Health Department Desktop App

- At startup, the health-department app shall display a credentials screen.
- On the credentials screen, the user shall be able to enter an authority, port number, database name, username, and password for the remote database.
- The authority, port number, database name, and username fields for the remote database shall be prepopulated with the values for the team's remote database.
- The password field for the remote database shall begin empty.
- On the credentials screen, the user shall also be able to enter an authority, port number, username, and password for the OpenMRS instance.
- The authority, port number, and username fields for the OpenMRS instance shall be prepopulated with the values localhost, 8080, and admin
- The password field for the OpenMRS instance shall begin empty.
- On the credentials screen, the user shall be able to submit all of the connection information for both the remote database and OpenMRS at once.
- When the user submits the credentials, the health-department app shall attempt to connect to the remote database and the OpenMRS server using those credentials.
- The health-department app shall display a user-friendly error message and allow the user to retry if either connection is unsuccessful.
- The health-department app shall clear the password fields and advance to a loading screen if the initial connection is successful.
- Once on the loading screen, the health-department app shall determine which records in the remote database can be imported into OpenMRS but have not been imported already; these are the records to import.
- Also on the loading screen, the health-department app shall determine which records in the remote database cannot be imported into OpenMRS because OpenMRS does not contain a patient with a matching patient ID or a provider with a matching provider identifier; these are the unmatched records.
- If either connection fails while the app is determining which records to import, the health-department app shall display a user-friendly error message and return the user to

the credentials screen.

- Once the app has determined the records to import and the unmatched records, it shall advance to the data-preview screen.
- On the data-preview screen, the app shall display all of the records to import as human-friendly strings in a scrollable list.
- On the data-preview screen, the app shall also display all of the unmatched records as human-friendly strings in a scrollable list.
- On the data-preview screen, the user shall be able to confirm or abort the import.
- If the user aborts the import, the health-department app shall return the user to the credentials screen.
- If the user confirms the import, the health-department app shall advance to an importing screen.
- Once on the importing screen, the health-department app shall upload the records to import into OpenMRS via the REST API.
- The importing screen shall display a progress bar to indicate the import's progress.
- If the OpenMRS connection fails while the app is uploading records, the health-department app shall display a user-friendly error message and return the user to the credentials screen.
- If the import is successful, the health-department app shall display a success message and allow the user to close the application.
- Every error message shall be specific about why the error occurred and what actions the user can take to remedy the problem.
- The health-department app shall import the patient's temperature as an observation for that patient if OpenMRS contains a matching patient ID.
- The user shall be able to open a "Vaccination Rate" screen.
- On the "Vaccination Rate" screen, the user shall be able to select a disease. After selecting a disease, the user shall be shown each of the vaccines that protect against that disease and, for each of those vaccines, the number of people in the database who have received that vaccine. The user shall also be shown the number of people in the database who have not received any vaccine

for that disease.

- The user shall be able to open a "Vaccine Order Summary" screen.
- On the "Vaccine Order Summary" screen, the user shall be able to select a disease. After selecting a disease, the user shall be shown each of the vaccines that protect against that disease and, for each of those vaccines, the number of orders placed and the number of orders fulfilled.
- The user shall be able to open a "Symptomatic Patients" screen.
- On the "Symptomatic Patients" screen, the app shall display a list of patients with a fever.

Distribution Mobile App

- From the main menu, the user shall be able to navigate to an "Add/Edit Vaccination Clinic" screen, a "New Vaccine" screen, and an "Order Vaccine" screen.
- On the "Add/Edit Vaccination Clinic" screen, the user shall be able to select an existing vaccination clinic or create a new vaccination clinic. If the user selects an existing vaccination clinic, the the vaccination clinic's name and address will be pre-populated from the database; otherwise, the user must provide this data.
- After selecting an existing vaccination clinic or creating a new vaccination clinic on the "Add/Edit Vaccination Clinic" screen, the user shall be presented with a list of manufacturers, and the screen shall indicate which manufacturers the vaccination clinic currently receives vaccines from (a new clinic initially will receive vaccines from no manufacturers). The user shall be able to change (add and remove) which manufacturers the vaccination clinic receives vaccines from.
- On the "New Vaccine" screen, the user shall be able to create a new vaccine by first selecting the manufacturer and then entering the vaccine's name, the disease that it protects against, and the number of doses required for full immunity.

- On the "Order Vaccine" screen, the user shall first select the vaccination clinic that they are ordering a vaccine for and the disease for which a vaccine is needed.

- After selecting a vaccination clinic and a disease on the "Order Vaccine" screen, the user shall then be presented with a list of manufacturers that distribute to the vaccination clinic that also produce a vaccine that protect against that disease. The user may select one of those manufacturers and the number of doses required. If no such manufacturer exists, the user shall be presented with a user-friendly error message explaining why the vaccination clinic cannot obtain a vaccine.

- The tracking app may limit the number of diseases and hard-code their names; however, there must be at least four diseases.

- The database shall not limit the number of manufacturers, vaccines, or vaccination clinics that can be stored.

- The database shall track each manufacturer's name, location, and the vaccines it produces.

- The database shall track each vaccine's name, relevant disease, and number of required doses.

- The database shall track each vaccination clinic's name, address, and the manufacturers it can obtain vaccines from.

- The installer shall pre-populate the database with three manufacturers, each of which produces vaccines for two diseases.

- The installer shall pre-populate the database with three vaccination clinics, each of which can obtain vaccines from two manufacturers.

- The database shall track the vaccine orders that have been placed.

- From the main menu, the user shall be able to navigate to a "Review Orders" screen.

- On the "Review Orders" screen, the user shall be able to select either a vaccination clinic or a manufacturer to review the outstanding orders placed by

that clinic or received by that manufacturer.

- On the "Review Orders" screen, when the user is reviewing outstanding orders, they shall be able to select an order to be fulfilled. After the user has selected an order and indicated they wish it to be fulfilled, they shall be prompted to confirm the fulfillment.

Record App

- From the main menu, the user shall be able to navigate to a "New Person" screen, and a "New Vaccination" screen.

- On the "New Person" screen, the user shall be able to create a new person by entering the person's name, patient ID, and date of birth.

- When displaying the success message after creating a new person, the system shall also ask the user if the person's first vaccination should be recorded and proceed to the "New Vaccination" screen instead of the main menu if the user answers "yes."

- On the "New Vaccination" screen, the user shall be able to select an existing vaccine lot and shall also be given the option of entering a new lot for an existing vaccine.

- If the user chooses to enter a new lot, they must match it to a vaccine, provide the lot identifier, and enter its date of manufacture.

- The user must provide the name of the person receiving the vaccination. If the user navigates to the "New Vaccination" screen from the "New Person" screen then the person's name shall be filled in from the data just collected. Otherwise, except as noted below, the field for the person's name shall be initially blank.

- The user most provide the date of the vaccination. Except as noted below, the default vaccination date shall be the current date.

- When displaying the success message after creating a new vaccination record, the system shall also ask the user if another vaccination should be recorded. If the user answers "no" then the system shall proceed to the main menu. If the user answers "yes" then the system shall return to the "New Vaccination" screen with the vaccine lot blank, but the person's name filled in and the date pre-populated with the date of the previous vaccination.

- On the "New Person" screen, after entering the person's data, the tracking app shall display a user-friendly error message and allow the user to edit and resubmit their data if a patient with the entered patient ID is already in the database.

- On the "New Vaccination" screen, after entering the vaccination data, if the person's name does not match any person already in the database, the tracking app shall display a user-friendly message prompting the user to confirm the name or to edit and resubmit the name.

- The database shall not limit the number of people, vaccines, or lots that can be stored.

- The database shall track each person's name, patient ID, and date of birth (if known), and each lot they have received a vaccination from.

- The database shall track each lot's lot identifier and manufacture date.

- The database shall track each vaccine's manufacturer, relevant disease, and number of required doses, and each vaccine's lots.

- The installer shall pre-populate the database with vaccination records for three people:
    - One person has received vaccinations from two lots for the same vaccine
    - One person has received vaccinations from two different vaccines
    - One person has received a vaccination from a vaccine that neither of the other two people received vaccinations from

- From the main menu, the user shall be able to navigate to a "Review Vaccinations" screen and a "Flag Vaccine Lot" screen.

- On the "Review Vaccinations" screen, the user shall be able to enter a patient ID to review the person's vaccination history: for each vaccination, the vaccine type,

the vaccine lot, and the date the vaccine was administered.

- From the "Review Vaccinations" screen, when the user is reviewing a person's vaccination history, they shall be able to navigate to the "New Vaccination" screen, and the person's name will be filled in and the date will be pre-populated with the current date.

- On the "Flag Vaccine Lot" screen, the user shall be able to select an existing vaccine lot to see which people have a vaccination from that lot.

- On the "New Vaccination" screen, the user shall be able to enter the person's temperature.