**Problems that we don’t know how to address**.

General Questions

- What design questions should we try to answer? What merits a paper?

- Our Contributions: rehabilitation visualization tool and diagnostic tool

- We can improve diagnosis in terms of time and accuracy.

- What are the deliverables of a rehabilitation visualization tool?

We can make our application objective. With machine learning it should be consistent. Question: Does this application allow for physicians to be more objective?

Help clinicians see the objective flaws in the way the score patients.

Question 2: How do we evaluate the trajectory (of recovery?) for a patient over time?

Help clinicians see what is helping patients recover better.

How does seeing the trend change rehabilitation plans.

Problem: The goal for clinics like Hillcrest is regarding how much better

the patients feel rather than meeting certain test criteria. Without hard numbers, it is hard to tell empirically that rehabilitation methods truly work.

We could maybe provide metrics that document recovery and rehabilitation effectiveness.

- How will clinicians use this rehab visualization tool we’ve developed so far?

- What is missing? What other information would they like? Is the layout fine?

- Where/how will it integrate into their current work flow?

Problem: Residents and fellows in-patient, need to determine whether patients are ready to be sent home or to care facilities. How can we help doctors and social workers better know when patients are ready to be released from in-patient.

Perhaps we could use the data to help clinicians develop a rehabilitation plan that patients can carry over to home or to whatever care facilities they go to.

See if patients are ready to be released. If not we could perhaps store a history that could be looked into to show recovery process.

Experiment: Get multiple videos of a single patient. See which video and during which date a clinician would release a patient. See if they release early or later.

Problem: How do we hide WHERE the patients are in the videos that we show to study participants. How do we blind them?

Possible Results: Ubistroke can be used to help release patients on time. Ubistroke made us realize that people have been released too early. Ubistroke made us realize that people have been released too late. Does this just show that doctors are overall inconsistent?

STRONG study?

- What will clinicians need for a diagnosis tool used in ED/inpatient (“Start New Patient”)?

- Where/how will it integrate into their current work flow?

- Should we consider how patient behavior might change if they are being examined by a machine rather than human?

- Will clinicians be our primary target user? What about EMS workers?

Technical Questions

* Ask clinicians what aspect of the whole app most influenced their decision, if any? Within-subjects study?
* Have clinicians do their own NIHSS via the video. They can CHANGE the NIHSS and we could compare that with the ACTUAL results.
* Start new patient – show video with patient. Have them fill out the form. Show video data then see how it would change.
* Question: When would you want to see this patient again? For inpatients: When would you want to release? For in-clinics: When do you want to see them again?
* Get when the patients that we had seen were seen again within the UC System

- Are there already any ways we could integrate Vish's ML data?- How do we address the problem where data is missing (gaps in skeleton tracking)?

- How do we deal with multiple skeletons tracked?

- How would this tool work in**real-time**? What resources would we need to make this happen?

- Need to convert image frames to video real-time

- Where will we store the data?

Process for Getting Feedback for a Design Paper - Spring Quarter

1. Testing with fellows in-person during data collection sessions

(Can Andrew specify smaller time frame during his data collection sessions to interview fellows/attendings so that Vish and Nadir can attend as well?)

2. Gather fellows’ feedback, summarize it

3. Meet with Kunal/Brett and discuss summary with them, and get their feedback on UI