**FLEx**

Justin Boschelli, Edward Bottom, Elizabeth Honigfort

Every year close to nine million Americans use physical therapy services, but studies done for the Physiotherapy Theory and Practice Journal suggest that as few as 35 percent of patients adhere to their at home exercise regimen. There are many theories about what causes this, with most focusing on patient busyness or laziness, but we think it is, at least in part, a user interface problem.

Our goal is to make physical therapy more intuitive and to close the information gap between the physical therapist and the patient. We will create a web app/hybrid mobile app which will keep track of the patient’s appointment schedule with their physical therapist and their physical therapist will be able to upload their personalized exercise regimen to it. Patients will be able to watch videos of each exercise being performed and there will be a way for them to keep track of how many of each exercise they have done that day. At each login there will be reminders for the user if there are overdue exercises that should be completed. Many of the exercises require props such as therabands or weights which many users may not have on hand at home. We may include on our site links to places to purchase what they need or suggestions for common household objects that could be used as a substitute.

Our app will allow patients to track their psychical therapy workouts and keep a log of how they are feeling on any given day. This will allow patients to easily keep a more accurate log of how they are feeling on any given day, because well being during psychical therapy tends to fluctuate and often times patients have trouble remembering how they felt on specific days between doctor visits. This log will also enable the doctor to view their patients records, so they can see how their patients are doing and if they need to reach out to any specific patient. Additionally, our app may offer SMS based reminders to do physical therapy and allow the doctor to send notifications to patients reminding them to do their exercises.

We believe this idea is both sophisticated enough to carry us through the semester and will provide an impressive and useful end result without becoming overwhelming. The features we have listed above are all of reasonable difficulty given our time frame, but if time were to become an issue, we could alway cut out a feature that is not essential to the application such as an SMS based message functionality or the ability to set reminders. These features are more for convenience and are by no means essential to the app. If need be, we can focus on the core functionality of providing video instructions and a log for the patient to report their well being. Also our decision to make a web app/ hybrid mobile app opens up the possibility of using a variety of technology stacks and means to solve our problem.

One major issue, which may need legal counsel if we bring our project to the market, is complying with HIPPA. Much of our initial feedback was concerned with the privacy of the users. We believe that there are many user portals out on the market for a variety of medical purposes, and that our product could also comply if it were brought to market. Once we have created a fully functional prototype, we may consider updating our product to be in full compliance with HIPPA, but for now our focus is on prototyping the idea. Another challenge that we anticipate is scope creep. As we mentioned above, we will prioritize the video and exercise tracking components, adding additional features only after those are complete.

Sources: (healthnetpulse.com)

(Patients’ mental models and adherence to outpatient physical therapy home exercise programs; Physiotherapy Theory and Practice; An International Journal of Physical Therapy)