

Improving case detection in children TB REACH experience in Yemen

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Child TB in Yemen

- Very few children
 - > Diagnosed
 - > Reported
- NTP does not have staff with expertise to deal with children or facilities
- Children with symptoms are hospitalised or asked to attend the hospital in consecutive mornings
- Hospitalisation is not free

◎ Many parents

- > Default before the child's diagnosis is complete
- > Do not like GA
- > Fail to register their children for treatment
- > Default treatment

Contacts of adult TB cases

- There are no tracing activities of children in contact with patients with smear-positive TB

TB Reach Yemen

- ◎ To increase access to TB diagnosis for
 - > children,
 - > women,
 - > elderly in contact with adults with SM+
- ◎ Improve children's treatment adherence
- ◎ Shorten the time needed for diagnosis

How?

- > Active case finding, home visits of SM+
- > identify symptomatic relatives
- > Take children to hospital for diagnosis
- > SMS messages to parents to remind them of the medicines
- > Improved counselling
- > Collect samples from multiple anatomical sites in one day

Laboratory

- ◎ All specimens
 - > Smear microscopy
 - > Solid culture

Improved access

- ◉ SM+ adults asked to take health visitors to their house
- ◉ One male/two female health workers
- ◉ Sputum containers given for morning sputum
- ◉ Symptomatic children kept fasting (02:00/4:00 am depending on age)

Timetable

- ⦿ January-December 2011

- ⦿ Expected to increase case detection in children
- ⦿ Test the hypothesis that home visits are acceptable
- ⦿ Link children in the community with diagnostic services

Sometimes life is complicated



in the last 6 months

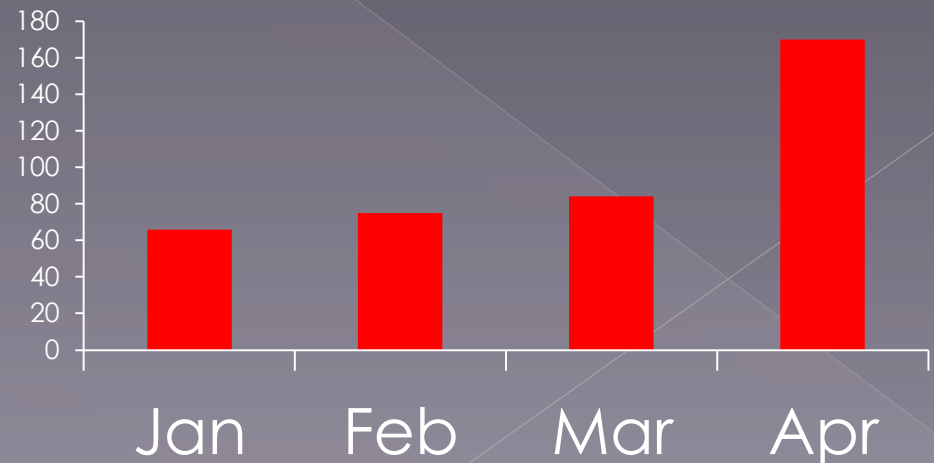
- ◉ No fuel
- ◉ Food shortages
- ◉ 1-2 hour electricity
- ◉ Snipers/bombs
- ◉ Road blocks
- ◉ Demonstrations
- ◉ Strikes
- ◉ Drones

- Difficult to
 - > Reach households
 - > Take children to hospitals
 - > Take samples back to the laboratories
 - > Conduct smear microscopy/culture
- Poor north of the city/governorate out of bounds
- many families moved away
- Limited electricity for incubators
- Mobile phone networks often down
- Patients unwilling to receive “strangers”

Data Jan-April

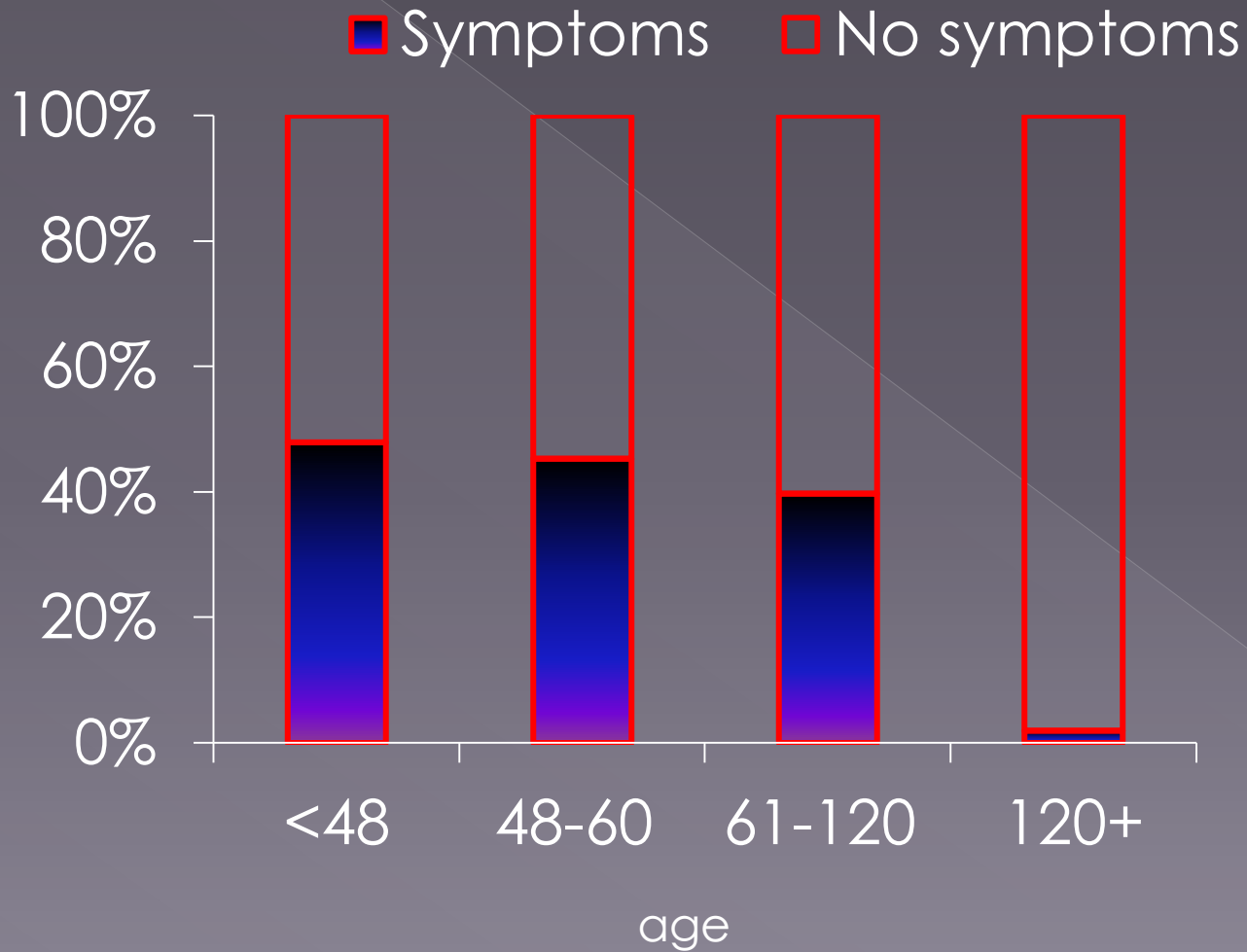
- 385 index cases identified
- Most had children
- Only 191 had not sent their children away
- 395 children screened

Children enrolled



- Mean age 84 (\pm 47) months [2 – 174]
- 155 symptomatic
- 240 asymptomatic

Symptoms by age



Symptom	No. (%)
Cough	104 (26%)
Fever	84 (21%)
Sweating at night	39 (10%)
Loss of appetite	37 (9%)
Wheeze	35 (9%)
Chest pain	29 (7%)
Loss of weight	26 (7%)
Difficulty of Breathing	23 (6%)
Others	19 (5%)
Haemoptysis	6 (2%)

Sample	No (%)	Positivity
sputum, GA and NPA	118	
GA	113 (96%)	3/113 (3%)
NPA	38 (32%)	0/38 (0%)
3 sputum		
Spot	66 (80%)	2/59 (3%)
Extra spot	59 (80%)	2/59 (3%)
Morning	59 (80%)	1/59 (2%)

- Of the 155 (38%) children with symptoms
- 6 SM+/culture+
- 3% of index cases had a child with TB

Hospitalised children

- ◎ 29 children hospitalised
 - > 2 children without samples
 - > (1 absconded, 1 dead)
- ◎ Mean age 57 m, range 5-190 months

	N	SM	Culture
● Sputum	25 (93%)	0	2 (7%)
● NPA	27	0	3 (11%)
● GA	27	0	3 (11%)
● LN biopsy	4	3	3 (11%)

Learning at a time of crisis

- Families worried of visits
- Very difficult to conduct visits
- Team discussed how to continue
- Invited relatives to come to the centre
- Prepared a list of symptoms for cases to screen the relatives
- Subsidised transport

Does it work?

- ⦿ Large number of relatives attended the centres
- ⦿ Overwhelmed staff
- ⦿ Large proportion asymptomatic
- ⦿ Maybe it is lack of access?

Conclusions

- Increased sensitisation of TB programme staff to the needs of children
- At least 3% of adult cases had children with confirmed TB.
- At least 11% of hospitalised children with symptoms have confirmed TB.
- Possible to conduct contact tracing in a civil war situation, but culture facilities have become precarious.

Acknowledgements

- TB Reach funding
- NTP of Yemen