Digital TB Surveillance System Assessment Report - Survey Form

A comprehensive real-time case-based TB notification, TB surveillance, and evidence-based data use and decision-making are critical for ending TB in the countries. Stop TB Partnership and WHO is partnering with the Global Fund to implement the Global Fund Strategic Initiative (SI), supporting countries to have real-time digital TB surveillance systems.

For this synergistic activity, the Stop TB partnership is conducting a rapid country assessment of TB surveillance systems in 19 high burden TB countries. The aim of this assessment is to understand the status of TB electronic data recording and reporting systems and to facilitate the strengthening/support of the transition to real-time case-based electronic reporting in the 20 TB Strategic Initiative (TB SI) countries. This would allow providing – as needed - high-level advocacy and technical support to key stakeholders including the NTPs team, National Governments, and in-country partners to further strengthen the national and subnational level TB notification systems.

The name and photo associated with your Google account will be recorded when you upload files and submit this form. Only the email you enter is part of your response.

* Required

Email *

Your email

PARTICIPATION CONSENT

Do you agree to participate in the assessment process? Please note that by answering yes, you give consent to participating in this survey *

☐ Yes
☐ No

PARTICIPANT DETAILS

Name of the Participant *

Your answer

Designation

Your answer

Country *

Choose

Email ID *

Your answer

Telephone Number

Your answer

TB NOTIFICATION MAPPING

1. Is the country using any electronic tool for case based TB notification?

☐ Yes
☐ No

2. Does the electronic tool for case-based TB notification allow notifying for DS TB or DR TB or both?

☐ DS TB only
☐ DR TB only
☐ Both DR TB and DS TB
☐ None

3. What is the trigger for case-based TB notification?

☐ Registration for presumptive
☐ TB register (post treatment initiation)
☐ Diagnosis
☐ Start of treatment initiation
☐ Others

3.1. If others, Please explain

Your answer

4. What is the lowest unit for case-based TB notification?

☐ District l/City/County level
☐ Individual (Self-notification)
☐ Facility level
☐ Provincial Level
☐ Regional Level
☐ National Level

5. How does the private sector notifies the cases?

- ☐ Electronic
- ☐ Private sector not notifying
- ☐ Manual
- ☐ Others

5.1. If others, Please explain

Your answer

6. Are there any National Unique ID (including Insurance ID) that is associated to the patient?

- ☐ Yes
- ☐ No

7. Is the National Unique ID used or linked with TB notification?

- ☐ Yes
- ☐ No

8. If yes to question7? Please explain how

Your answer

9. Is a notification ID available to the patient for future TB care services?

- ☐ Yes
- ☐ No

10. What is the frequency of collecting of TB notification data?

- ☐ Real-Time
- ☐ Daily
- ☐ weekly

- ☐ Bi-monthly
- ☐ Monthly
- ☐ Quarterly
- ☐ Annually

Others _____

10.1. If others, Please explain

Your answer

11. What is the frequency of digitization of TB notification data?

- ☐ Real-time
- ☐ Daily
- ☐ Weekly
- ☐ Monthly
- ☐ Quarterly
- ☐ Annually

Others _____

11.1. If others, Please explain

Your answer

12. Are there any mechanisms to follow-up with TB patients already notified?

- ☐ Phone call
- ☐ Social Media
- ☐ Physical Visit
- ☐ Mobile App
- ☐ Nil

13. Are there any incentives for case-based TB notification?

- ☐ Incentives for the provider

☐ Incentives for the patient

☐ Both

☐ None

14. What is the scale of use of the electronic system for TB notification if any?

☐ National roll-out

☐ State Roll-out

☐ District Roll-out

☐ Pilot Sites only

☐ Others

14.1. If others, Please explain

Your answer

15. Is there a specific Govt. guidelines or legal notice for notifying TB cases?

☐ Yes

☐ NO

16. Does your country have data server or central repository for case based TB notifications and other core TB indicators?

☐ Yes

☐ No

17. What is the core framework of your TB notification IT system?

☐ OpenMRS

☐ DHIS2

☐ Country Specific EMR/HMIS system

☐ Excel

☐ Other

17.1. If others, Please explain

18. Is the TB notification IT system dedicated to TB notification/program or generic to the health department like multi-program country HMIS?

☐ Dedicated for TB program
☐ General multi-program HMIS
☐ Others

18.1. If others, Please explain

19. Do you have an in-house IT team to sustain the ongoing work and management of the IT platform?

☐ In-house country IT team
☐ Outsourced IT team
☐ Others

19.1. If others, Please explain

20. Does the IT platform has interoperability and data exchange mechanisms?

☐ Necessary APIs available
☐ Data export available
☐ None

21. What are the measures kept ensuring individual patient data privacy and security?

22. Are there any other case base reporting or notification system that is being implemented in your country for other programs like COVID-19, HIV, Mother and Child

etc. that can be leveraged or adapted for TB notification? Please share more details on the program implementing it.

Your answer

23. Could you kindly mention different mechanisms for TB notification and how it has evolved over all 5 years?

	Manual Paper Based	Excel	Desktop System	Mobile Apps	Others
2021	☐	☐	☐	☐	☐
2020	☐	☐	☐	☐	☐
2019	☐	☐	☐	☐	☐
2018	☐	☐	☐	☐	☐
2017	☐	☐	☐	☐	☐

24. What was the budget for developing the IT system in your country? (in USD)-2M

Your answer

25. Was it funded by external donor, national/state funding or other funding source

☐ National funding
☐ State Funding
☐ Global Fund
☐ USAID
☐ BMGF
☐ Others

25.1. If others, Please explain

Your answer

26. What is the annual recurring cost for developing the IT system?

Your answer

27. What was the cost of implementing the case based TB notification system beyond just the software development like Training health staff on the software, dissemination and communication materials etc.

Your answer

28. How much time did it take to develop the case-based TB notification system?

Your answer

29. Are there any specific challenges in real-time case based TB notification in spite of having a software system? Please specify the reasons. (example- timely data entry, lack of infrastructure like electricity, internet, or lack of training etc.)- facility roll out especially on hardware devices

Your answer

30. What is needed to enable a fully functional digital system for TB notification that can be scaled at a national level?

☐ Budget
☐ Technical Assistance (IT expertise and know-how)
☐ Political will
☐ Others

30.1. If others, Please explain

Your answer

31. How much budget would be needed to develop a fully functional digital system for TB notification for the country?

Your answer

32. What all technical assistance will be needed for developing and implementing a fully functional case-based TB notification system?

Your answer

33. What would be the implementation cost of a fully functional case-based TB notification system?

Your answer

34. How much time might be needed if all necessary budget and technical support for developing case-based TB notification systems is provided?

Your answer

35. Any other specific challenges or bottleneck for developing a fully functional case based TB notification system?

Your answer

36. Is digital case-based TB notification has been included in the national strategic plan (NSP). Have you already budgeted it? How much?

Your answer

37. What are the core case based TB data variables collected through the electronic system?-Yes to all

☐ Yes
☐ No

☐ Demographic details (Age, DOB, Gender)

- [ ] Address and contact details (Country, Province, District, House address)
- [ ] Geolocation (GPS coordinates of the household)
- [ ] Contact details (Phone number/Mobile number, WhatsApp, Email etc.)
- [ ] Health Facility address
- [ ] Type of health facility (Public, Private etc.)
- [ ] Site of TB (Pulmonary, Extra-pulmonary)
- [ ] Type of diagnostic test (Microscopy, GeneXpert, TruNaat, CXR, etc.)
- [ ] Date of test result
- [ ] Drug susceptibility (DSTB, DRTB)
- [ ] Treatment Regimen
- [ ] Treatment start and end date
- [ ] Co-morbidity (HIV, Diabetes, COVID-19 etc.)
- [ ] Treatment adherence and outcomes
- [ ] Demographic details (Age, DOB, Gender)
- [ ] Address and contact details (Country, Province, District, House address)
- [ ] Geolocation (GPS coordinates of the household)
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- [ ] Treatment Regimen
- [ ] Treatment start and end date
- [ ] Co-morbidity (HIV, Diabetes, COVID-19 etc.)
- [ ] Treatment adherence and outcomes

38. Which are the core indicators that you are using for reporting and evidence-based decision making?-Yes to all

- [ ] Yes
- [ ] No

- [ ] Spatial distribution of TB notification
- [ ] Age-group & sex wise aggregate numbers and proportions notified
- [ ] Basis of diagnosis wise aggregate numbers and proportions notified
- [ ] Type/site/drug resistance wise aggregate numbers and proportions notified
- [ ] Provider source-wise aggregate numbers and proportions notified
- [ ] Comorbidity wise aggregate numbers and proportions notified
- [ ] Key-population wise aggregate numbers and proportions notified
- [ ] Estimate/Target wise notification/treatment coverage (proportions)
- [ ] Treatment initiation (proportion)
- [ ] Treatment outcomes (proportions)
- [ ] Provider-type disaggregated treatment outcomes (proportions)
- [ ] Comorbidity disaggregated treatment outcomes (proportions)
- [ ] Key population disaggregated treatment outcomes (proportions)
- [ ] Spatial distribution of TB notification
- [ ] Age-group & sex wise aggregate numbers and proportions notified
- [ ] Basis of diagnosis wise aggregate numbers and proportions notified
- [ ] Type/site/drug resistance wise aggregate numbers and proportions notified
- [ ] Provider source-wise aggregate numbers and proportions notified
- [ ] Comorbidity wise aggregate numbers and proportions notified
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- [ ] Estimate/Target wise notification/treatment coverage (proportions)
- [ ] Treatment initiation (proportion)
- [ ] Treatment outcomes (proportions)
- [ ] Provider-type disaggregated treatment outcomes (proportions)
- [ ] Comorbidity disaggregated treatment outcomes (proportions)
- [ ] Key population disaggregated treatment outcomes (proportions)

39. Any additional information or remarks -

Your answer

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DESKTOP RESEARCH TEMPLATE

Country's Mobile Penetration Profile	
Access to smartphones	
Preferred technology (Android/ Windows/ iOS)	
Access to internet services	
Social media usage	
Internet connectivity and performance	
Cost particulars - Free or no cost, Expensive (approximate monthly expenditure)	
Maturity of internet services (4G, 5G, etc)	
Any other relevant findings	

		TB Notification systems					
		System 1			System 2		
	Country HIS Architechture - Summary of Findings	Response	Citation	Last date of updation	Response	Citation	Last date of updation
Basic Attributes	Name of the system						
	Date of Inception						
	Data Ownership						
	Central system (Yes/No)						
	Supporting partners - Funders						
	Supporting partners - Technical agencies						
Platform Attributes	Technology stack/ Platform						
	Server hosting (Local/ Physical/ Cloud)						
	Open source (Yes/No)						
	Local language integration						
	Data security and privacy measures (link related guidelines, if any)						
	Other system integrations - Email, IVRS, ODK, Diagnostic tools, HMIS, WHONET, etc						
	Internal HR capacity - IT (link related guidelines, if any)						
Implementation Particulars	Implementation stage (Nationally rolled out/ Regional/ Pilot)						
	Size of implementation - Approximate user base						
	Type of data (Case-based/ Aggregate)						
	Extent of technology Integration (Web based/ Paper based/ Mobile app)						
	Frequency of data collection (daily, monthly, etc)						
	Point of data compilation and data entry (if online)						
	Reporting from non-government service provers						
	Identified challenges in implementation						
Practices of handling case-based records	Use of unique identifiers						
	Notification norms (input criteria)						
	Stages of patient's journey (Cascade of care)						
	Allows a differential registration of DS and DR-TB (only for TB notification systems)						
	Data privacy and protection measures (encription, anonymity, etc)						
	Contact tracing (Yes/No) (If yes, how?)						
	Followup model						
	Patient notification system (Manual, Social Media, Other apps, etc)						
Data Outputs	Key data outputs						
	M&E practices and indicators						
	Modal of data dissemination						
	Data warehousing and Dashboards (Yes/No) (link if found in public domain)						
	Frequency of data output generation (real time, monthy, etc)						
	Level of data access and usage						
Financials	Initial budget sanction for developing IT system (USD)						
	Grants/Supplementary sanctions received from development partners/donors						
	Annual recurring cost for developing/maintenance of IT system (USD)						
	Implementation and training cost (USD)						
	Any other costs involved (USD)						
Any other relevant information							

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TECHNICAL ASSESSMENT TEMPLATE

COUNTRY:

DATE:

TIME:

Participants Name	Designation	Dept.	

QUESTIONNAIRE	RESPONSE	REMARKS	Analytical Framework Mapping
Does your country have data server or central repository for case-based TB notifications and other core TB indicators?			AF_008
What is the core technology of your TB notification IT system?			
Is the TB notification IT system dedicated to TB notification/program or generic to the health department like multi-program country HMIS?			AF_033
Do you have an in-house IT team to sustain the ongoing work and management of the case based TB notification platform?			AF_010
Does the IT platform have interoperability and data exchange mechanisms?			AF_009
What are the measures kept ensuring individual patient data privacy and security?			AF_036
Does the notification platform can export data in excel?			
Can the notifciation platform exchange data through APIs/JSON format? Are the APIs already available?			AF_036
What is the programming language used for the application?			AF_036
What are the techstake for the database?			AF_036

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PROGRAMMATIC ASSESSMENT TEMPLATE

COUNTRY:
DATE:
TIME:

Participants Name	Designation	Dept.	Email ID

QUESTIONNAIRE	RESPONSE	REMARKS	Analytical Framework Mapping
Is the country using any electronic tool for case-based TB notification?			AF_001
Is the current module capturing the following part of the workflow:			
Workflow	Digital	Manual	
Screening			AF_002
Testing			AF_003
Treatment Initiation			AF_004
Treatment Adherence			AF_005
Treatment Outcome			AF_006
Contact tracing			AF_007
Who has developed the system? National TB Program, Any other program? General Health Dept.?			AF_001
Does NTP has autonomy on improving the system? If not who has?			AF_001, AF_033
Does the electronic tool for case-based TB notification allow notifying for DS TB or DR TB or both?			

Data Collection	Total Scale	Implementation	Tools		Channels	Data Type
National						
Provincial						
State						
District						
Facility						
Outreach						

Data Use	Total Scale	Implementation	Tools		Channels	Data Type
National						
Provincial						
State						
District						
Facility						
Outreach						

Stakeholders name/organisation	Stakeholders name	Remarks/Specific roles
Who has developed?		*How many resources?*
Who has funded?		*How much and for what period?*
Who manages application currently?		*How many resources?*
Who owns the application?		
Who hosts the data?		

QUESTIONNAIRE	RESPONSE	REMARKS	Analytical Framework Mapping
What is the trigger for case-based TB notification?			
What is the lowest unit for case-based TB notification?			AF_017
What is the private sector notification rate?			AF_036
Does the private sector notify on TB cases?			AF_019, AF_036
Does the private sector uses national case based TB notification system?			AF_036
If not how the private sector notify?			AF_036
Does the private sector notify indivual cases or aggregared numbers only?			AF_036
What is the proportion coverage of private sector notification? How many private facilities vs how many notifies?			??
Are there any National Unique ID (including Insurance ID) that is associated to the patient?			AF_034
Is the National Unique ID used or linked with TB notification?			AF_034
If yes to Q7, then how?			AF_034
Is a notification ID available to the patient for future TB care services?			AF_034
How are managing duplication of records?			AF_034
What is the frequency of collecting of TB notification data?			AF_020
Are there any mechanism to follow-up with TB patients already notified?			AF_021
Are there any incentives for case-based TB notification?			??
What is the scale of use of the electronic system for TB notification if any?			AF_022
Are there specific Govt. order or legal notice for notifying TB cases?			AF_024
Could you kindly mention different mechanisms for TB notification and how it has evolved with important milestones?			AF_015

YEARS	n for case based TB notification
2024	

	2023		
	2022		
	2021		
	2020		
	2019		
	2018		
	??		

Question		Code
What was the budget for developing the IT system in your country? (in USD)		AF_001
Was it funded by external donor, national/state funding or other funding source		AF_001
What is the annual recurring cost for developing the IT system? (in USD)		AF_001
What was the cost of implementing the case based TB notification system beyond just the software development like Training health staff on the software, dissemination and communication materials etc.		AF_001
How much time did it take to develop the case-based TB notification system?		AF_001
What would be the top 3 success stories or achievements according to you?		AF_025
What are the top 3 challenges with the current case based TB notification		AF_025
What are the top 3 changes you would like to see in case based TB notifciation and to address the challenges		AF_026
What is needed to enable a fully functional digital system for TB notification that can be scaled at a national level?		AF_001
How much budget would be need to develop a fully functional digital system for TB notification for the country (in USD)		AF_029
What all technical assistance will be needed for developing and implementing a fully functional case-based TB notification system?		AF_029
What would be the implementation cost of a fully functional case-based TB notification system? (in USD)		AF_029
How much time might be needed if all necessary budget and technical support for developing case-based TB notification system is provided?		AF_029
Any other specific challenges or bottleneck for developing a fully functional case based TB notification system?		AF_025
Is digital case-based TB notification has been included in national strategic plan (NSP). Have you already budgeted it? How much?		AF_028 and AF_001
Data variables captured		AF_0031

Data Variables	Yes/No
Non-Programmatic Variables	
Demographic details (Age, DOB, Gender)	
Address and contact details (Country, Province, District, House address)	
Geolocation (GPS coordinates of the household)	
Contact details (Phone number/Mobile number, WhatsApp, Email etc.)	
Health Facility address	
Type of health facility (Public, Private etc.)	
Programmatic Variables	
Site of TB (Pulmonary, Extra-pulmonary)	
Type of diagnostic test (Microscopy, GeneXpert, TruNaat, CXR, etc.)	
Date of test result	
Drug susceptibility (DSTB, DRTB)	
Treatment Regimen	
Treatment start and end date	
Co-morbidity (HIV, Diabetes, COVID-19 etc.)	
Treatment adherence and outcomes	

Which are the core indicators that you are using for reporting and evidence-based decision making?			AF_0032

Indicators	Yes/No	ublicly Available	Format in which it is available?
Presumptive Screening (proportion)			
Treatment initiation (proportion)			
Treatment monitoring			
Treatment outcomes (proportions)			
Spatial distribution of TB notification			
Age-group & sex wise aggregate numbers and proportions notified			
Basis of diagnosis wise aggregate numbers and proportions notified			
Type/site/drug resistance wise aggregate numbers and proportions notified			
Provider source-wise aggregate numbers and proportions notified			
Comorbidity wise aggregate numbers and proportions notified			
Key-population wise aggregate numbers and proportions notified			
Estimate/Target wise notification/treatment coverage (proportions)			
Provider-type disaggregated treatment outcomes (proportions)			
Comorbidity disaggregated treatment outcomes (proportions)			
Key population disaggregated treatment outcomes (proportions)			

Other ancillary systems supporting or complementing case based TB notification			AF_027

Name of the platform/initiative	Developed by?	Funded by?	How is it complementing the national case based TB notification initiatives?
Digital Adherence Tool			
Logistic Management Tool			
Laboratory Info system			
Financial Management Tool			
GenXpert Integration (directly or through GXAlert?)			
Fuji CXR Integration			
Community Led Monitoring tools			
Contact tracing module?			

Program	Tools	Developed by?	Funded by?

HIV								
Malaria								
COVID-19								
Who pays the technical support team responsible for developing the solution			AF_001, AF_033					
Under what budget, funding scheme?			AF_001					
How long the support is committed?			AF_029					
Who are the key stakeholders and their roles			AF_033					
Vision- theory of change: Priority: Important vs Urgent	Priority- 1-5	Urgency 1-5						
Areas needing support: Priority: Important vs Urgent	Priority- 1-5	Urgency 1-5						