Prevent TB

Application User Manual

Provider - side

VERSION 1.0

Contents

Introduction to Prevent TB

Purpose of the document

This document is a complete guide for provider users on how to use the healthworker interface of the Prevent TB application. It contains step by step instructions on each of the components with illustrations which would enable healthworkers to encode patient information and track their progress through the cascade of care.

Prevent TB Components

The Prevent TB platform has the following modules:

1. Web / Mobile Application – Healthcare provider interface
2. Web / Mobile Application – Client Interface
3. Dashboard
4. Smart Setup

This document covers the walk-through of the provider facing component of the application.

Application URLs

The Prevent TB application is available both as a web app as well as a mobile application on Google Play Store and App Store.

1. Web App URL
    a. Web App: https://uatltbi.duredemos.com/productuatv1/

System Modules

The following modules are present on the Prevent TB application:

1. Add new client
2. Search
3. Alerts
4. People on care

5. Persons referred
6. Contacts waiting for TB screening
7. Contacts waiting for TPT
8. Adherence Monitoring
9. Get Connected
10. Offline clients
11. Settings

User Roles

The Prevent TB platform offers role-based access to various program stages. As an example, in certain programs outreach workers at ground zero usually only have access to certain initial stages such as registration and risk assessment. Further access to testing, treatment and adherence stages is given to lab technicians, nurses, doctors, and other users from the provider's end.

Client Types

The flow of the application is determined based on the client type, which is determined at the time of registration. The following client types are present on the Prevent TB platform:

1. **Presumptive TB**: Vulnerable groups that have been identified and need TB disease testing/treatment services.
2. **Index**: The initially identified case of new or recurrent TB in a person of any age in a specific household or other comparable settings in which others may have been exposed. An index can have multiple contacts.
3. **Contact**: Tuberculosis (TB) contacts are people who have close contact with patients with infectious TB disease. All contacts are linked to indexes.
4. **People living with HIV**: HIV-positive people, seropositive people or people who live with HIV are people infected with the human immunodeficiency virus (HIV), a retrovirus which if untreated may progress to acquired immunodeficiency syndrome (AIDS).
5. **Others**: For any clients belonging to groups that do not fall under the above four client types, the user can select 'Others' and specify the client type from:
    a. General population
    b. Clinical risk population
    c. Prisoners
    d. Miners
    e. Other Vulnerable Population

Languages

The Prevent TB platform is available in all official WHO languages:

1. English
2. Arabic
3. Chinese
4. French
5. Spanish
6. Russian

The application can also be customized in any other local language using the Prevent TB Smart Setup. This would require a single time effort of adding translations for the existing data labels.

Introduction to the Prevent TB Application

Installation

1. The Prevent TB application is available both on the Google Play Store and App Store.
2. The Android app is compatible with devices having Android 8 and above.
3. It is also available in the form of a webapp and can be accessed using a browser.
4. Both versions of the application display the version number on the login page to ensure that the user is using the recent upgrade.
5. The application also prompts the user to upgrade to a newer available version in case they are using any older version.

Login and Language Preference

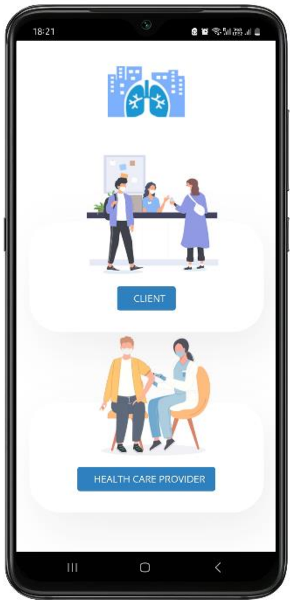

Figure 1: Healthcare provider login

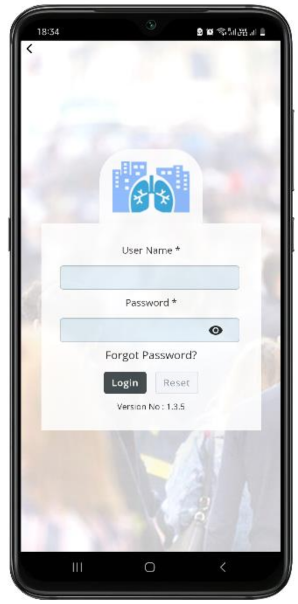

Figure 2: Login

1. To access the web app, the user should open the web app link (from System URLs) on a web browser. Use of an Incognito/Private window is recommended for a seamless user experience.
2. To access the different modules, the user needs to login to the app with their respective credentials, which contain the following:
    a. Username
    b. Password
3. There should be no spaces before or after the username.
4. The user can unmask the password, to check for any errors in entry.
5. If the user does not have an account, they should contact the administrator.
6. The user is then redirected to the Language Preference page, where the language of choice can be selected.

Homepage

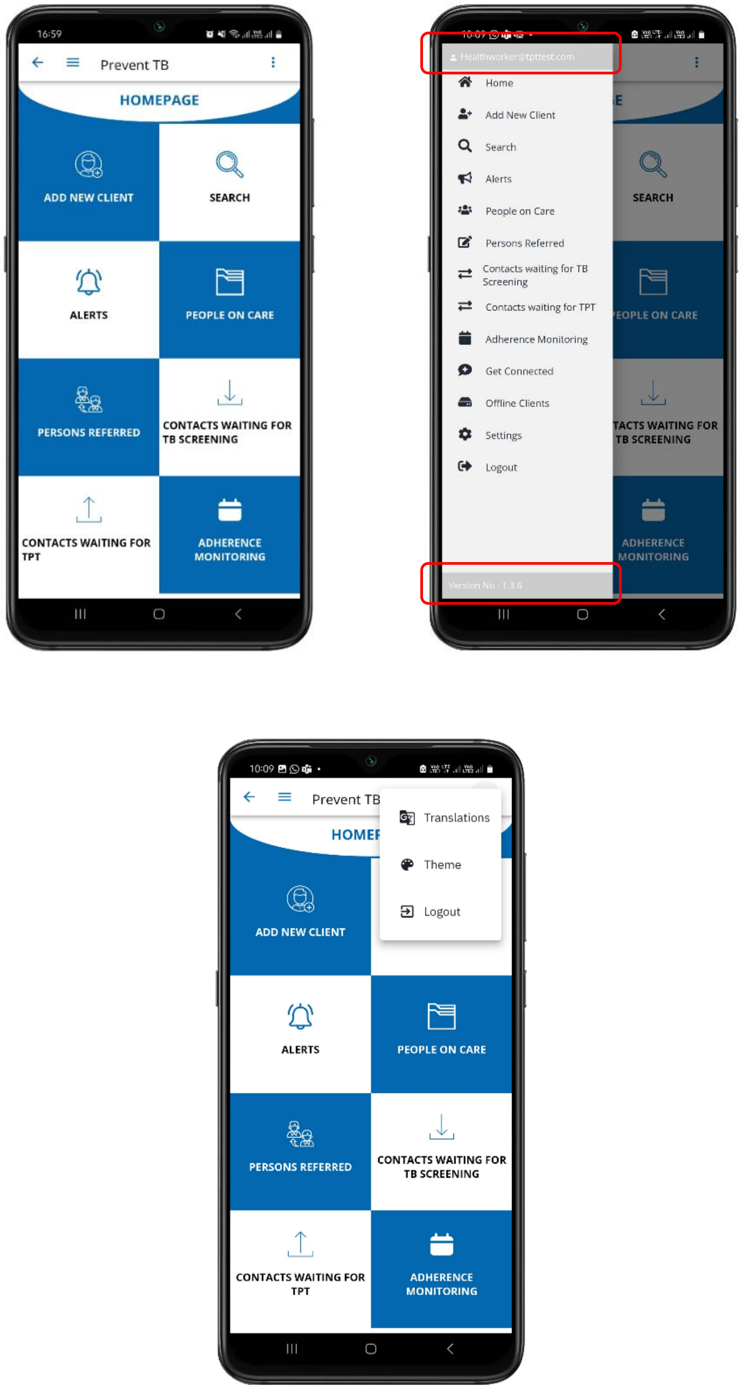

Figure 3: Homepage

1. The homepage allows the user to access the various modules of the application.
2. The homepage also allows the user to view the following:

- App version number and username on the left hamburger menu
- Language selection, app theme selection and logout option as icons on the top right corner.

3. The following modules can be accessed towards the left of the homepage:
   a. Add new client
   b. Search
   c. Alerts
   d. People on care
   e. Persons referred
   f. Contacts waiting for TB Screening
   g. Contacts waiting for TPT
   h. Adherence monitoring
   i. Offline client
   j. Settings
4. The left hamburger menu can also be accessed to navigate to the various modules of the application.

Application Modules

1. Search

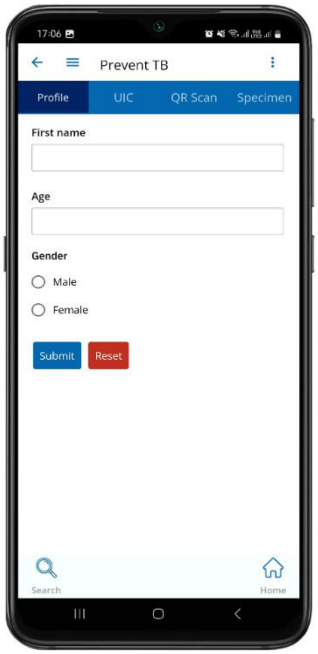

Figure 4: Search

1. The Search module can be used to search for a specific client within the application, especially before registering a new client, to **avoid client duplication**.
2. The search module supports the following modes of looking up a client:

a. Profile: Clients can be searched based on their first name, age and gender.
b. UIC: Clients can be searched via their Unique Identification Code or UIC.
c. QR Scan: The user can scan a QR code, which is auto-generated agter client registration and can be downloaded from the ‘Registration’ form.
d. Specimen ID: Clients can be searched based on a Specimen ID entered on the testing stages.

3. If a client with the same details is available on the system, it is displayed and can be selected by the user to access that client’s profile.

2. People on care

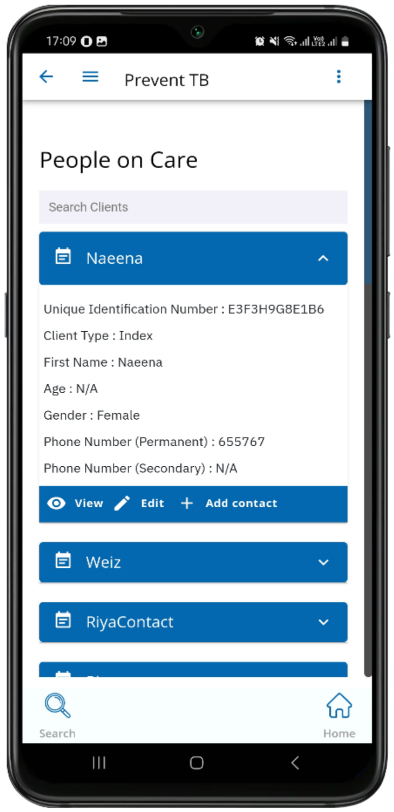

Figure 5: People on care

1. In the 'People on care' module, the clients registered on the Prevent TB application can be viewed by the user.
2. To view/update the client details, the user can navigate to that particular client, and click on the dropdown.
3. There is a provision of a search bar to look up clients. The search bar requires a minimum input of four characters to filter the results.
4. The user can **add contacts** to a specific index via this module.
5. The following actionable buttons are available for each client in this module:
    a. View: Users can view stage-wise details for a particular client.
    b. Edit: Users can edit or view the client details.
    c. Add contact (only for Index clients):
        - If the client is an index, the user can register multiple clients as contacts linked to this index.
        - The user is redirected to the 'Registration' form on clicking this option.

3. Alerts

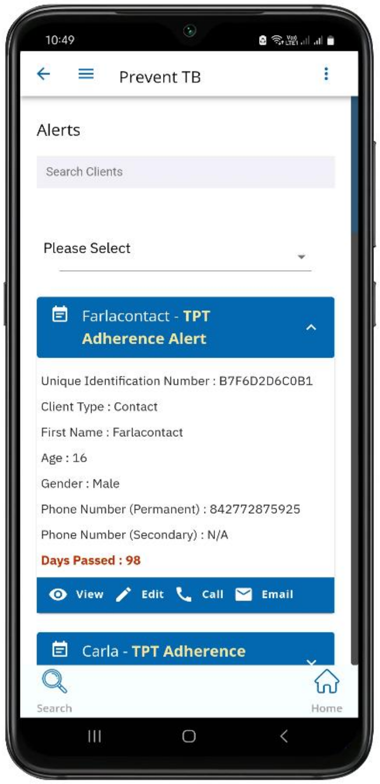

Figure 6: Alerts

1. The user can view client-wise alerts which provide information on the pending actions for that specific client.
2. Each client is displayed by their first name and the name of the alert, highlighted in yellow.
3. The cards displayed in this module contain the following:
    i. Unique Identification Number
    ii. Client type
    iii. First name
    iv. Gender
    v. Phone number (Permanent)
    vi. Phone number (Secondary)
    vii. Days Passed – highlighted in red to indicate priority action. The colour coding of this can be customised as per the program needs.
4. The user can also perform the following actions on a specific client:
    i. View: The user can view the client's stage-wise data.
    ii. Edit: The user can update or modify the client's data.

iii. Call: The user can contact the client on their permanent phone number.
iv. Email: The user can email the client with their specific email id.

5. The following alerts are available on the PreventTB application:
   i. TPT Adherence Alert
      - If a client's TPT treatment has been initiated and it has been more than 5 days since adherence has been marked.
      - If the client is on a TPT regimen of 3HP, the alert is triggered after 8 days of previously marking adherence.
   ii. TB Infection Testing Alert
      - This alert is triggered if a client has been referred to TB Infection Testing in the ‘Referral services’ stage.
   iii. TPT Referral Alert
      - During TB Infection Testing, if a client is eligible for TPT, this alert is triggered.
   iv. TB Disease Testing Alert
      - This alert is triggered if a client has been referred to TB Disease Testing in the ‘Referral services’ stage.
   v. TB Treatment Referral Alert
      - This alert is triggered if during TB Disease testing, the client tests positive for TB.
   vi. ADR Alert-
      - This alert is generated when a client marks an adverse drug reaction from their login while recording self- adherence.

4. Persons Referred

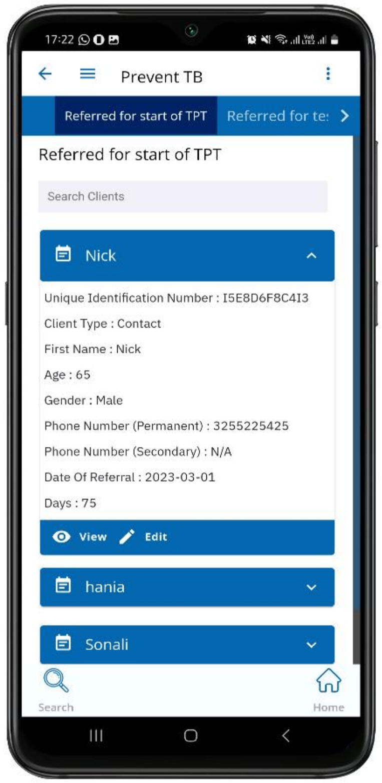

Figure 7: Persons referred

1. The ‘Persons referred’ module contains a list of clients segregated based on the services they are referred to in the ‘Referral Services’ stage.
2. The following referral-based segregations are available:
    a. Referred for start of TPT
    b. Referred for test for TB disease
    c. Referred for start of TB treatment
    d. Referred for test for TB Infection
3. A search bar allows the user to look up a client by entering the client’s first name. A minimum input of four characters is required to filter the search list.

5. Adherence Monitoring

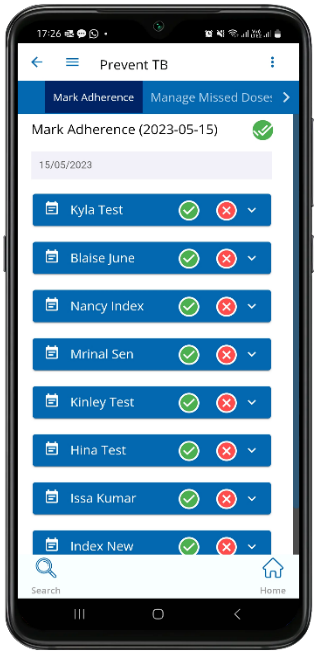

Figure 8: Mark Adherence

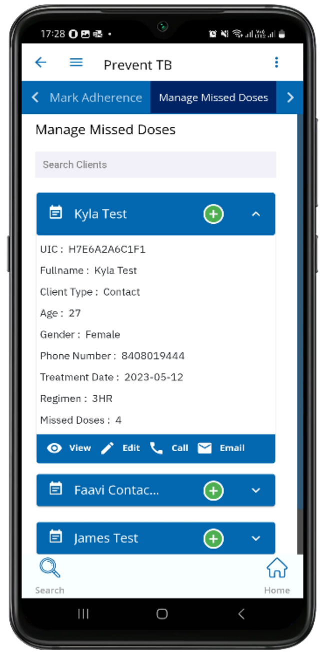

Figure 9: Managed missed dose

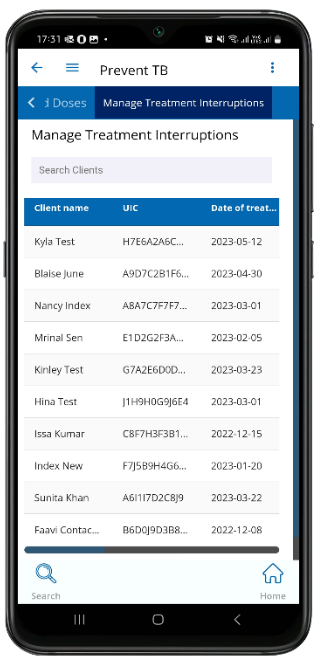

Figure 10: Manage treatment interruptions

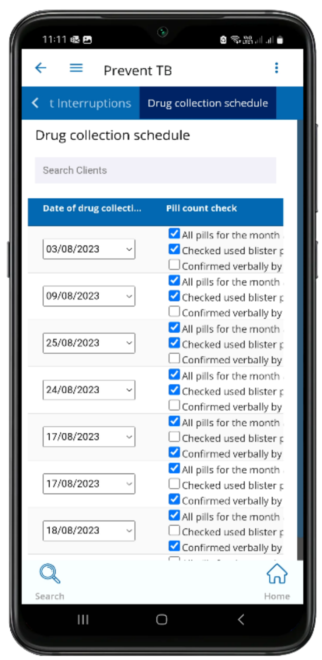

Figure 11: Drug collection schedule

1. Adherence monitoring is a module that facilitates ease of marking TPT Adherence for the user.
2. It consists of the following sections:
    a. Mark Adherence
        i. The user can mark adherence either for individual clients or for all clients for a particular date.
        ii. If the client has taken their dose, the user must select the green tick mark.
        iii. If the client has missed their dose, the user must select the red cross mark.
    b. Managed Missed Doses
        i. The user will be able to view a list of clients who have missed their doses.
        ii. Each client in this section will have a field under their name indicating the number of missed doses.
        iii. The user can view or edit the details of the client as well as reach out to the client via a phone call or an email.
        iv. The user can also perform actions on these clients by clicking the green plus button next to their name. The actions are as follows:
            - Schedule in person meeting
            - Continue with TPT
    c. Manage Treatment Interruptions
        i. This section is used to monitor TPT adherence for all clients who have started TPT.
        ii. The user can view key information such as total doses taken in percentage, total missed doses, remaining doses and the days remaining.
        iii. The user can also perform the following actions on the clients:
            - Restart full course
            - Change regimen
            - Refer for adherence counselling and address reason for interruption.
    b. Drug Collection Schedule
        i. This section helps in the scheduling of dates for client visits for the purpose of drug collection.
        ii. Health workers at this stage can also mark the adherence monitoring outcomes as per the provided checklist.

6. Task list for Contacts

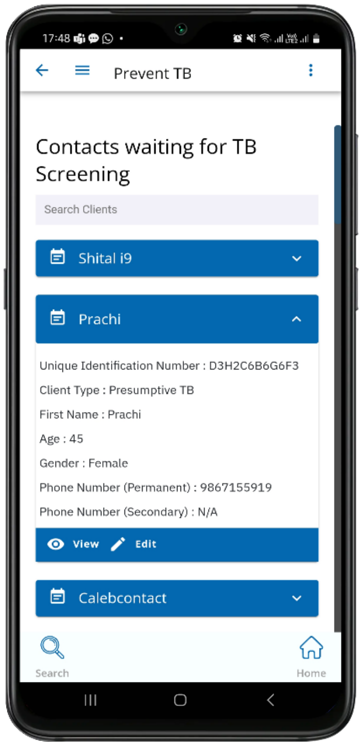

Figure 12: Contacts waiting for TB Screening

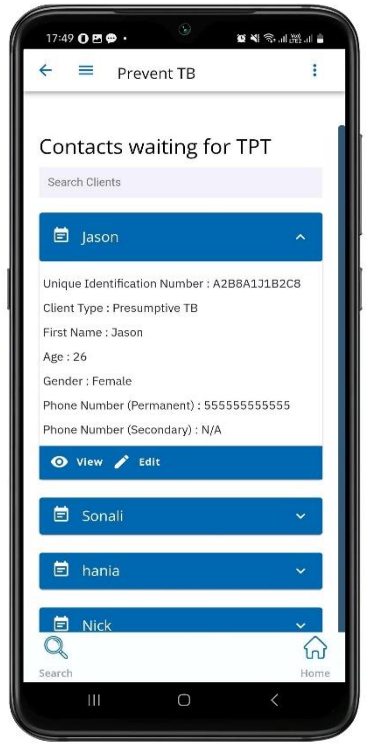

Figure 13: Contacts waiting for TPT

1. The Task list for contacts is divided into two modules:
    a. Contacts waiting for TB Screening: This section displays a list of contact clients who are yet to receive TB Screening services.
    b. Contacts waiting for TPT: This section displays a list of contact clients who are yet to receive TPT services.
2. Actionable buttons of ‘View’ and ‘Edit’ would allow users to view the clients stages’ details or open their forms for editing respectively.

Program Workflow

The main purpose of the Prevent TB application is to register at-risk clients or clients who are affected by tuberculosis and provide them with the required services. This chapter covers the entire flow of the client's journey through screening, testing and treatment services as well as user-based access to the various stages present on the application.

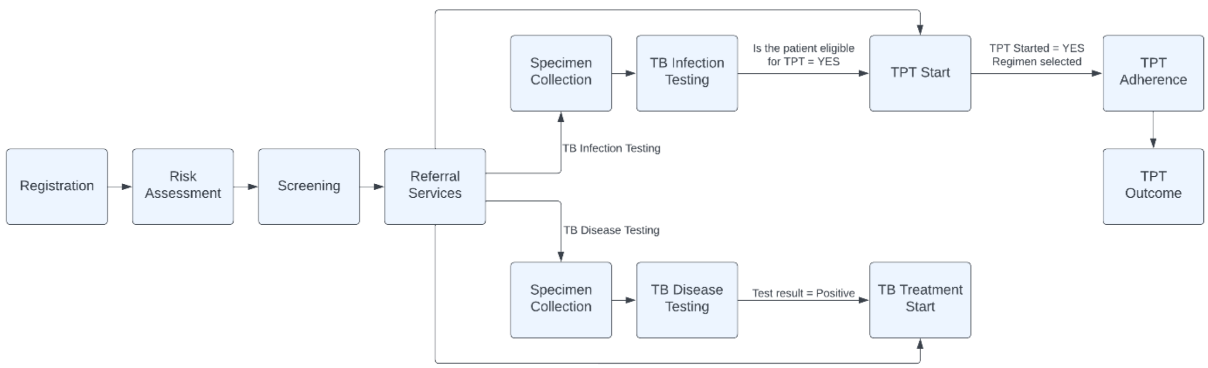

Figure 4: Basic program workflow

Add New Client / Registration

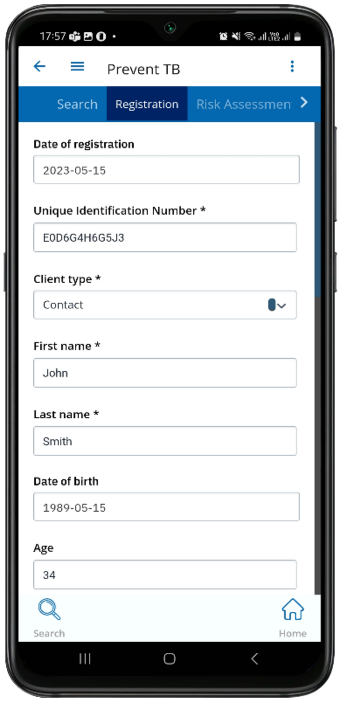

Figure 15: Registration form

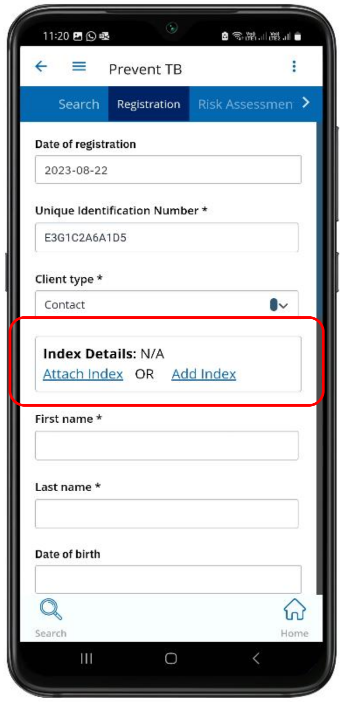

Figure 16: Add/attach index

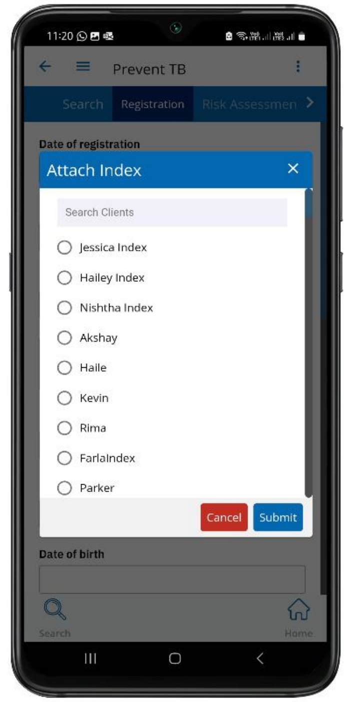

Figure 11: Attach Index

1. The user is first directed to the 'Search' page to check if the client to be registered already exists.
2. The user can look up a client in the following ways:
    a. Profile: The user can enter the client's first name, age, and gender.
    b. UIC: The user can enter the client's Unique Identification Code.
    c. QR Code: The user can scan the client's associated QR code.
    d. Specimen ID: The user can enter the client's Specimen ID.
3. If a match is found, the user can edit the details of the existing client, and if not, the user can proceed to register the client.
4. The search option helps to avoid duplication of records.
5. The user is prompted to fill in the following mandatory fields before submitting the registration form.
    a. Unique Identification Number
    b. Client Type
    c. First Name
    d. Last Name
    e. Gender
    f. Code
    g. Phone Number
    h. Presently on Anti-TB medication?

6. The ‘Date of Registration’ and the ‘Unique Identification Number’ are pre-filled fields and cannot be edited by the user.
7. If the client type selected is ‘Contact’, the user gets an option at the bottom to **add or attach an index**.
- <u>Add Index</u>- Redirects the user to a new registration form for index case registration.
- <u>Attach Index</u>- Displays a list of all existing index cases which can be selected for the linking. A search option on this window enables searching for a specific index client.
8. If the client type selected is ‘Index’, once the registration form is submitted, the user is prompted to register contacts for this index user.
9. The ‘Patient address’ field has an option to pick the user’s exact location using Google maps.

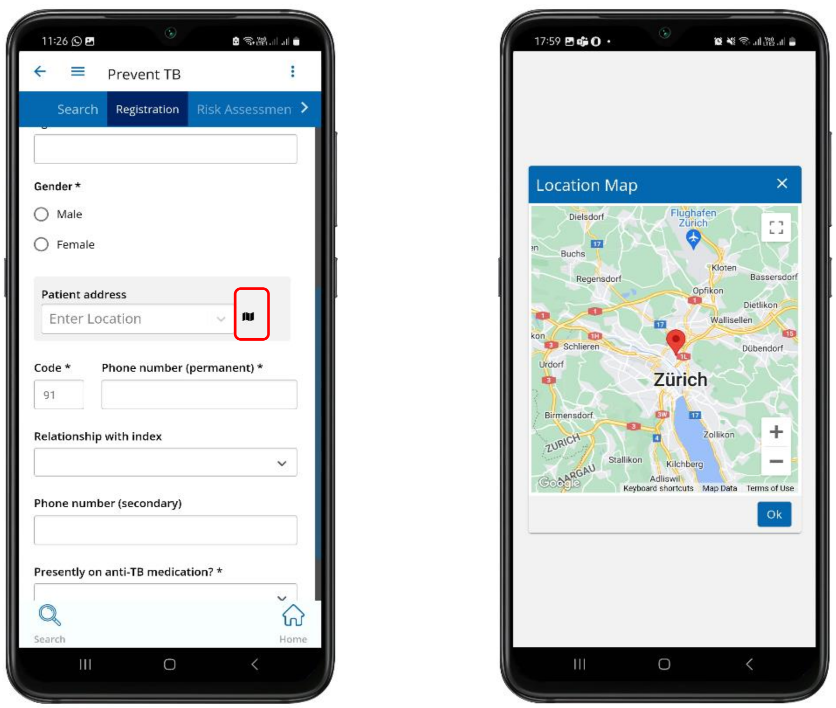

Figure 17: Recording patient address

Risk Assessment

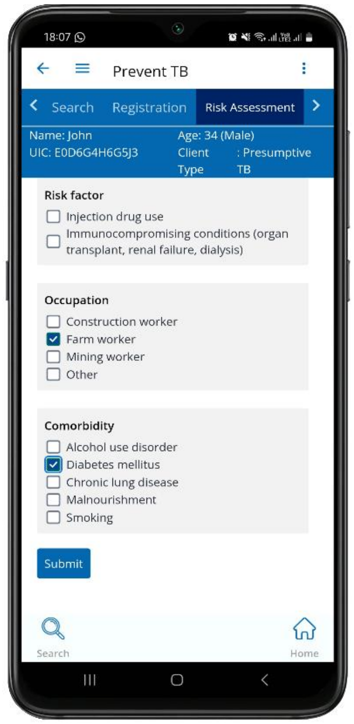

Figure 18: Risk Assessment

1. On submitting the 'Registration' form, the user is directed to the 'Risk Assessment' module.
2. This stage is used to register risks faced by the client and based on these risks, the client is referred for further services.
3. The following fields are present in this stage:
    a. Risk factor
        i. Injection Drug use
        ii. Immunocompromising conditions (organ transplant, renal failure, dialysis)
    b. Occupation
        i. Construction worker
        ii. Farm worker
        iii. Mining worker
        iv. Other
    c. Comorbidity
        i. Alcohol use disorder
        ii. Diabetes mellitus
        iii. Chronic lung disease
        iv. Malnourishment
        v. Smoking

Screening

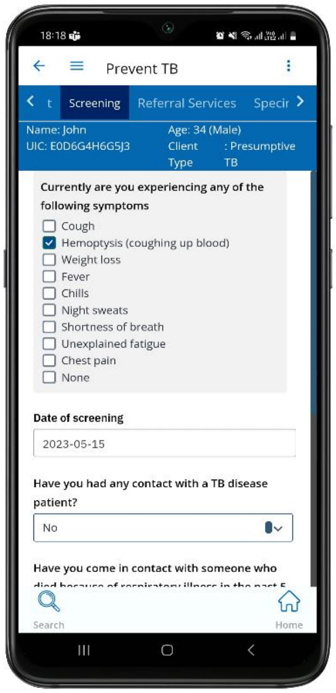

Figure 19: Screening

1. After submitting the Risk Assessment form, the user is redirected to the Screening form.
2. In this stage, the user can mark the client's symptoms as well as the client's medical history.
3. The information entered in this stage helps the user with referral of services in the next stage.

Referral Services

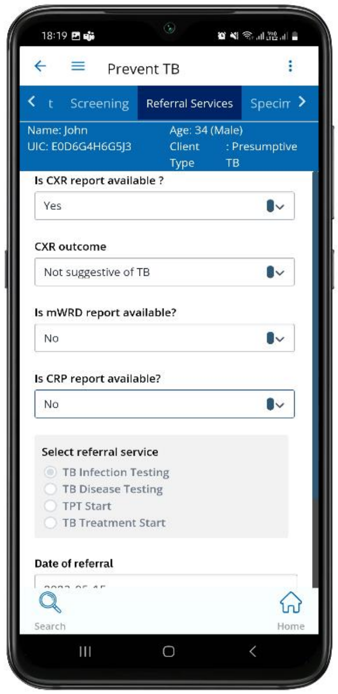

Figure 20: Referral Services

1. On submitting the ‘Screening’ form, the user is redirected to the ‘Referral services’ form.
2. In this form, the user can refer the client for various testing and treatment services.
3. The client can be referred to the following services:
    a. TB Infection Testing
    b. TB Disease Testing
    c. TPT Start
    d. TB Treatment
4. Based on an inbulit algorithm, the application prompts the required referral on its own based on the options selected on the fields available on this stage.
5. The ‘Is CRP report available’ field is only available if the client is declared as HIV positive in the registration form.
6. The user can also refer the client to a facility center as well.

Specimen Collection

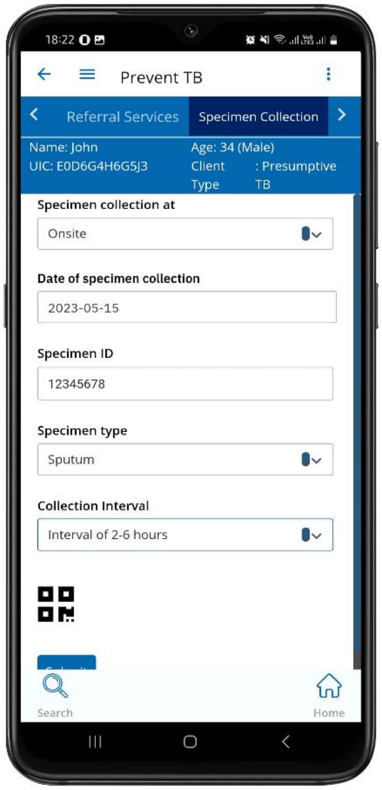

Figure 21: Specimen Collection

1. For a client to receive testing services, the user must enter the details pertaining to the specimens to be used in testing.
2. The specimen can be collected on-site or referred to a facility.
3. The date specimen collection, specimen ID and type, and collection interval are entered in this stage.

TB Infection Testing

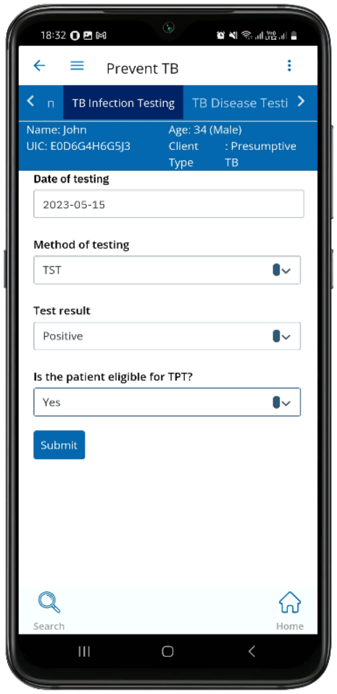

Figure 22: TB Infection Testing

1. After the Specimen collection stage, the user is redirected to the testing stages.
2. If 'TB Infection Testing' is selected in the 'Referral services' stage, the user is redirected to this stage.
3. The user has to enter the method of testing as well as the test results, specially mentioning whether the client in question is eligible for TPT.
4. If the client is eligible for TPT, they will be redirected to the TPT Start form on submission of the TB Infection Testing form.

TB Disease Testing

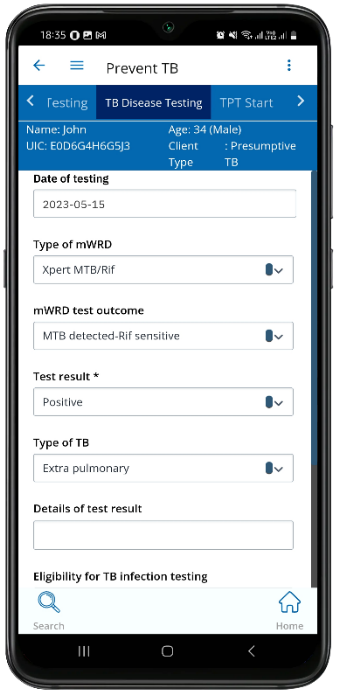

Figure 23: TB Disease Testing

1. If 'TB Disease Testing' is selected in the 'Referral services' stage, the user is redirected to this stage.
2. The user will have to enter the TB Disease test results, including the date of testing, mWRD test details, details of test result and if the patient is eligible for TB Infection testing.
3. If the test result is positive, the user is redirected to TB Treatment Start and can initiate the client's treatment.

TPT Start

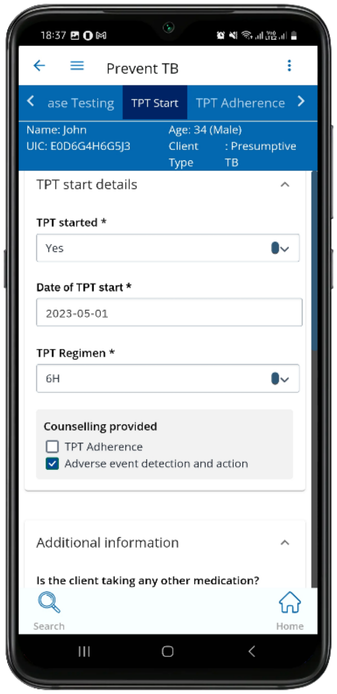

Figure 24: TPT Start details

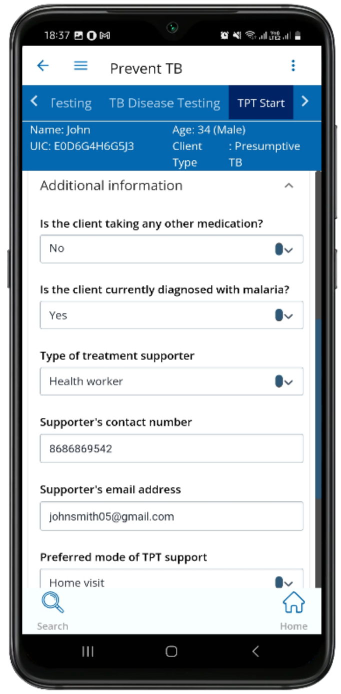

Figure 25: Additional information

1. If the client is eligible for TPT, they are directed to the TPT Start stage for TPT initiation.
2. If TPT is started, the user has to mandatorily select the date of commencement of TPT and the regimen to be followed.
3. The following regimens can be recorded under TPT regimen:
   a. 1HP
   b. 6H
   c. 3HP
   d. 3HR
   e. 4R
4. Additional information pertaining to TPT can be entered such as TPT support and preferred modes of contact in case of missed doses.

TPT Adherence

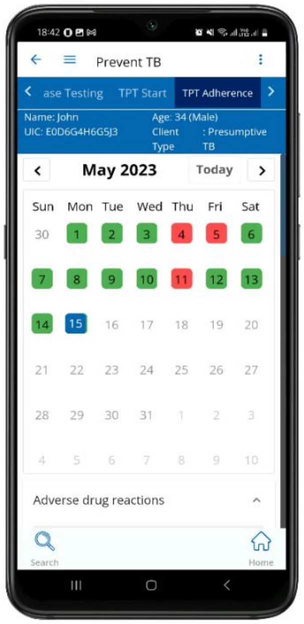

Figure 26: TPT Adherence Stage

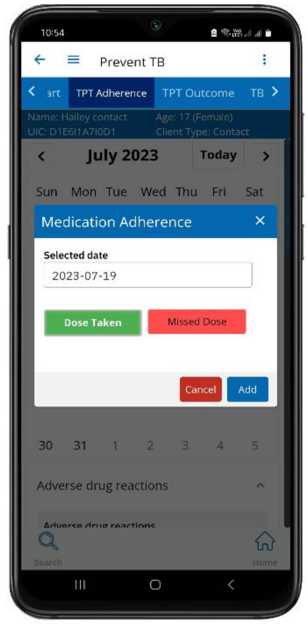

Figure 27: Marking dose intake

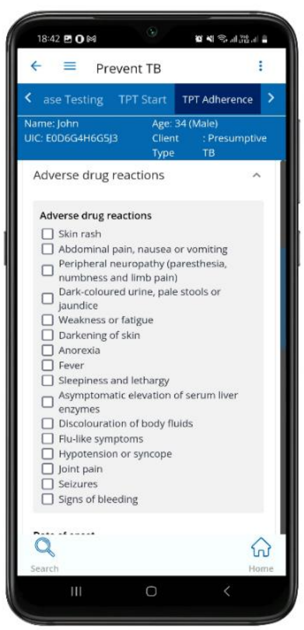

Figure 28: Adverse drug reactions

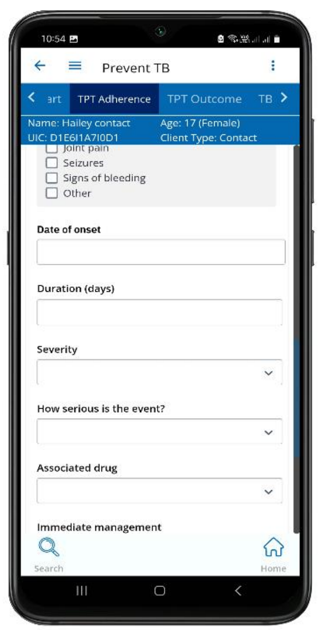

Figure 29: Management of ADR

1. Once TPT is started, the user will have to mark the client's adherence to the regimen specified.
2. Adherence cannot be marked unless the date of TPT start, and regimen is selected in the 'TPT Start' stage.
3. A calendar is available for the user to mark adherence. To mark TPT adherence for a specific date, the user must navigate to the date on the calendar.
4. The user must then select the date, which will trigger a popup containing the options to mark whether the dose was taken or missed.
5. If the user selects 'Missed dose', they would be prompted to enter a reason for the missed dose.
6. On submitting, adherence is highlighted against that particular date on the calendar.
7. If the dose was taken, the date is highlighted in green and if missed, it is highlighted in red.
8. An important section of adherence is '**Adverse drug reactions'**, which allows the user to mark any adverse effects faced by the client towards the treatment doses and the steps of action taken for the management of these reported ADR.
9. The user can also enter details pertaining to Adherence monitoring such as the date of drug collection and the next visit.

TPT Outcome

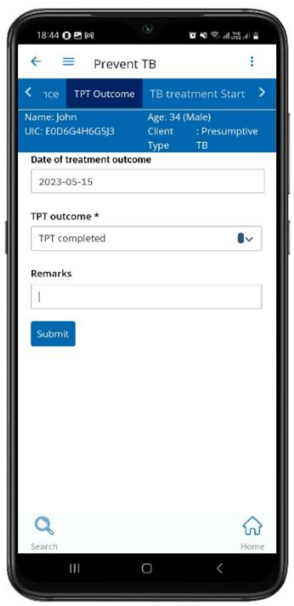

Figure 30: TPT Outcome

1. The user can enter the outcome of the TPT Treatment, especially once the treatment regimen has been completed.
2. The following outcome scenarios can be entered on the application:
    a. On TPT
    b. TPT Completed
    c. TPT Interrupted

TB Treatment Start

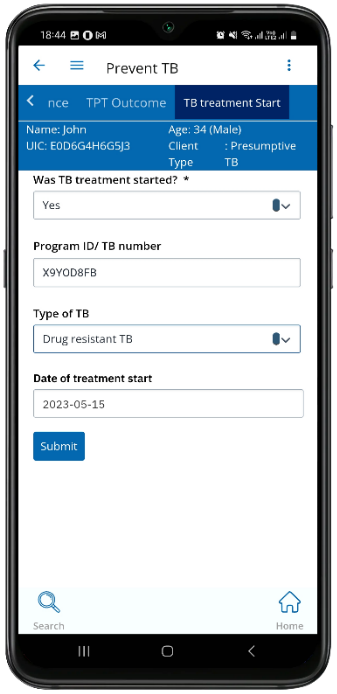

Figure 31: TB Treatment Start

1. If the client tests positive in the TB Disease testing stage, users are redirected to this stage to enter details related to the start of TB treatment. Clients can also be directly referred for TB treatment start from the 'Referral Services' stage.
2. TB treatment start marks the commencement of treatment for TB disease.
3. The user can enter the type of TB as well as the date of the start of treatment.

Link Record

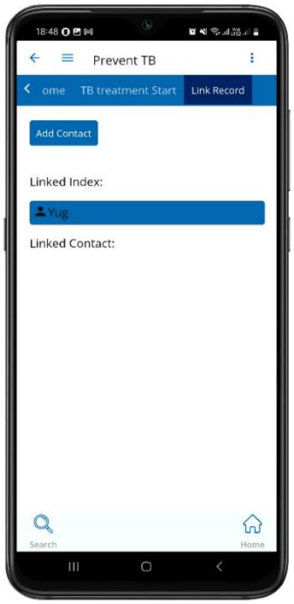

Figure 32: Link Record

1. This module displays the index or contact(s) linked to a particular client.
2. The user can add a contact for an index client by clicking the 'Add Contact' option.
3. The user can edit/update the linked client as well, from this module.

How to link a Contact to an Index?

1. While filling in the registration form, if the client type is selected as 'Contact', the user gets an option at the bottom of the form to add or attach the contact client to and existing index client.
2. If the user wishes to add an index, they are redirected to a fresh registration page.
3. Another way of index-contact linking is by first registering the Index first on the application via the above flow.
4. The user then must navigate to the 'People on care' module from the homepage and click on the already registered index client's name.
5. The user can then select the 'Add contact' option under that user, which then redirects to the registration page, with the default client type as 'Contact'.
6. The third way to link a contact, is by navigating to an index client's record in 'People on care', selecting the 'Edit' option and adding a contact in the 'Link Record' stage.
7. The fourth way is during index client registration itself. When an index is registered, the user is prompted to register contacts based on the number of members in the household. The system keeps prompting the user to add contacts at this stage until details of all household members are entered.

7. Get Connected

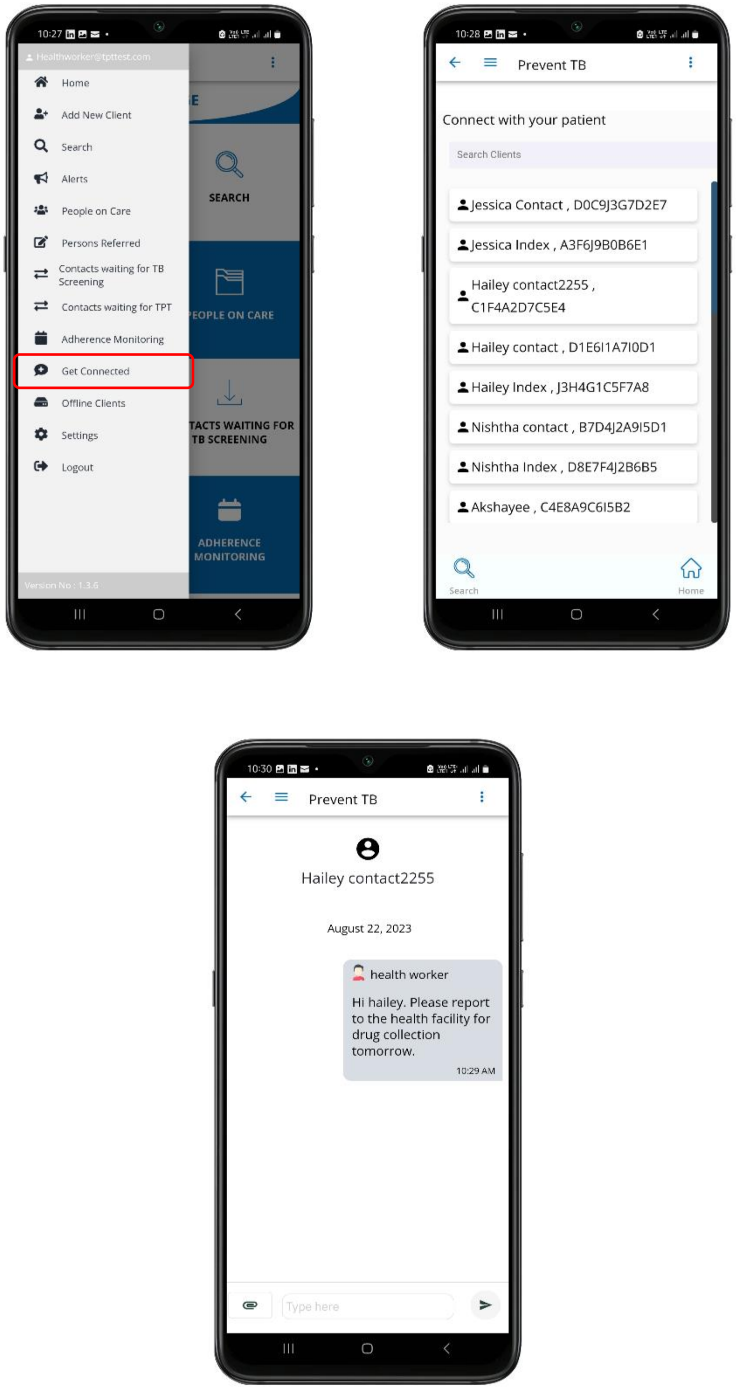

Figure 33 : Get Connected

The Get Connected module of the application allows healthworkers to communicate with their clients who are using the client facing component of the application through chat.

- Users can access this module from the left hamburger menu as shown in the figure above.
- The module will display a list of all clients registered by the healthworker.
- A search option on the top allows searching of any specific client using their name.
- Click on the client's name to open the chat window.
- Using this section, the user can send any messages or attach files/images of relevance which can then be shared with the client.

8. Offline Clients

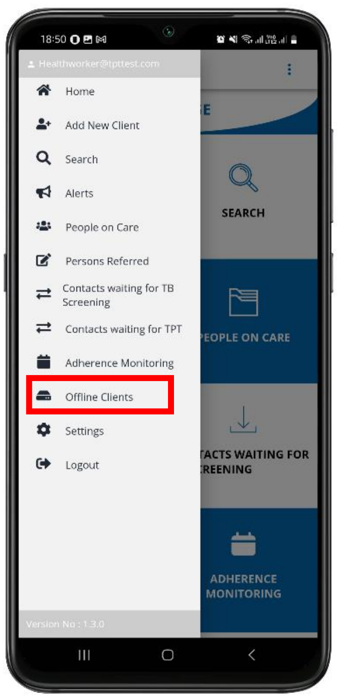

Figure 34: Offline client

1. The offline functionality is of utmost importance to users who have limited access to internet connectivity, especially for volunteers who work in remote areas.
2. Users can also add and link contacts to index clients registered in the offline mode.
3. **It is important to note that a user needs a stable internet connection to first login and reach the homepage of the mobile application before using the application in the offline mode.**
4. The user will **not** have access to any modules except 'Add new client'.
5. All client records registered in the offline mode can be accessed under 'Offline Client' in the hamburger menu at the top left corner of the application.
6. The offline client records are saved even if the mobile application is closed.

7. To register a client, the user can simply navigate to the 'Add new client' and register a client.
8. The user can link contact clients only to index clients who have been registered in the same offline session. The user cannot add/link a contact to existing index clients in the offline mode.
9. To add a contact, the user must navigate to 'Offline Client' in the hamburger menu at the top left of the application.
10. The user can then add a contact to a registered index by selecting the 'Add contact' option under an index client.
11. Once the user has access to a stable internet connection, they can sync the records by selecting the 'Sync data' option in the 'Offline client' section.
12. On syncing the offline records, the user can now view these records in the 'People on care' module.
13. Users are not allowed to log out of the application unless the offline records are synced. On trying to do so, the application prompts the user to first complete the syncing activity.