Requirements document
Tuberculosis Treatment Application

Iteration 1 (March 13, 2018)

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1 Introduction

Taking medicine every so often is hard to adhere to. Our goal is to help with that, specifically for the treatment of tuberculosis.

The reason why for tuberculosis is simple: TB is treatable and curable, but Treatment starts with a 6 month course of 4 antimicrobial drugs, which is difficult to adhere to for many patients. Poor adherence could cause the disease to spread and possibly give the disease a resistance to the drug. Of course there are many other factors that play a role, but adherence plays a big role as it is extremely important for medicine intake to actually be taken.

The aim of our project is to increase treatment adherence by designing a smart-phone application for patients that gives information about tuberculosis, treatment, side-effects and additionally reminds the patient every day which medication to take. Our current vision is to have an android and a IOS app that will simply put allow for interaction and have a webapp that will 'respond' to your input.

2 Functional requirements

2.1 Users

- Patient: a patient is a user of the mobile app. He is supposed to receive an overview of his treatment plan, and reminders about when to take medications. Possibly a progress awarding system could be added. A patient has limited control over his account, he cannot create one nor modify the treatment plan. He should be able to choose his password and possibly his username
- Physician: a physician is a user of the web application. He is supposed to be able to create patients' accounts and modify/create treatment plans. He has full control over his account, he can create one, choose password, and give a preferred email address (needed for recovery). A physician can possibly create accounts for multiple patients, and he/she should be able to have a complete overview of all of them. Possibly he should also be able to keep track of single patients' medications progress
- Admin: an admin is a user of the web application. He/She is someone appointed to modify/update the content of the application after its release. The creation process of an admin account is still TBD

2.2 Critical

1. A patient should be able to receive reminder notifications about his medications.
2. The physician can create his own account on the webapp to allow the physician to overview data of his patients as well as interact with the date.
3. The admin can create his own account on the webapp to add/remove features
4. The physician can create a patient's account, which the patient can use to login in the mobile app, which will give him access to his schedule
5. A patient should be informed about which medication to take on which dates and mark that he has taken his medication.
6. The physician can input/modify a patient's treatment plan. A treatment plan is the information of what pills should be taken at what time/date
7. Any user should be able to log in his account
8. A physician should be able to recover his account when he forgets his account details.

2.3 Important

1. The mobile application should have calendar functionality in the sense that the user will receive a pop-up when he is notified instead of just a background notification.
2. The physician should be able to keep track of a patient's medication progress
3. The physician should be able to recover a patient's account should the login details go lost

2.4 Useful

1. The app should contain general information about the illness and medication. Given information should be accessible before logging in, so that even a user that does not have access to the treatment plan part of the app can keep up-to-date and learn about tuberculosis
2. A patient user should be able to receive awards for successfully proceeding with his treatment plan. The nature of given awards is for the client to decide.
3. A patient user should be able to receive remainder notifications even when the phone is not online

3 Non-functional requirements

3.1 Security

- The application should be secured against the most common attack methods (SQL Injection, Cross site scripting...)
- The application should not treat any patient's personal information

3.2 Availability

The application should be available for

- Android (min version TBD)
- iOS (min version TBD)
- Browser (only for physicians)

3.3 Usability

- The app should be lightweight, because of the nature of the app this will be an easy task and should allow the app to be usable on all devices with a smooth experience e.g. no noticeable load times.

3.4 Scalability

App should be able to accommodate more medicine intake plans and more data about TB if necessary.

3.5 User Friendliness

- Everything should be intuitive and easy to use, such that anyone can use the mobile application. To keep the app intuitive we want to keep the design of the app in line with native apps such as S-health or the agenda app. The app should not overwhelm you with features as well as properly categorize similar features. There should be multiple ways to identify a feature due to the illiteracy of some users. It should give appropriate feedback when the user interacts with the app to provide a sense of interaction.
- The web application does not need to be extremely user friendly, since it will be used by physician that do not share the medical illiteracy of the patients, and because it will not be used for very complicated tasks. However, sufficient documentation regarding the usage of each functionality will be released.

3.6 Responsiveness

3.7 Adaptability

4 Won't do

1. Development of apps aside from Android and IOS.
2. Releasing continuous large updates ourselves after official release. This is in the sense that we want the app to be stand-alone, allowing easy feature updates by the physician/admin.

5 Meeting log

Date	**Participants**	**Description**
21/02/2018	All + TA's	First group meeting for the project.

6 Change log

Date	Contributor(s)	Section(s)	Description
27/02/2018	Giacomo Casoni, Julius van Dijk	All	First version of the requirements document...
27/02/2018	Marco Lu	1,2,4	Added extra paragraphs to introduction,some won't do's and functional reqs.
27/02/2018	Sten Sipma	Titlepage, 3, 5, 6	Added the title page with all the necessary information (client name, TA's group members etc.). Added a format for the meeting- and change log. Added some general points for the non-functional requirements.
12/03/2018	Marco Lu	The document	Added additional info that was not provided, fixed some poor wording