

Active Tuberculosis Response for a Labor and Delivery Nurse at a Military Hospital

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INTRODUCTION

- Tuberculosis (TB) exposure within maternity units is concerning due to increased risk of infection among pregnant women, post-partum mothers, and their newborns.
- On April 24, 2025, an active duty labor and delivery nurse at an Alaskan Military Treatment Facility (MTF) was diagnosed with pulmonary TB disease, prompting a rapid public health and military response.
- The infectious period was presumed to have begun on December 24, 2024, triggered by the index case's initiation of adalimumab, an immunosuppressant.

INVESTIGATION & CONTACT DEFINITIONS

To optimize transmission detection among vulnerable cohorts, a highly sensitive contact-tracing threshold of 4 hours was established.

Public Health Response:

- Determine TB screening from index case
- Contact investigation—identify people who were in contact with the index case. Start small and expand if positives are detected.

Infectious Period: 24 December 2024 – 24 April 2025

TB Close Contact Definitions for Testing and Evaluation:

- Pregnant Women:** Females presenting to the MTF's Maternal Newborn Unit during the infectious period with documented care provided by the index case.
- Newborns:** Children born at the unit with documented care provided by the index case.
- Children < 5 years old:** Children in contact with index case.
- Adults & Children ≥ 5 years old:** Individuals present at the MTF in contact with index case ≥ 4 hours over 7 days.
- MTF Staff:** Hospital workers in contact with index case ≥ 4 hours over 7 days.

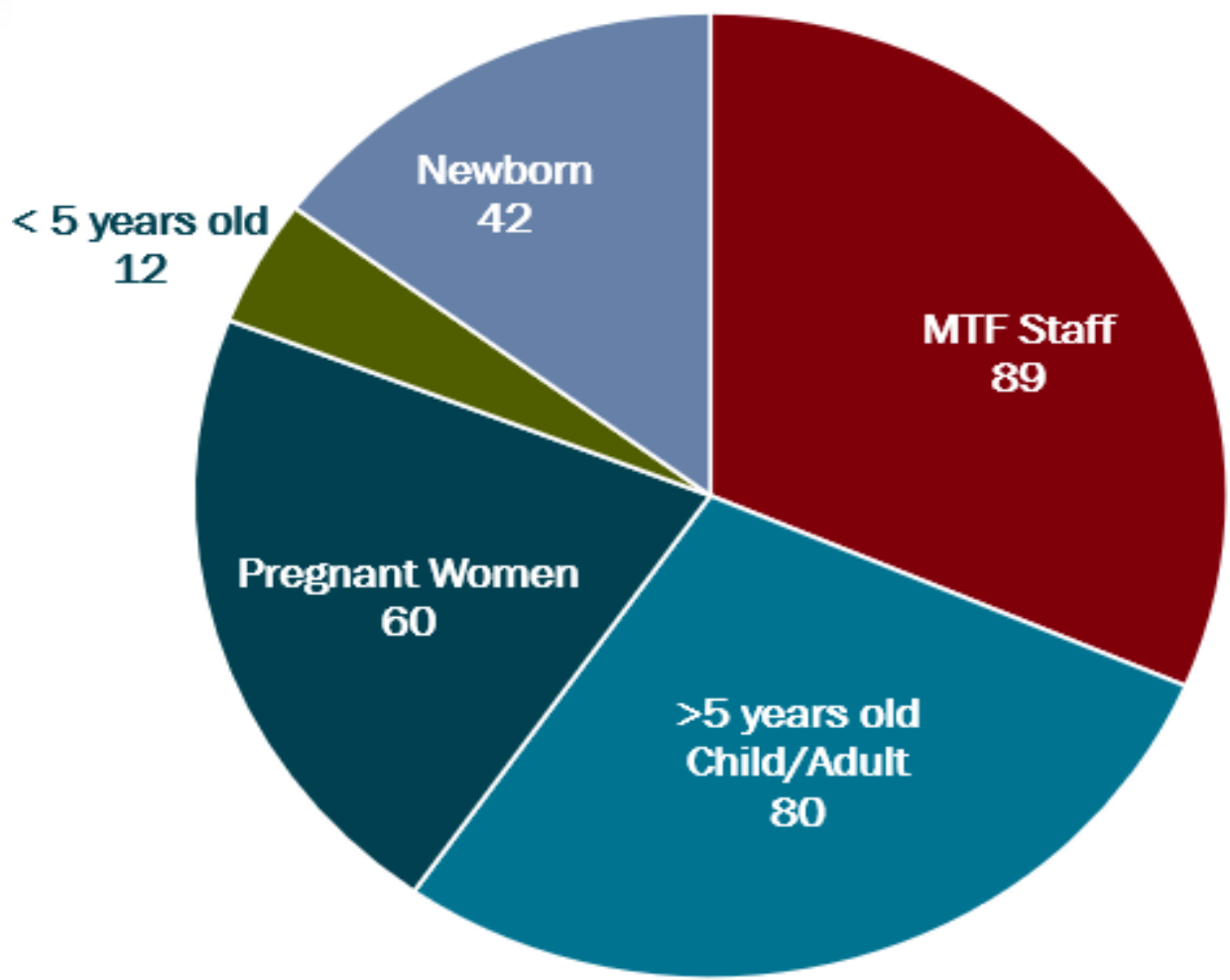


Figure 1. Contact Categories

RESULTS

The index case was screened incorrectly as a new hire.

A total of 283 contacts were identified. All contacts of the index case were managed in accordance with published recommendations.

Close Contacts	Contacted	Tested	Positive Test	Treatment
MTF staff	89	89	2	1
Newborns	42	42	0	19
<5 yrs	12	12	0	2
Pregnant Women	60	56	0	0
Adults/Children ≥5 yrs	80	64	2	1
Total	283	263	4	23

Table 1. Tuberculosis contacts reporting metrics — Military Treatment Facility (MTF), Alaska, April–August 2025

Case outcomes:

- 0 additional cases of TB disease detected.
- 3 cases of latent TB infection (LTBI) were diagnosed but epidemiologically unrelated to the index case.

WINDOW PERIOD PROPYLAXIS

An extensive diagnostic and prophylaxis protocol was adapted for high-risk youth contacts. Of the 26 children <5 years offered window prophylaxis, 21 (80.8%) completed the full therapeutic course.

Diagnostic Protocol (Contacts < 5 years old):

- Baseline physical exam, vital signs assessment, chest radiography, liver function test, TB test and HIV test

Treatment:

- Isoniazid offered for 8-12 weeks following last exposure
- 8-12 weeks of window prophylaxis, stopping after second negative TB test

CONCLUSIONS

Successful Containment: Despite a prolonged infectious period, rapid contact tracing successfully identified and screened a highly vulnerable cohort with no active TB transmission.

Screening Deficiencies: Inadequate baseline screening of the index case at the time of hire, combined with subsequent incidental findings of LTBI among MTF staff, underscores the critical need for robust pre-employment and risk-based screening. This investigation exposed distinct gaps in occupational health protocols, prompting immediate MTF policy revisions, and the implementation of comprehensive compliance programs.

Call to Action: Standardized guidance regarding TB screening, routine risk assessments, workplace screening for healthcare workers, and clear window prophylaxis timelines for infants and children is imperative for future prevention.

REFERENCES

Please see handout.