

Depiction of Nikshay-Ids of Notified TB Cases on Google Map for Presentation of Density of TB In District Kupwara, J&K

Ghulam Hassan Khatana¹, Mohamad Amin Aga², Shanaz Nazir Marazi³,
Mohamad Ishfaq Wani⁴

¹District TB Officer, J & K Health Services

²District Data Manager, NTEP

³District Program Coordinator, NTEP

⁴District Accounts Manager, NTEP

Abstract:

In India, TB infects more than 30 percent of its population which is called latent TB infection. The essential source for spread of TB infection is the case with active TB disease. To decrease the burden of Latent TB infection, the best level of prevention is the secondary prevention by screening and diagnosing active TB disease and treating such cases to reduce the source of infection in the community. The importance of such google map has been increased many folds under the circumstances of achieving the Gold Medal by the district Kupwara for elimination of Tuberculosis. Because after achieving such award the general public as well as majority of stakeholders of NTEP in Kupwara have become more reluctant which may adversely affect the NTEP in the District. *Seeing is believing*, so google map with real time add-on cases of newly notified TB cases w.e.f. 1st January 2023 may become an effective tool for convincing the general public and the secondary and tertiary level stakeholders of NTEP to accept the reality of ongoing threat of TB at the village & panchayat level about the need for continuation of their contribution at individual level as well as community level so that incidence of TB can be further decreased in comparison to the incidence of TB in 2015. It is expected that such visual depiction of TB density may create awareness in the community for the enhancement of activities to fight against TB by its early diagnosis and treatment.

Keywords: Nikshay-ID; Google-map; NTEP; notified-TB

Introduction:

Use of latest technology for management of world's most scientifically designed program of TB can be considered like using any latest medicine to cure TB. Nikshay portal has been developed by the central TB division (CTD) Ministry of Health and Family welfare, Government of India, in collaboration with the National Informatics Centre (NIC) and the World Health Organization Country Office for India. Nikshay ID is a unique identity for the any notified TB case. The visualization of such unique IDs of currently notified TB cases on google map can serve multiple purposes for National TB Elimination Programme (NTEP)

District TB Centre Kupwara is probably India's first DTC to create its google map depicting microbiologically confirmed and clinically diagnosed TB notified cases starting on annual basis w.e.f 1st January 2023. (Fig.1)

The link for the NTEP map of Kupwara District is as follows:

https://www.google.com/maps/d/edit?mid=13fjEH3qYVub4a1s-p5ykki_I6N8Aq84&ll=34.46177788909476%2C74.17060358039359&z=15

Objective: "Seeing is believing" means you need to see something before you can accept that it really exists or occurs. This is the objective of creating current google map under discussion.

Target Group: Identification of the enemy is equally important for every reader. But google maps of TB is particularly important for NTEP programme managers to do advocacy regarding TB up the line up to the highest political authority regarding sustained political commitment and down the line up to the family as well as the TB patient regarding adherence to the TB treatment for the prescribed time period.

Materials and Methods:

Study setting: The District Kupwara is situated at an average altitude of 5300 feet from the sea level. It is located to extreme north of Jammu & Kashmir. It's headquarter is almost 110 kms away from Srinagar city. Its total geographical area is 2379 sq. kms of which three fourth is under intense forest cover. The total population of Kupwara is approximately 10 lakh of which 85% lives in rural areas. District Kupwara is bounded by 170 km line of actual control (L.O.C) in the north while southern part is bounded by District Baramulla. (1) Under NTEP, District Kupwara is having 10 TB units 307 Peripheral Health Institutions (PHIs) including most recent Government Medical College, Handwara. District Kupwara is having 384 panchayats. In addition to its permanent population, during summer some nomadic population of Bakarwals from Jammu division and workers mainly from UP, Bihar and west Bengal also come in this district. Under NTEP, this district is the only district of J & K having full time DMC in the Military Hospital.

Data collection and measures: As per the existing guidelines of NTEP real time enrolment of presumptive TB subjects is a routine process followed by testing for TB. As and when some any among the enrolled population gets diagnosis of microbiologically confirmed TB from the any NTEP accredited laboratory his data is update in the Nikshay enrolment file consequent upon which s/he get notified as TB case. The other group of TB patients is those with clinically diagnosed TB by various tests (including X-ray) approved under NTEP. Tuberculosis is a notifiable diseases in India therefore, there is no scope for any private practitioner working within any district and treating someone for TB without his/her notification on Nikshay.

The Nikshay IDs of all notified TB Cases (MC as well as CD) in district Kupwara w.e.f. 1st January 2023 have been pinned on the google map according to their residential address. Because it is a real time entry, the total number of notified cases may change as and when some new TB case get notified. Figure 1 in this document is a screen-short of the google map recorded on its first day of publication i.e. 12-7-2023 when there were total 249 TB cases notified in a population of approximately 10 lakh distributed in ten TB –Units of the District. The uploaded data on google map shall be frozen 31st December 2023 and shall

be kept so up to world TB Day on 24th March 2024 for the purpose of analysis. Then it will be deleted permanently and new set of data for the New Year w.e.f. 1st January shall be uploaded.

Discussion: The World Health Organization (WHO) had declared TB as global emergency in 1994 (2) which is still a global emergency. Every year, 10 million people in the world fall ill with Tuberculosis. The fact about TB is that it is “preventable” by various methods including TB Preventive therapy (TPT) with minimal single approved drug and “curable” with full course of multidrug prescribed under the national programmes for TB in various countries, despite this, 1.5 million people die from TB each year. India’s TB incidence for the year 2021 is 210 per 1 lakh population. (3) The latest nomenclature of national programme for TB is “National Tuberculosis Elimination Programme.” Scientifically elimination of any disease means reduction to zero of the incidence of a specified disease in a defined geographical area as a result of deliberate efforts for which continued intervention measures are required. As per the NTEP guidelines, for all practical purposes the current operational definition or criteria of declaring any district as TB free is as follows. “The district has seen more than 80% reduction in TB incidence from the baseline of 2015” As per this operational definition when any district is declared as TB free, then the general public of particular district fails to interpret it correctly and start false belief of their safety from TB but practically it is impossible until and unless TB also gets eliminated from the neighbouring districts and neighbouring states. District Kupwara has already received gold medal which means more than 60% reduction achieved by ending 2021. During 2022 and 2023, such incidence has further decreased and we have achieved more 80% reduction as compared to baseline year 2015 (claim yet to be verified for SNC for TB free status) but this never means that the stakeholders get relaxed and stop being careful and alert. For further discussion regarding innovative technique of depicting Nikshay IDs on google map, the best method may be to write its SWOT Analysis as follows:

Strength:

1. Identity of TB patients has been coded with the symbols of their Nikshay IDs. Therefore, no one else can identify any particular patient other than the NTEP officers & consultants from DTC level up to the CTD who have the access to the Nikshay portal.
2. Coded depiction of TB cases on the google map of particular village/panchayat may guide the general public, Mohallah committee members, Panchayat members, student and other opinion makers regarding the existence of active TB cases and risk of TB infection.
3. Such map may definitely guide the programme managers (technocrats) and the administrators (bureaucrats) to identify villages and panchayats and understanding the distribution and density of TB cases in the district. With this visible information technocrats and bureaucrats can design the specific intervention including active case finding campaigns for hitting the target.

Weakness: Two separate symbols for microbiologically confirmed TB cases and clinically diagnosed TB cases are needed to be pinned manually by the Data Entry Operator working at the District TB Centre after manually extracting the data of TB Cases from the Nikshay portal. Therefore, such mapping is data operator dependent.

Opportunity: Such google map may guide the other national health programme managers, including Integrated Disease Surveillance Programme (IDSP), National AIDS Control Program and National

Programme for Non-Communicable Diseases about the density of TB. Obviously such information may be useful for integrated and coordinated action as per the programme guidelines.

Threat: Despite maintaining the privacy of TB patient on google map, there are chances of leaking of information about the identity at local level but this may not be any measure breach of confidentiality because under existing guidelines NTEP employees are already going for home visits and household contact tracing.

Conclusion: The visual depiction of density of TB on google map by uploading the data of notified TB cases on annual basis may serve multiple purposes. The most important purpose of such presentation of TB burden is creating awareness among the stakeholders and general public that TB is real threat existing in their local environment. Suspect its possibility whenever someone shows its minimal signs and symptoms. Stakeholders can keep watching the trend of density of TB and make commitment of going for early detection and treatment of active TB disease. Such practice may also be started by other districts under NTEP on merits.

References:

1. Official District Profile of District Kupwara, J&K (source: Internet)
2. WHO Global Tuberculosis Programme. (1994). TB: a global emergency, WHO report on the TB epidemic. World Health Organization. <https://apps.who.int/iris/handle/10665/58749>
3. World TB Report -2022 (WHO)

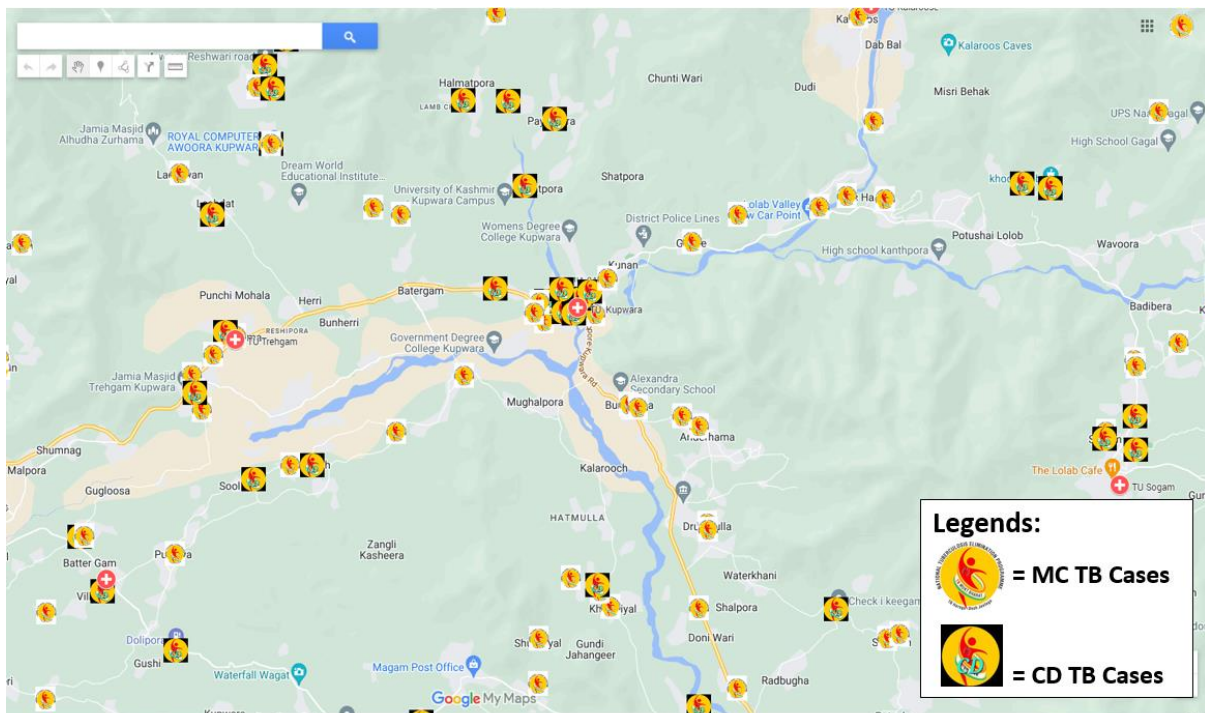


Fig. 1: Google Map NTEP-Kupwara (J&K) 2023