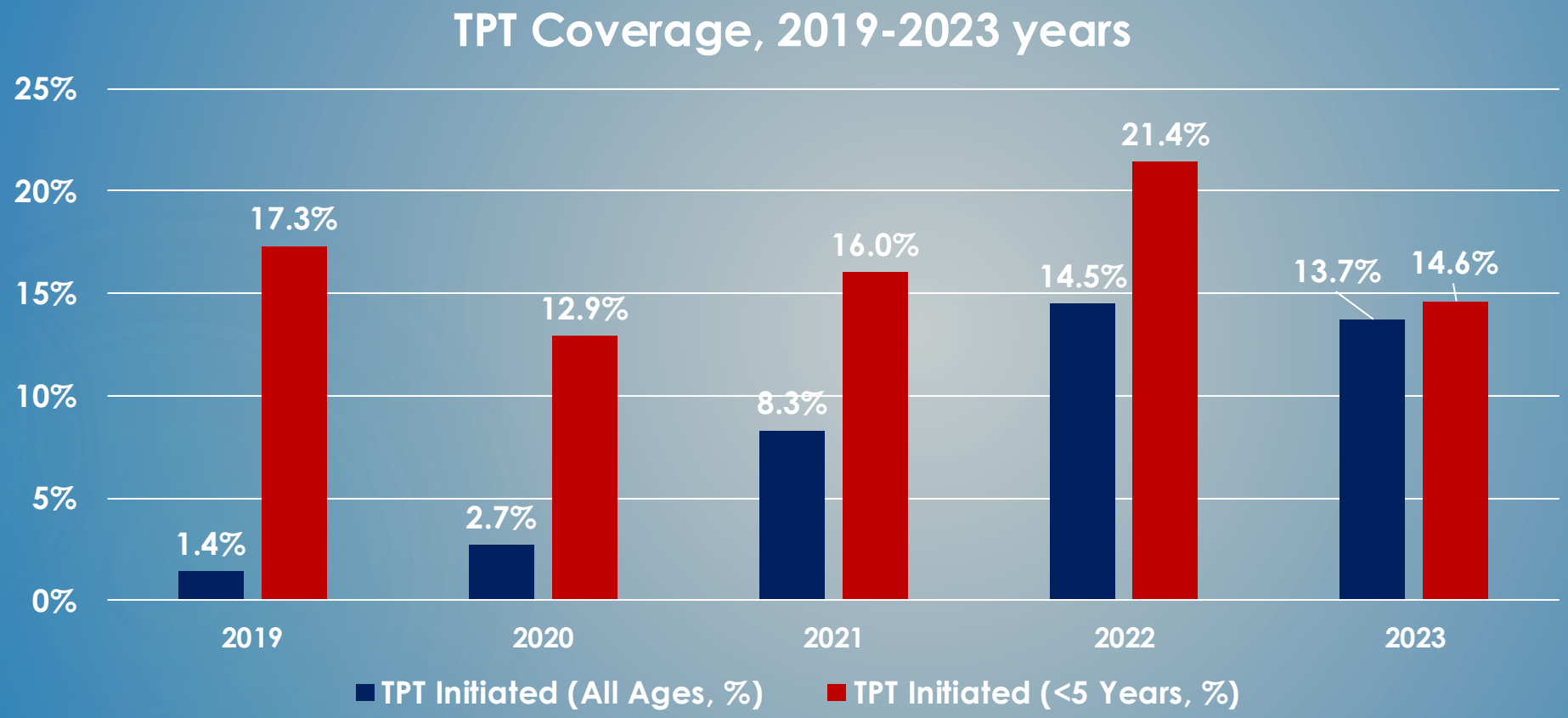
Tuberculosis Systematic Screening and Preventive Treatment among Household and Close Contacts of People with Infectious Tuberculosis and People Living with HIV in Georgia

Keti Meskhi, MPH, PhD(c)

Implementation Challenge



Problem Statement

- WHO Estimated total TB incidence, In Georgia, 2024, – 45 per 100,000 population

PEOPLE STARTED ON TB PREVENTIVE TREATMENT 2023

396

(471 in 2022 ↓ -16%)

- **Study Goal**

  To evaluate barriers and facilitators to systematic TB screening and TPT implementation among HHCCs, PLHIV and healthcare providers, considering patient-, provider-, and system-level factors

What is the evidence-based practice you intend to implement better?

- **Evidence-based practice: Systematic TB screening and TB Preventive Treatment (TPT)**
  - Systematic screening increases case detection and enables earlier diagnosis (Kranzer et al., 2013)
  - TPT is a proven and effective intervention to avert the development of TB disease among those exposed, reducing their risk by about 60–90%. (Getahun et al., 2015)
  - The main health care intervention available to reduce the risk of TB infection progressing to active TB disease is TB preventive treatment. (Global tuberculosis report 2024)

Implementation Framework

Framework: The Study was guided by the Consolidated Framework for Implementation Research (CFIR)

–Used to identify patient-, provider-, and system-level barriers and facilitators to TB/TBI systematic screening and TPT implementation, informed by in-depth interviews and Nominal Group Technique (NGT) discussions

NGT Results

Table 1. Barriers identified by different NGT groups

#	Barriers to TB contacts screening identified by epidemiologists (n=10)	Votes N= 30 (%)	Barriers to high-risk populations reaching the TB Unit for screening identified by PHC Physicians (n=10)	Votes N= 30 (%)	Barriers to TB preventive treatment uptake identified by TB Contacts and at-risk groups (n=7)	Votes N= 21 (%)	Barriers to TB screening and Tuberculosis preventive treatment uptake identified by TB physicians and TB program experts (n=10)	Votes N= 30 (%)
1	TB stigma	6 (20)	Lack of education related to TB	8 (27)	TB Stigma	9 (43)	Lack of commitment and prioritization by government	7 (23)
2	Lack of incentives for contacts (compensation for transport)	5 (17)	Patient non-adherence	5 (17)	Lack of Information	3 (14)	Limited awareness among providers and communities about TB risk groups, case identification, and availability of preventive services	5 (17)
3	Fear of diagnosis	4 (13)	Absence of TB-related symptoms leading to low risk perception	5 (17)	Non routine screening for TB	3 (14)	Lack of diagnostic tools	5 (17)
4	Weak collaboration between phthisiatrists and epidemiologists	4 (13)	Lack of diagnostic testing (Mantoux test)	5 (17)	Lack of education/Limited intellectual capacity	2 (10)	Absence of fixed-dose combination medications complicates treatment administration	5 (17)
5	Lack of information	3 (10)	TB related Stigma	2 (7)	Fear of discrimination	1 (5)	Lack of integration of services (increased infection risk)	3 (10)

NGT Results

Table 2. Potential solutions identified by different NGT groups

#	Proposed potential solutions to improve contact investigation identified by epidemiologists (n=10)	Votes N= 30 (%)	Proposed potential solutions to enhance referral identified by PHC physicians (n=10)	Votes N= 30. (%)	Potential solutions to TB screening and Tuberculosis preventive treatment uptake identified by TB Contacts and At-risk groups (n=7)	Votes N= 21. (%)	Potential solutions to TB screening and Tuberculosis preventive treatment uptake identified by TB physicians and TB program experts (n=9)	Votes N= 27(%)
1	Providing accurate information to contacts (emphasizing that investigation does not mean a diagnosis)	6 (20)	Improved communication with patients regarding disease risks and potential complications	10 (33)	Educational meetings	5 (24)	Government should support the service integration	8 (30)
2	Active involvement of family physicians and raising awareness about tuberculosis	5 (17)	Engaging family members to enhance understanding and awareness	6 (20)	Mobile screening groups	4 (19)	Ensure availability of Diagnostic test throughout country	6 (22)
3	Provision of vouchers or incentives	4 (13)	Training of primary healthcare physicians (what is the aim of referral)	6 (20)	Socal media campgain	4 (19)	Fixed-dose combinations and simplified treatment regimens	6 (22)
4	Public awareness and education campaigns on tuberculosis	3 (10)	Availability and accessibility of diagnostic tests	3 (10)	Training of medical personnel in empathy	4 (19)	Market for the combined medication	2 (7)
5	Distribution of informational materials by family physicians to contacts and community	3 (10)	Distribution of informational brochures in healthcare facilities and within the community (by primary healthcare physicians)	3 (10)	Financial support	3 (14)	TB preventive medications outside of TB sites	2 (7)

NGT results mapped into the CFIR

Top 5 Barriers	CFIR Domain	CFIR Construct	Corresponding Facilitator(s)
TB stigma	Outer Setting	Local Attitudes	Public awareness and education campaigns; Social media campaigns; Educational meetings; Providing accurate information to contacts; Improved patient communication; Training healthcare personnel in empathy
Lack of TB knowledge/information (including lack of education and limited awareness among providers and communities)	Individuals	Capability (Knowledge & Beliefs)	Educational meetings; Training of PHC physicians; Providing accurate information to contacts; Distribution of informational materials/brochures; Public awareness campaigns; Active involvement of family physicians
Limited access to diagnostic services (lack of diagnostic tools, Mantoux testing, and diagnostic availability)	Outer Setting	Local Conditions	Ensure availability of diagnostic tests throughout the country; Improve accessibility of diagnostic tests; Mobile screening groups
Financial barriers (lack of incentives, transport costs)	Outer Setting	Local Conditions	Provision of vouchers or incentives; Financial support
Lack of government commitment and service integration	Outer Setting	Policies & Laws / External Pressure	Government support for service integration; TB preventive treatment outside TB sites; Strengthened integration of TB services

Conclusions and Next Steps

CONCLUSION

- NGT-identified barriers and facilitators were mapped to CFIR domains and constructs
- Mapped constructs guided selection of matched ERIC implementation strategies to close the systematic TB/TBI screening and TPT gap
- This process shaped a planned multicomponent strategy to strengthen TB/TBI systematic screening and TPT delivery among high-risk groups in Georgia
- The work directly informed the design of INTEGRATE-TB, an implementation research project submitted to NIH

NEXT STEPS

- TB facility readiness assessment
- In-depth interviews

Thank you for your attention!

Keti.meskhi.1@iliauni.edu.ge