

## Surveillance

Complete surveillance is an important public health function in the prevention and control of any disease. Prompt notification to the public health system is an important component of the surveillance process and achieves the following public health objectives:

- It provides helps to measure disease burden, monitor epidemiological trends, detect outbreaks, and plan and target preventative and treatment services.
- It identifies people needing follow-up to ensure that treatment is completed, and enables contact tracing and screening of close contacts.

### **Notification of TB patients**

In order to undertake comprehensive surveillance of Tuberculosis, ensure quality of care, reduce TB transmission and address the problem of emergence of spread of drug resistant TB, it is essential to have complete information of all TB cases. Government of India has declared Tuberculosis a notifiable disease in May 2012. Henceforth, all health care providers in public and private sectors have the public health responsibility to notify TB cases diagnosed and/or treated by them.

All TB cases irrespective of method of diagnosis (microbiologically confirmed or clinical), initiation of treatment (whether on treatment or not), source of treatment (Government or non-government), type of patients (TB or DR-TB), type of regimen used for treatment (daily or intermittent) should be notified to public health system.

Once private practitioner notifies TB patient information following action will be taken by local public health staff of general health system of Government or local bodies and entered in Niksahy:

- Patient home visit as per convenience of patient,
- Counselling of TB patient and family members,
- Treatment adherence and follow up support ensure treatment completion,
- Contact tracing, symptoms screening, evaluation of TB symptomatic and offering INH chemoprophylaxis to eligible contacts,
- Offering HIV testing, Drug Susceptibility Testing (DST), if eligible.

All laboratories shall notify TB cases with information as per Annexure 18 A and medical practitioners, Clinics, Hospitals, Nursing homes shall notify TB cases with information as per Annexure 18 B.

Strengthening Surveillance System will ensure that appropriate measures can be taken by the program to implement quality TB diagnosis and treatment as per STCI.

### **TB notification system**

To make a complete surveillance system and to bring missing TB patients under surveillance system, all TB patients diagnosed under the programme (either microbiologically confirmed or clinical) need to be notified. All TB patients who are put on standardized treatment regimen under the programme or other regimen due to clinical indication (as initiated in tertiary care institute) within programme are to be notified. Over and above, all TB patients treated outside government health system need to be notified under one uniform surveillance system and to be accounted for total cases notified.

Once a TB patient is diagnosed, s/he will be notified in a **peripheral health facility TB notification register** (Annexure-attached TB notification register). The notification is to be done on the same day of diagnosis. If his/her treatment is initiated in the same health facility, patient's treatment information, follow up and treatment outcomes are updated in the same TB notification register. Else, the patient will be referred to the health facility catering area of patient's residence.

There s/he will be registered as referred-in patient, and treatment related information will be updated. There will be two cohorts – notification (diagnosed) and treatment cohorts. For final notification report for any health facility all cases notified will be included. For Treatment cohort reporting all cases initiated on treatment at the respective health facility will be included (including the transferred in patients)

To account for notification, TB notification register of health facility where patient is diagnosed will be source of information. And to account for treatment cohort, TB notification register of health facility where treatment is initiated will be source of information as well as transferred in and referred in patients.

Notification number will be generated at time of first notification either at diagnosis or at initiation of treatment whichever comes first.

#### Illustration of how the system will function in different situation

Situation 1: A patient is diagnosed in a health facility by any method and put on treatment in the same health facility.

Laboratory technician or MO will notify a patient and close the loop by initiating treatment and reporting information in the same notification register.

Situation 2: A patient is diagnosed in one health facility and referred to other health facility for treatment.

A patient will be notified by LT or MO and refer the patient for treatment with intimation to treating health facility. MO of treating health facility will initiate treatment and give feedback to diagnostic health facility to account for treatment which will be entered in the same register in which notification occurred at time of diagnosis.

Situation 3: A patient diagnosed as clinically (based on CXR, histopathology, cytology, USG, CT Scan, MRI, other), MO diagnosed the patient will notify the patient.

Situation 4: A patient is initiated on treatment without being notified earlier; MO of treating health facility will notify the patient.

Notification number will be generated at time of first notification either at diagnosis or at initiation of treatment whichever comes first.

For the purpose of monitoring and to ensure accountability for each notified TB patient following mechanism will be adopted.

Each health facility will be monitored for both indicators; fate of all notified patients as well treatment outcomes of all patients initiated on treatment including transferred in cases.

Since each health facility will have both patients diagnosed in their facility as well cases referred in and transferred in; reconciliation of treatment outcomes will be done at all levels starting from TB Unit and above.

<b>Level of monitoring</b>	<b>Fate of notification for treatment initiation</b>	<b>Treatment outcomes of all those initiated on treatment</b>
TB Unit	<p>Compilation of information on each fate of notification for all health facilities within TU and those referred outside TU should be segregated and further monitored for those whose feedback is received and not received.</p> <p>While doing so, compilation on extend of all referred in patients and transferred in patients by all health facilities within TU should be done and monitored for extent to which the feedback is given to referring health facilities within TU and outside TU</p>	<p>Compilation of treatment outcomes at TU level should include all patients initiated on treatment at all health facilities within TU including referred in and transferred in patients</p> <p>The gap between all patients notified and whose treatment outcome is known should be monitored and should decrease over a period of time with increasing feedback to all health facilities for referred and transferred out patients within TU</p>
District level	<p>Compilation of information on each fate of notification for all health facilities within district and those referred outside district should be segregated and further monitored for those whose feedback is received and not received</p> <p>While doing so, compilation on extend of all referred in patients and transferred in patients by all health facilities within TU should be done and monitored for extent to which the feedback is given to referring health facilities within district and outside district</p>	<p>Compilation of treatment outcomes at district level should include all patients initiated on treatment at all health facilities within district including referred in and transferred in patients</p> <p>The gap between all patients notified and whose treatment outcome is known should be monitored and should decrease over a period of time with increasing feedback to all health facilities for referred and transferred out patients within district</p>

Level of monitoring	Fate of notification for treatment initiation	Treatment outcomes of all those initiated on treatment
State level	<p>Compilation of information on each fate of notification for all health facilities within state/UT and those referred outside state/UT should be segregated and further monitored for those whose feedback is received and not received</p> <p>While doing so, compilation on extend of all referred in patients and transferred in patients by all health facilities within TU should be done and monitored for extent to which the feedback is given to referring health facilities within state and outside state</p>	<p>Compilation of treatment outcomes at state level should include all patients initiated on treatment at all health facilities within state including referred in and transferred in patients</p> <p>The gap between all patients notified and whose treatment outcome is known should be monitored and should decrease over a period of time with increasing feedback to all health facilities for referred and transferred out patients within state</p>
National level	<p>At national level Compilation of information on each fate of notification for all should be monitored for the extent of feedback received against the sent by all health facilities.</p> <p>The gap should reduce over a period</p>	<p>At national level Compilation of treatment outcomes at district level should include all patients initiated on treatment at all health facilities in the country</p> <p>The gap between all patients notified and whose treatment outcome is known should be monitored and should decrease over a period of time with increasing feedback to all health facilities for referred and transferred out patients.</p>

National level At national level Compilation of information on each fate of notification for all should be monitored for the extent of feedback received against the sent by all health facilities.

The gap should reduce over a period At national level Compilation of treatment outcomes at district level should include all patients initiated on treatment at all health facilities in the country.

The gap between all patients notified and whose treatment outcome is known should be monitored and should decrease over a period of time with increasing feedback to all health facilities for referred and transferred out patients. Such compilation and monitoring should be facilitated with use of Nikshay and review of the feedback mechanism in real-time using ICT coupled with exchange of information between health facilities, TB Units, district and states periodically; at least fortnightly at TU level, monthly at district level quarterly at state level and bi-annually at national level.

### **NIKSHAY**

Nikshay is the platform for the National Tuberculosis Programme Surveillance System. Nikshay envisages to establish ICT enabled state-of-art surveillance system with system utilization by 100% stakeholders and ensuring 100% notification of TB cases at diagnosis (microbiologically confirmed & clinical). The programme also envisions continuous monitoring and treatment adherence for all TB patients registered with eNikshay, enable tracking of all registered TB patients across TB control lifecycle, geographies, transfers and referrals.

The first step is to ensure registration of all healthcare establishments across public and private sector in Nikshay and to ensure participation of all providers over time in e-Nikshay. Details of every TB patient diagnosed and / or initiated on treatment must be updated in NIKSHAY. If the patient has not been registered in NIKSHAY at the time of examination at the diagnostic centre, s/he may be registered/ notified afresh. Look for a NIKSHAY ID for the patient who has already been registered. If not available, registering/notifying afresh will generate a new ID. This ID is unique and is important for further follow up and linkages with treatment support programs. All health establishments must report all TB cases and their treatment outcomes to public health authorities (District Nodal Officer for Notification).

**Detailed guidance on usage of Nikshay will be updated from time to time on the programme website and strategy document for Supervision, monitoring and evaluation.**