



TB TREATMENT ADHERENCE

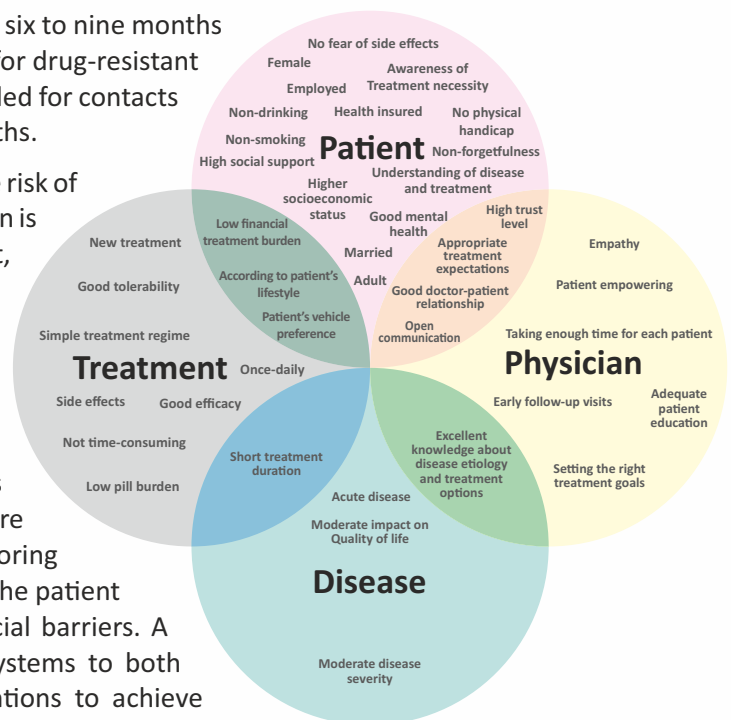
PERSON-CENTERED CARE FOR COMPREHENSIVE ADHERENCE MANAGEMENT

BACKGROUND

TB treatment regimens are long in duration, ranging from six to nine months for drug-susceptible TB (DS-TB) and up to 18-24 months for drug-resistant TB (DR-TB). TB Preventive Treatment (TPT) is recommended for contacts of pulmonary TB patients for a duration of three to six months.

Irregular adherence to TB therapy is known to increase the risk of death, relapse, and drug resistance. Treatment interruption is a multi-dimensional challenge, affected by the patient, physician, disease, and treatment-related factors. In addition, adherence to preventive treatment poses a unique challenge whereby beneficiaries are asked to comply with medication without the experience of symptoms or active disease.

The identification of non-adherent patients requires reliable monitoring methods that can be used by healthcare workers to escalate patients for further care. Monitoring methods must also be linked with enhanced support for the patient to address underlying structural, clinical, and psychosocial barriers. A comprehensive care model therefore enables health systems to both monitor adherence and provide differentiated interventions to achieve patient-centered care.



KEY OBJECTIVES

- Implement a comprehensive adherence management strategy by integrating adherence monitoring with enhanced patient support.
- Provide differentiated care for patients to improve physical, mental, and social well-being of patients.
- Strengthen the capacity of the general health system to provide comprehensive support to patients.
- Development of the Nikshay platform to support workflows of patient-centered care.
- Development of national and state-level guidance documents for scale-up.

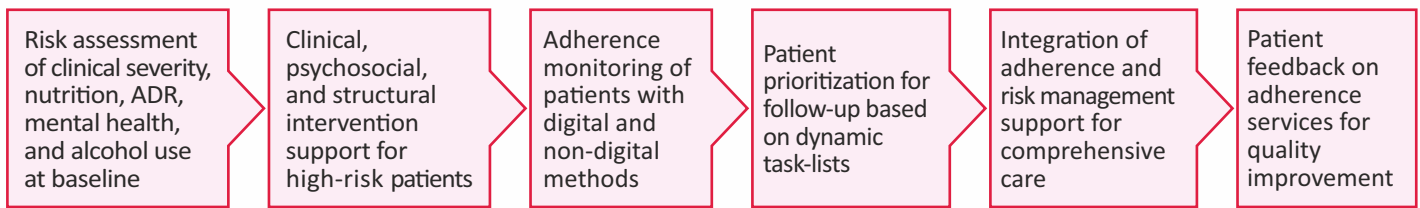
ABOUT THE CGC PROJECT

Closing the gaps in TB Care Cascade (CGC) is a four-year (2020-2024) project funded by United States Agency for International Development (USAID) and is being implemented by World Health Partners (WHP) in four districts- Ranchi & East Singhbhum (Jharkhand) and Surat & Gandhi Nagar (Gujarat). The project will be further scaled-up to additional five states - Bihar, Uttar Pradesh, Sikkim, Punjab and Himachal Pradesh.

INTERVENTION WORKFLOW

Implementation Period: Jan 2021- June 2022

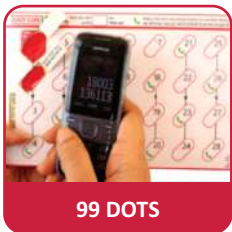
Geographies: Surat, Gandhinagar (Gujarat), Ranchi, East Singhbhum (Jharkhand)



ADHERENCE MONITORING METHODS: DS-TB / DR-TB / TPT

Patients and beneficiaries are assigned monitoring methods consisting of digital adherence technologies (eligibility as per the guidelines) and non-digital methods to support patient treatment.

- ✓ Patient choice & consent
- ✓ Respectful of patient privacy
- ✓ Ease of use / low burden
- ✓ Accessible with treatment and free of cost



99 DOTS

99 DOTS

- Patients are issued TB drugs in blister packs wrapped in a custom 99DOTS envelope.
- When a blister tab is removed to take a dose, a hidden phone number is revealed on the inner tab.
- Patient calls a new toll-free number every day to indicate a dose taken in Nikshay.

99 DOTS lite (Box and Sticker)

- Single Toll Free Number (TFN) sticker is pasted on a plastic box containing medications or directly on the FDC blister.
- Patients can store the number in the phone and call the same number to report adherence (instead of a new number each day).



99 DOTS lite (Box and Sticker)



DR TB MERM box

Medication Event Reminder Monitor

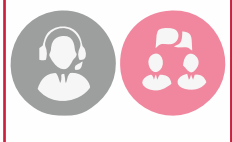
- Patients receive drugs in a MERM box.
- MERM has an electronic module that records the date and time when the box lid is open. Alert mechanisms of MERM include:
 - **Daily Medication Reminder:** Green Light & Buzzer as a daily medication reminder
 - **Refill Reminder:** Yellow light to remind patient to go for refills.
 - **Low Battery Alert:** Red light to alert patient to low battery.
- Open-close lid of MERM box registers as a dose taken in Nikshay.

TB Aarogya Sathi

- A patient-facing mobile application to access information on side effects, health facilities, nutrition advice, and other support services.
- Patient self-reports adherence information in a digital calendar to register a dose taken in Nikshay.



TB Aarogya Sathi



Call-Based Monitoring

Call-Based Monitoring

- Outgoing calls made to patients on a weekly basis in intensive phase (IP) and fortnightly in continuous phase (CP).
- Adherence information is registered in Nikshay by healthcare workers or Call Center agents.

Refill Monitoring

- Dispensation refill dates of patient are monitored.
- Delayed refills indicate missed doses as a proxy for adherence.



Refill Monitoring

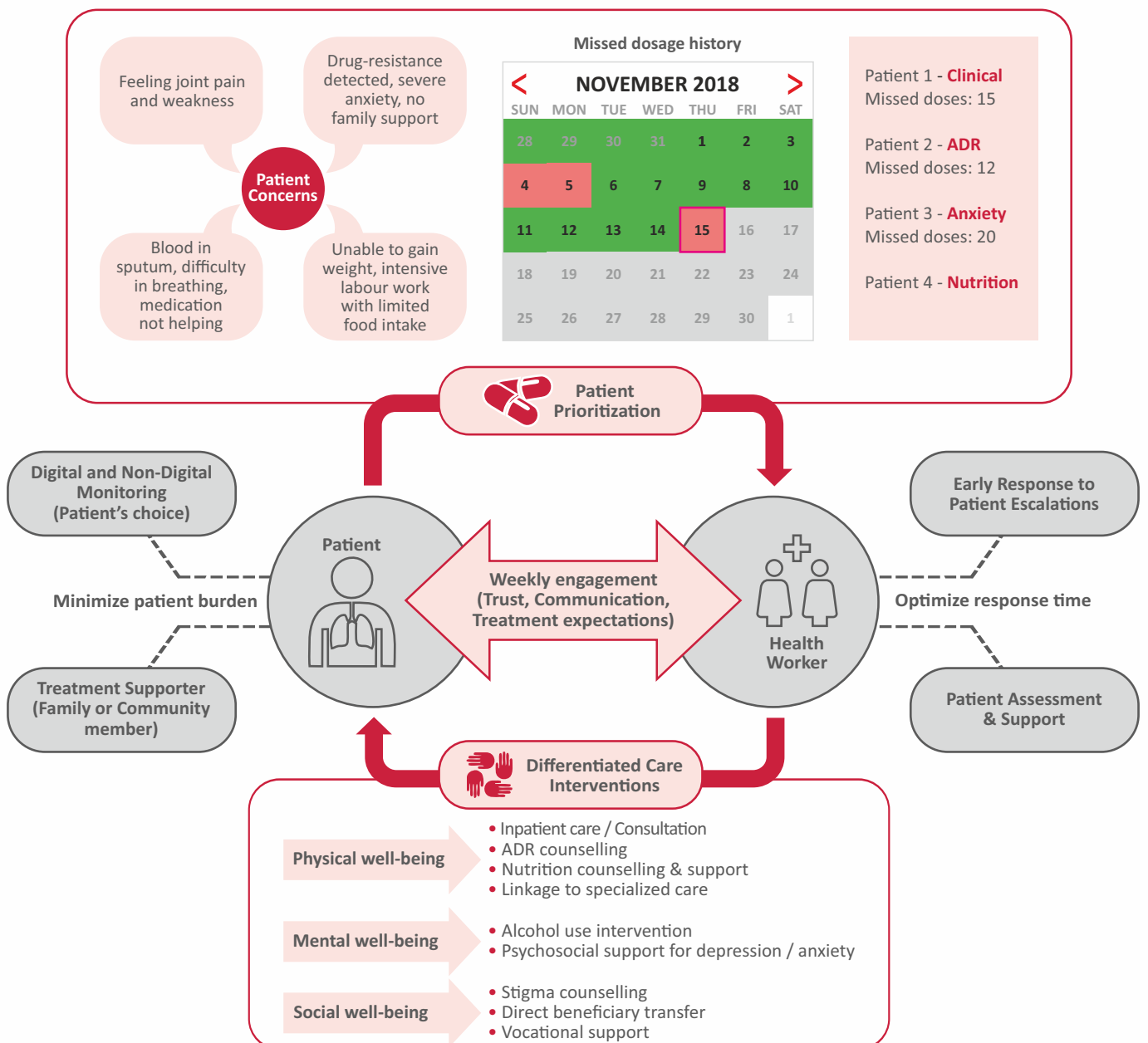
DIFFERENTIATED CARE MODEL

Key components of a differentiated care model include:

- Empowering the patient with flexible and convenient options to engage with the health system to report challenges with adherence
- Supporting the patient with interventions that are responsive to underlying physical, mental, and social barriers affecting adherence behaviour and overall quality of life
- Ensuring the patient feels supported by the health system through high levels of trust, open communication, and clear expectations of the treatment journey

To achieve a differentiated care model, adherence history (missed doses) is integrated with risk management (co-morbidity, ADR, anxiety, etc.) to escalate and prioritize patients for differentiated care interventions.

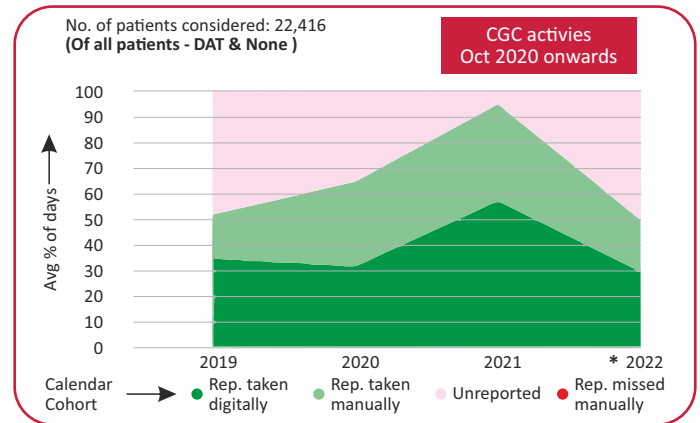
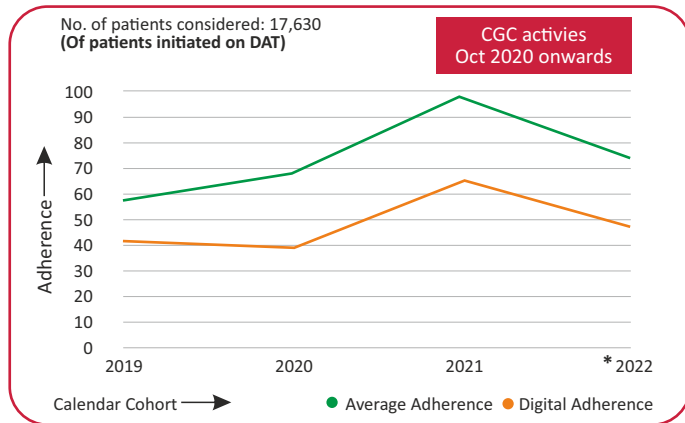
Patient prioritization is dynamic throughout treatment based on outcome of interventions, subsequent adherence information, and identification of new risk factors.



EARLY LEARNINGS

- Improved patient uptake with patient-friendly adaptations and engagement with digital adherence technologies.
- Improved adherence management with utilization of patient escalation lists for follow-up.
- Improved capacity of the general health system to manage adherence and provide counselling support.
- Increased utilization of adherence data and real-time dashboards in Nikshay by the district leadership.

TB TAM ADHERENCE MONITORING & REPORTING - SMC (PUBLIC SECTOR)



--Shows average values for patients on treatment during the year(s) irrespective of the date of notification. Source: Nikshay adherence dashboards

*Declination in Adherence statistics in 2022 is due to addition of 2,753 TB Preventive treatment (TPT) patients and their lack of adherence reporting. Dip in numbers is also because of discontinuation of the JEET project that was managing private sector patients.

CGC project activities

- ✓ Extensive training of NTEP staff on Nikshay features
- ✓ Weekly sharing of (low adherence) patient-wise lists
- ✓ Routine review and monitoring of adherence indicators
- ✓ DAT Support (MERM, 99 DOTS Lite - Private sector)

Results

- ✓ Increase in average overall TB medication adherence from 75% to 88% in SMC public sector due to adherence management review strategies
- ✓ Increase in average overall adherence from 10% and 11% in Ranchi and East Singhbhum to 56% and 37% respectively
- ✓ Improved quality of adherence information with increased reporting of manually missed doses
- ✓ Real-time monitoring and reporting in Nikshay
- ✓ DAT support to private sector through MERM and 99 DOTS lite

Scale up

- ✓ MERM Box scaled up to two new states; Punjab and Himachal Pradesh
- ✓ MERM Box rolled out in six additional districts in both Gujarat and Jharkhand for DRTB patients
- ✓ Technical support provided to NTEP to rollout the DAT interventions.
- ✓ Developed a guidance document on "Adherence Management"

World Health Partners (WHP) is a non-profit Indian society that sets up programs to bring sustainable healthcare within easy access to underserved and vulnerable communities. It innovatively harnesses already available resources more efficiently by using evidence-based management and technological solutions. WHP is best known for its programs focused on early detection and treatment of tuberculosis in urban and rural settings supported by community-based activities to ensure prevention. The organization uses all available resources--both in the public and private sectors to ensure that people living in any part of the country will have access to high-quality treatment. For more information, please contact : Ms. Prachi Shukla, Country Director, World Health Partners (WHP), A 151 , Block A, Sector - 72, Noida - 201301, India, info@whpindia.org

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