Gap in Tuberculosis (TB) Surveillance under National Tuberculosis Elimination Programme in West Champaran District, Bihar, India, May-July 2023

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Closing Tuberculosis reporting gap to save lives

Introduction

- National Strategic Plan (NSP) targeted to achieve Sustainable Development Goal 3.3 -End TB by the year 2025
- Bihar accounted for 6.7% of cases reported by India in 2022
- West Champaran district of Bihar contributed 2.8% to the above burden
- We described the cases and evaluated the timeliness and completeness of TB reporting, including HIV and Diabetes status, in West Champaran district from May to July 2023 in the Nikshay portal under NTEP (National Tuberculosis Elimination Program)

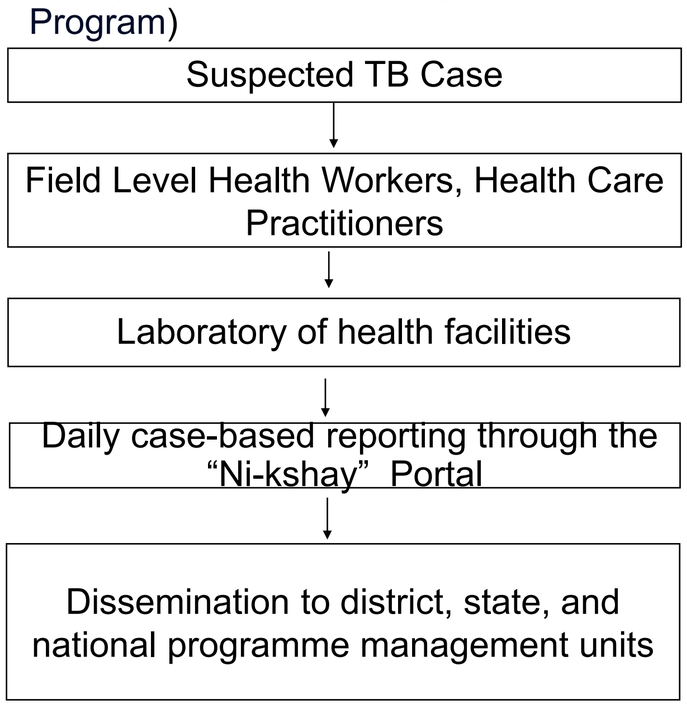

Figure 2: Data flow of the TB surveillance system

Figure 1: Indian map showing Bihar State and West Champaran District (Shaded)

Methods

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Sample Selection

Purposive selection of three health facilities reporting the highest number of cases in West Champaran district

Reference Period

May to July 2023

Data collection

Line list of cases from the Ni-kshay portal

Qualitative Interviews of Health care providers

Data analysis

Frequency, Proportions, and Percentages

Operational definitions

Timely reporting: Cases reported within 48 hours of diagnosis
Late reporting: Cases that were reported after 48 hours of diagnosis
Completeness: Complete information on the cases as per programme mandate

Results

Descriptive Epidemiology Reported 589 cases

Median age (IQR) in years 32 (20-52)

Male 357 (61%)

Public Health institutions 241 (41%)

Pulmonary TB 523 (89%)

TB Diagnostic Techniques

Chest X-ray **367(63%)** → CBNAAT 117(20%) → Cytopathology & Microscopy 30(5%)

Table 1: Timeliness and completeness of TB reporting, West Champaran, Bihar, India, May-July, 2023 (N=589):

Attribute	**Reporting**	n (%)
Timeliness	**Late reporting***	**162 (28)**
Completeness		
HIV testing	Testing status	470 (80)
	HIV Reactive and Not enrolled in ARTC (Antiretroviral Treatment Centre)	6 (1)
	Unknown	**113 (19)**
Diabetic status	Diabetic with treatment status unknown	54 (9)
	Unknown	**148 (25)**

*** Reasons for late reporting (Interview):**
- Newly recruited, untrained manpower
- Lack of an Information Technology (IT) system for the Laboratory

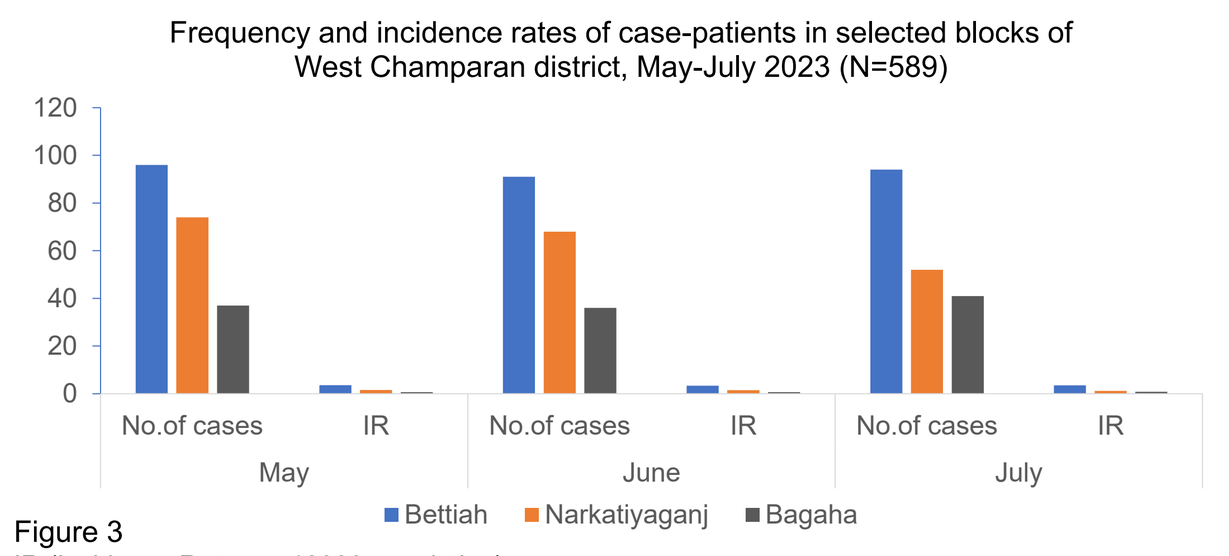

Figure 3
IR (Incidence Rate per 10000 population)

Public Health Action

- Chief District Medical Officer led training to healthcare providers to improve TB reporting in the West Champaran district

Conclusions

- High TB burden concentrated in the Bettiah block, with almost similar case distribution in all three months
- Young males contribute substantially to TB
- Significant gaps in HIV/diabetes screening and ARTC linkage remain
- Delayed reporting persists due to workforce and IT system limitations

Recommendations

- High TB notifications in Bettiah block warrant targeted interventions and enhanced active case finding
- Explore reasons for incomplete reporting about the HIV and diabetes status of reported TB cases
- Ensure prompt enrollment of reactive HIV cases in ART centers and record
- Robust laboratory capacity should be mandated to accelerate TB diagnosis and meet NSP goals

References
1. https://www.nikshay.in/
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Acknowledgements
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