gastric aspirate-smear/xpert and culture
- c) CBC/ ESR

Findings (1)

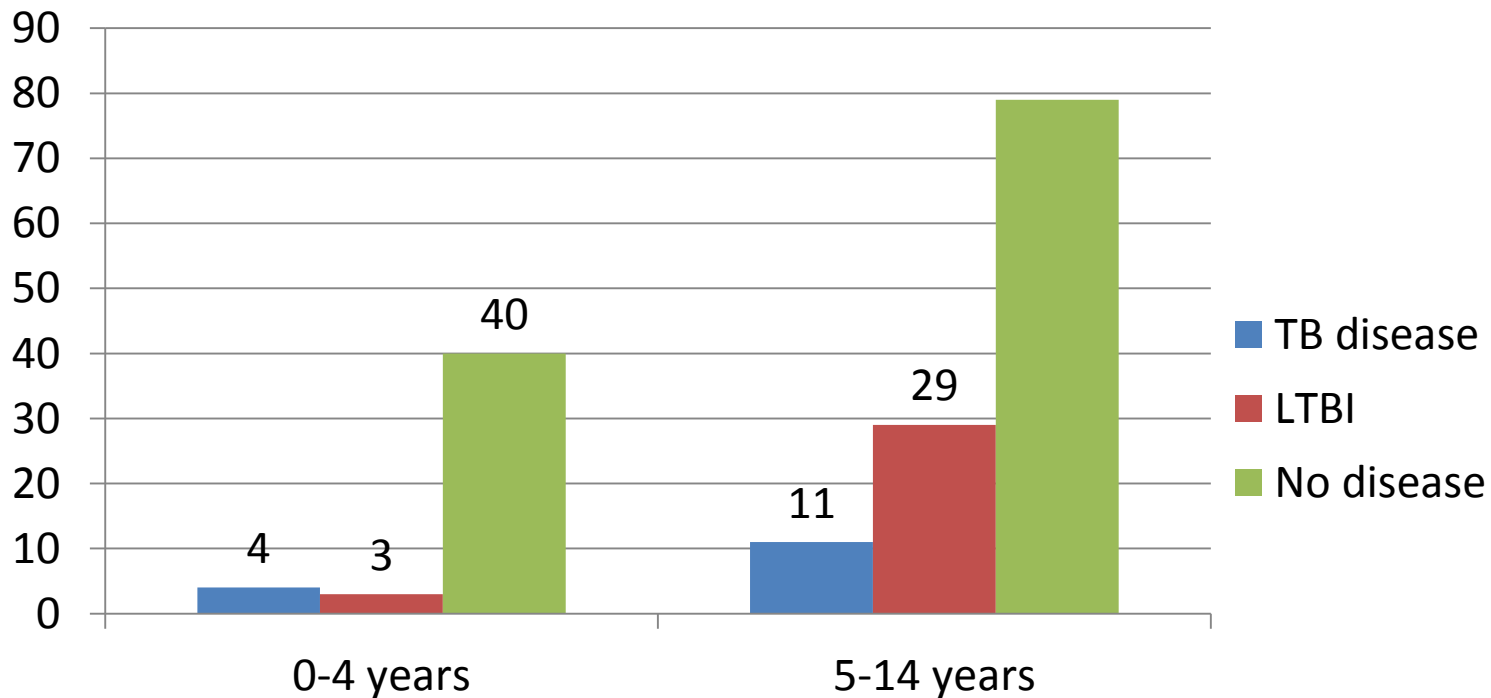
- n=192
- 59% male
- 55% child of index patient
- 42% underweight (<-2 SD)
- 50% BCG scar

Findings (2)

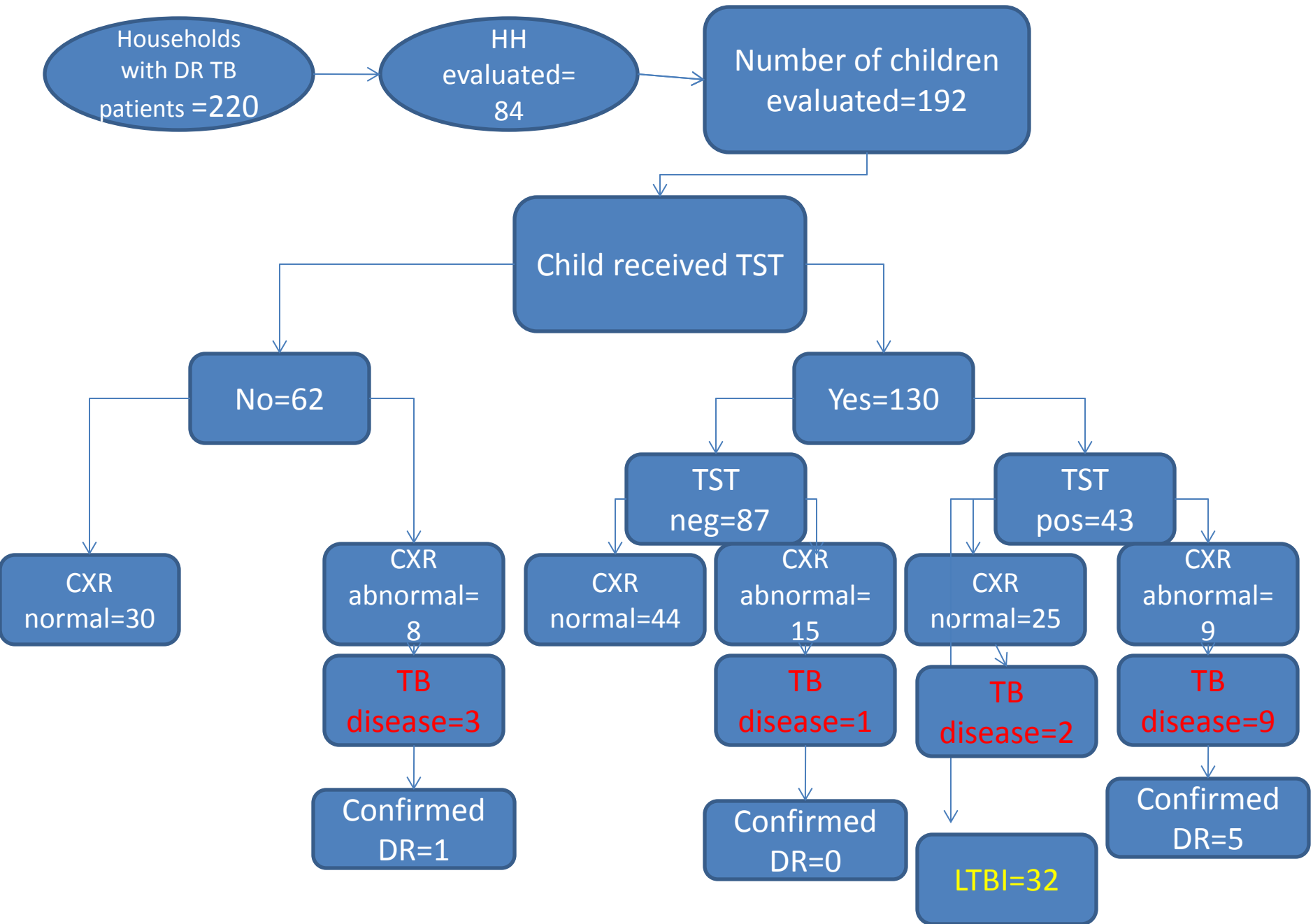
- 33% PPD \geq 10mm (n=130)
- 26.6% sx (any of: cough, fever, night sweats, weight loss, adenopathy)
- 55% ESR elevated (n=131)
- 9% TB disease (15/166)
- 40% culture confirmed DR-TB (6/15)

TB disease and LTBI in child contacts

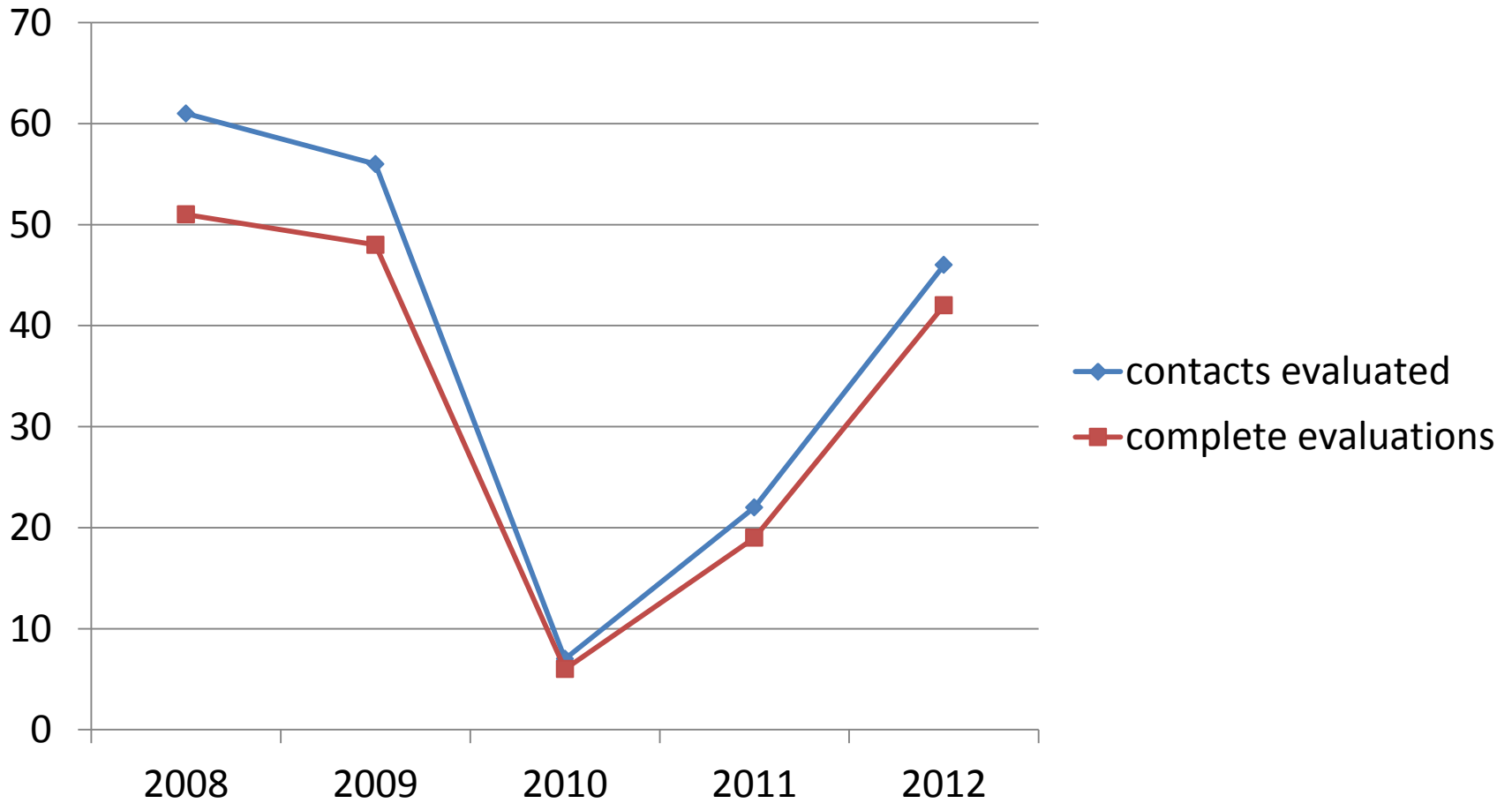
Age groups	TB disease n (%)	LTBI n (%)	No disease n (%)	Total
0-4 years	4 (8.5)	3 (6.4)	40 (85)	47
5-14 years	11 (9.2)	29 (24)	79 (66)	119
Total	15 (9)	32 (19.2)	119 (72)	166



Flow chart showing numbers evaluated at each step of the protocol



Challenges in implementation



Challenges in implementation

- Erratic contact evaluation efforts
 - inconsistent human resources , funding constraints
- Poor turnout for child contact evaluation
 - Bringing well children to the hospital twice- expensive
 - No follow-up after initial evaluation
 - Incomplete evaluation- no TST reads
 - No provision of preventive therapy, for <5 year old contacts or LTBI
 - No funds for preventive regimens

Strategies to overcome some challenges

- TST placement and reading done daily at the TB clinic
- All testing and CXR done in the TB clinic
- Daily pediatric TB clinic as of mid 2011

Strategies to be implemented

- Travel reimbursement for contact evaluation visit
- SMS reminders for contact evaluation and follow-up
- Health worker capacity building in reading TSTs
- Incentives such as:
 - Contacts get a complete pediatric checkup and immunization as part of evaluation package
 - MVI, iron supplements, de-worming, nutrition evaluation and supplements
 - Helpline number for reporting a symptomatic child and a fast track for free workup and treatment of illnesses

Recommendations

- Strategies for replication in other settings

Situation in high burden settings

1. Routine systematic contact management not done apart from few time limited GF projects
2. PMDT “implemented”- DR-TB in children? Child contact management programs?
3. Children not included in national strategic plans- as funding needs not known.

Recommendations

- Mandatory notification of all TB including child contact management
- Child TB and child contact management in the context of family centered care to be included in National strategic plans for TB control
 - Funding and human resource for contact management and drugs for treatment of diagnosed cases
- Integration of symptom screens in ANC, MNCH, EPI centers with clear referral systems for further evaluation
- Community programs and NGO strengthening
- Research studies eg. TB CHAMP- outcomes will inform concrete preventive therapy guidance for DR-TB child contacts.



Thank you