# CS 147 Autumn 2014: Concept Videos
# OLA Diabetes Care

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Video at https://vimeo.com/109275030

## I. Team Name: Value Proposition

Ola is Hawaiian for "life, health and well-being." Our goal with Ola is to provide real time context aware care for chronic disease patients through technologies such as smart wearable devices and advanced data analytics (machine learning). We hope Ola will enable patients to live a normal life without ever having to worry about their conditions and medication.

## II. Each team member's name and role.

*Manager*: Ian Holmes
*Design*: Tang Zhang
*Development*: All
*User testing*: Ian Holmes
*Documentation*: Albert Chen

## III. Problem and Solution Overview

Currently, chronic disease patients (such as diabetics) typically receive treatment update only when they visit their doctor (once every 3 to 6 months). They also have to self administer numerous measurements/treatments each day to maintain their health. Finally, the devices which patients use for their day-to-day health are expensive, hard to use and requires proprietary software to view download historical/raw data. Our solution is to enable real time context aware care for chronic disease patients via technologies such as inexpensive smart wearable devices and advanced data analytics (machine learning).

## IV. UI Sketches for 2 different interface designs

### Wearable technology interface

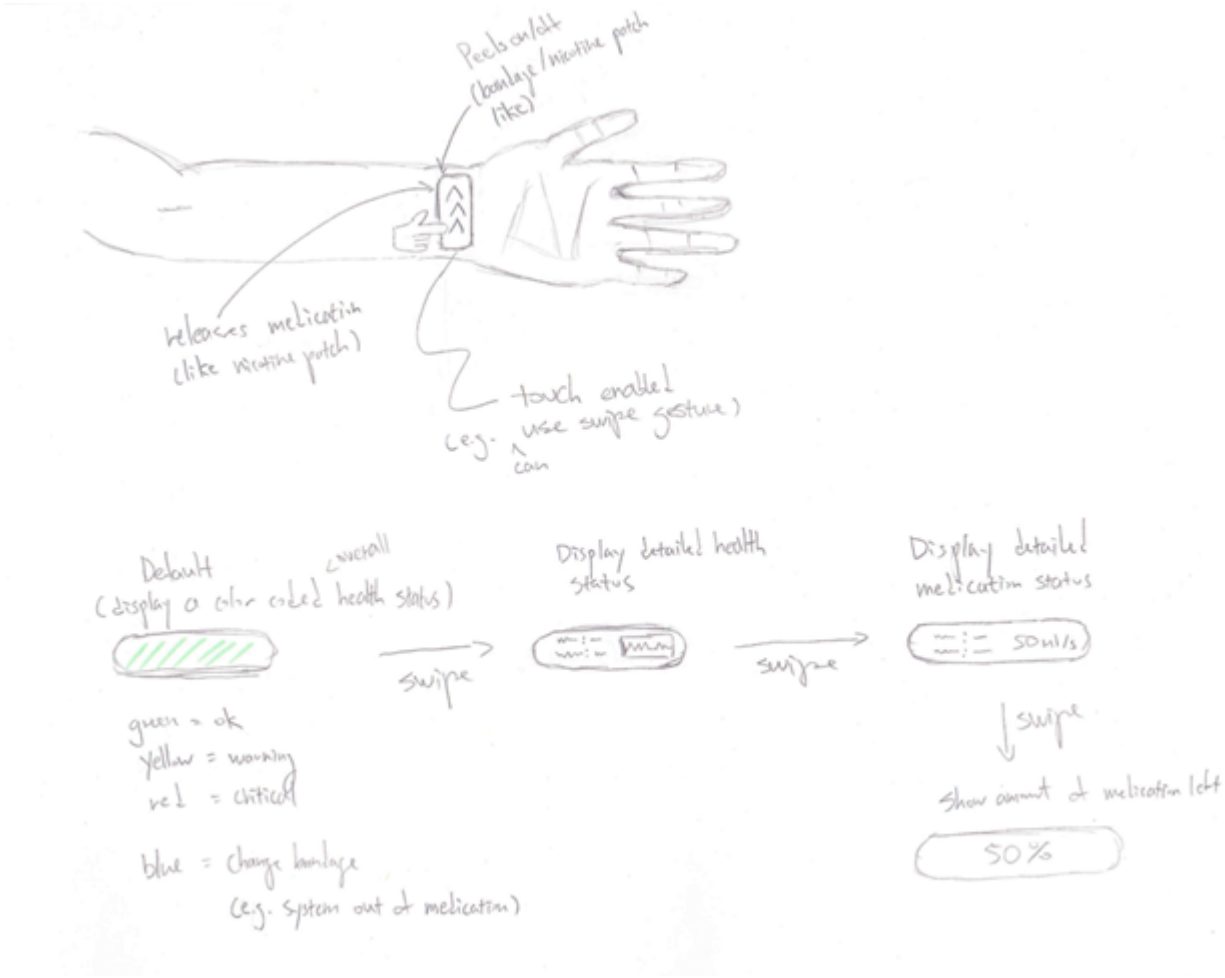


Figure 1 - Wearable technology overall usage

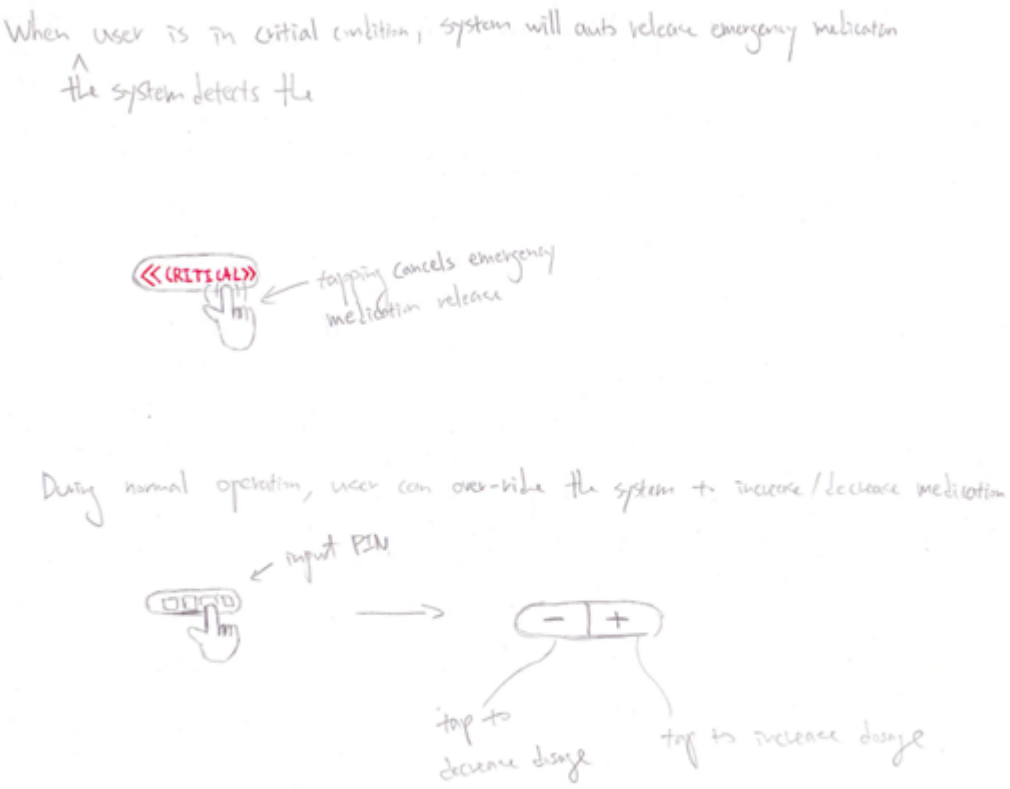


**Figure 2 - Wearable technology medication and emergency usage**

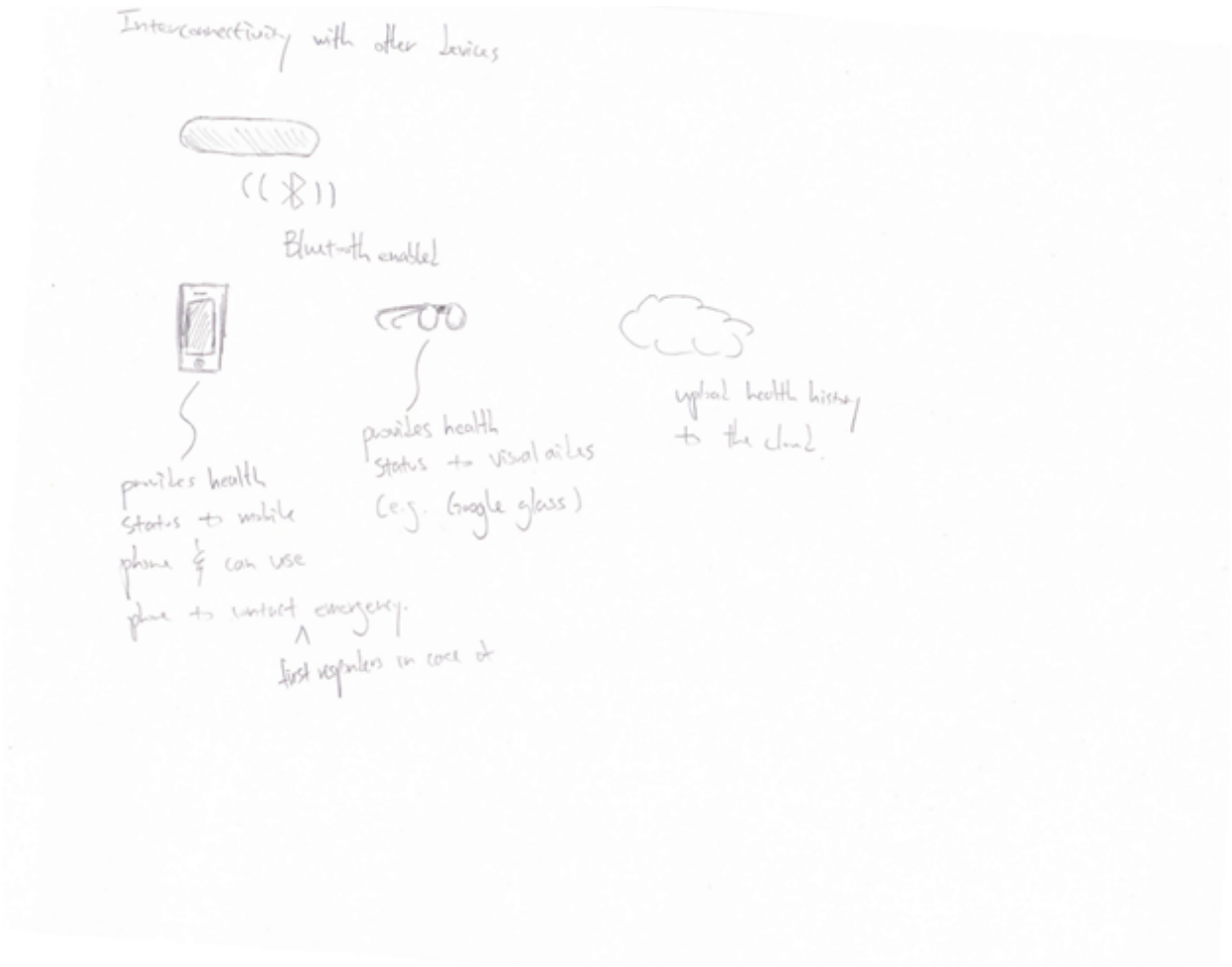


**Figure 3 - Wearable technology network connectivity**

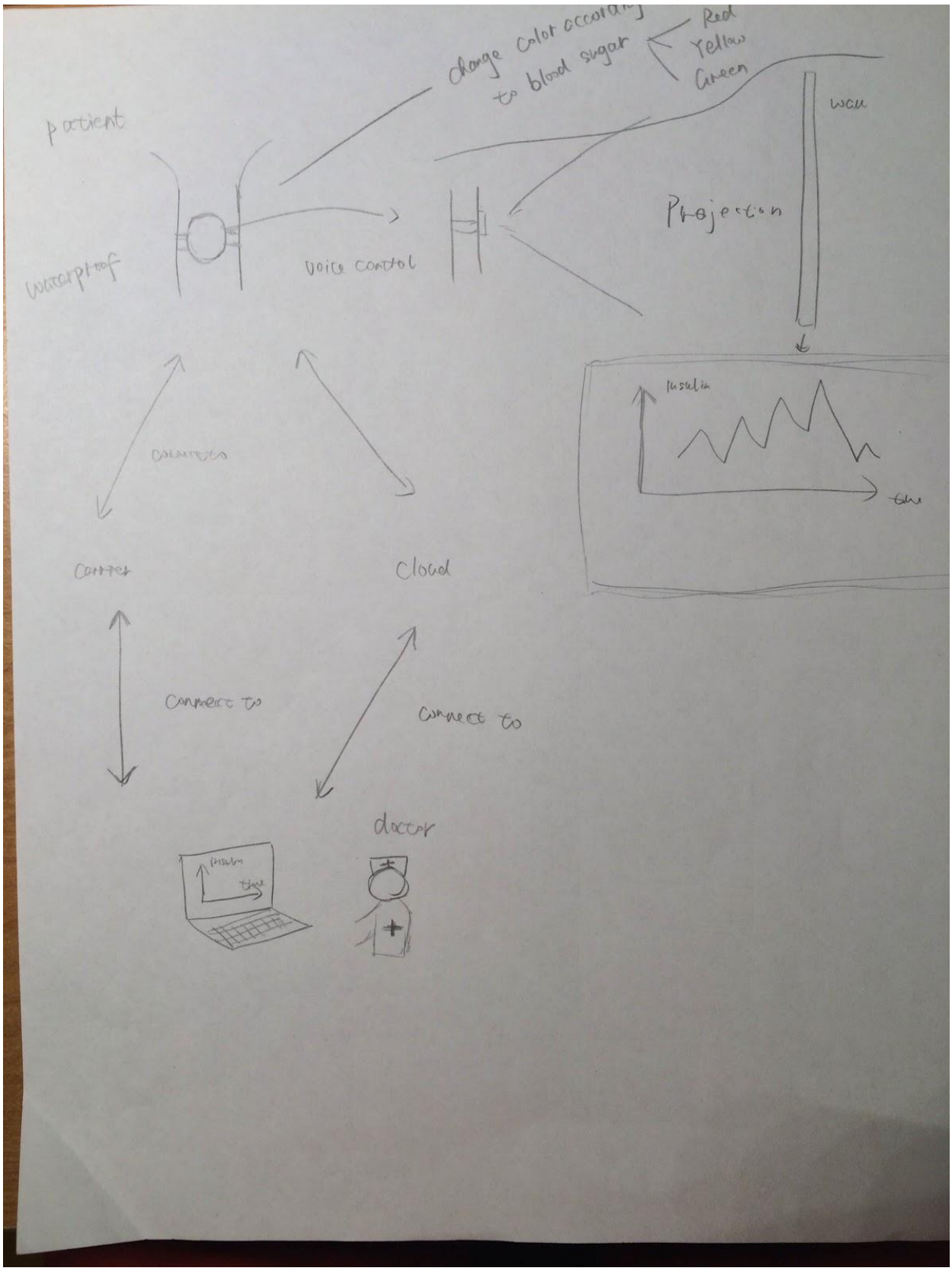


Figure 4 - Wearable technology data visualization

## Smartphone application interface

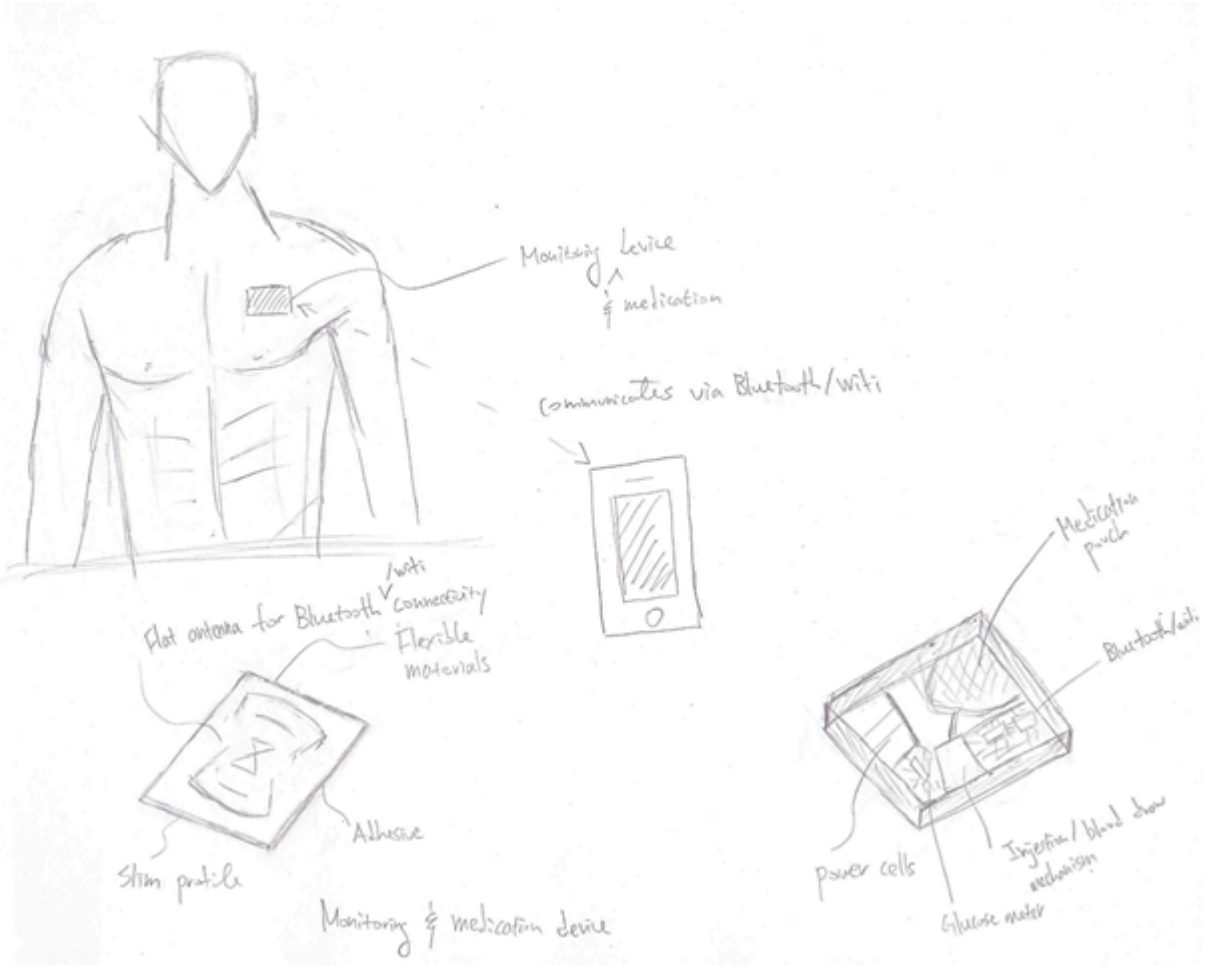


Figure 5 - Smartphone application wearable medical pod

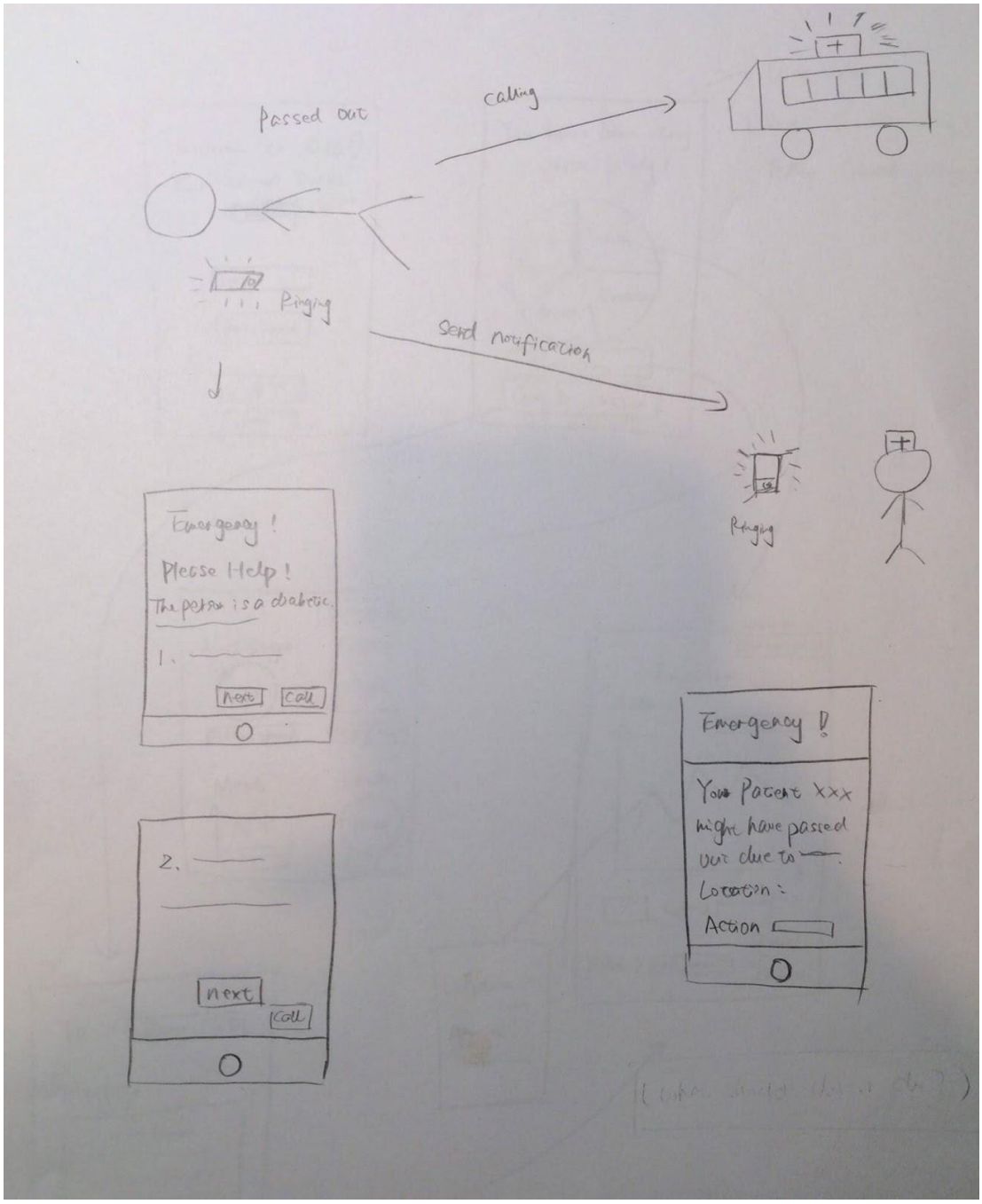


**Figure 6 - Smartphone application emergency care**

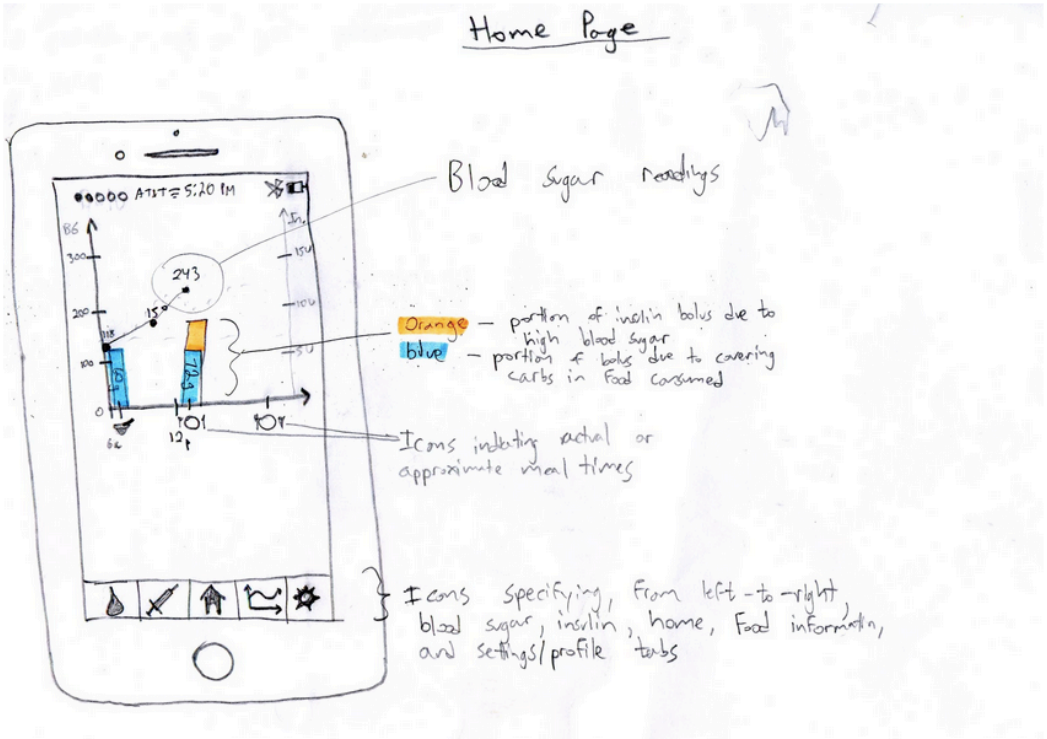


Figure 7 - Smartphone application homepage

## V. Selected Interface Design

We decided to move forward with the smartphone application interface, as it is more implementable with today's commodity technology. Also, we think today's users are more familiar with smartphone interfaces rather than a new interface based on wearable technology so we think our proposed product would make a greater impact by using this medium.

| Feature | Description |
| --- | --- |
| Food camera | Calculate the amount of carbohydrates in food by taking a photo of it. |
| Flexible patch | Thin and flexible with minimum physical inconvenience to the user. Contains insulin and continuous glucose monitor sensor. |
| Wifi/Bluetooth/Cellular connectivity | Enables automatic contact with first responders and physicians during emergencies. |
| Medication (insulin/glucagon) injection | Inject user with proper dosage of medication automatically, on demand. |
| Constant health monitor | Constantly monitors the health of the user with data provided to the user's physician. |
| Intuitive interface with data visualization | Provides easy to use touch interface to explore past health history and adjust present medication dosages. |

Functionality Table

## VI. UI Storyboards for 4 Scenarios

### 1. Counting carbs for meals

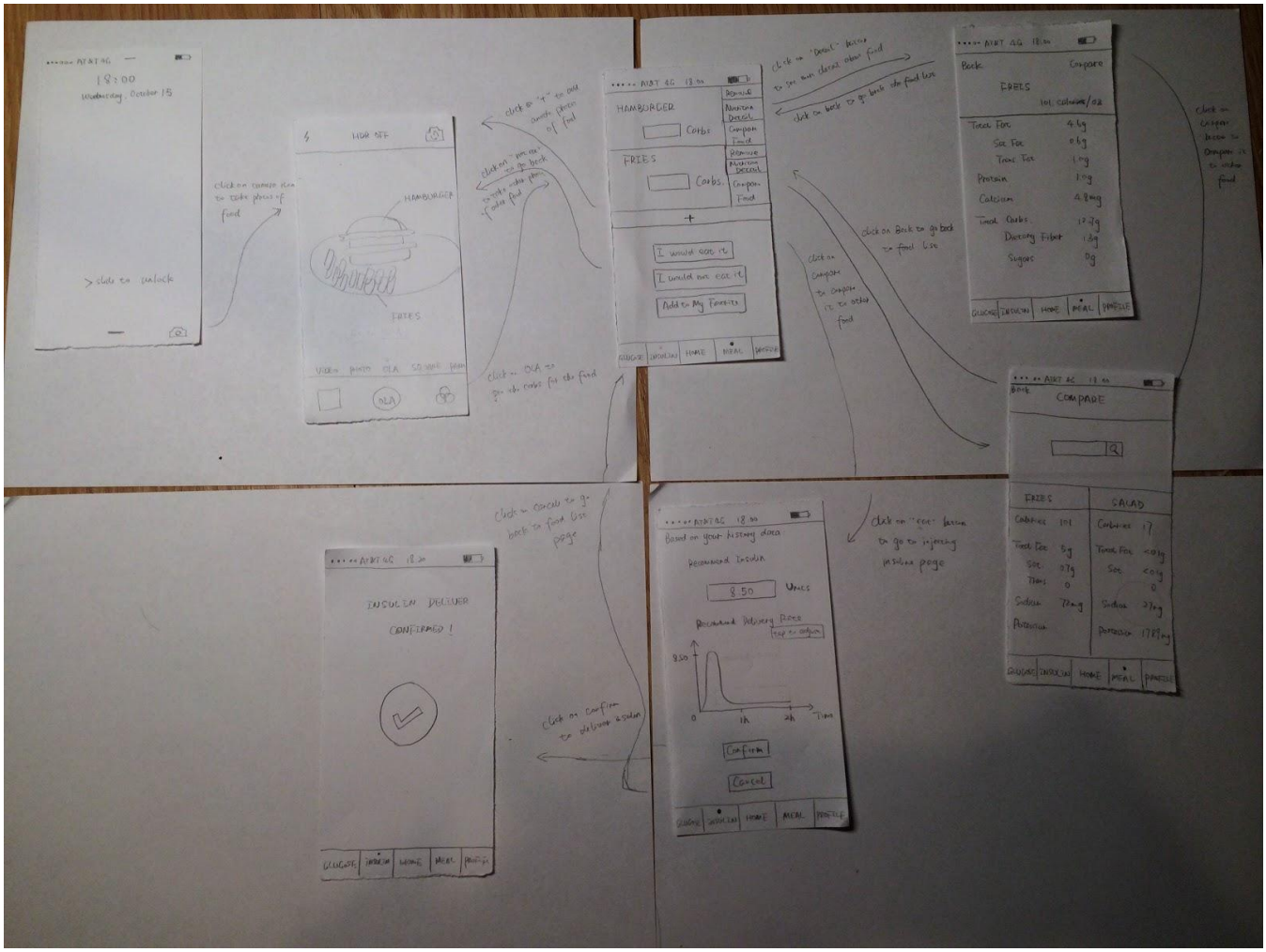


Figure 8 – Task 1: Counting carbs

## 2. Measuring glucose level

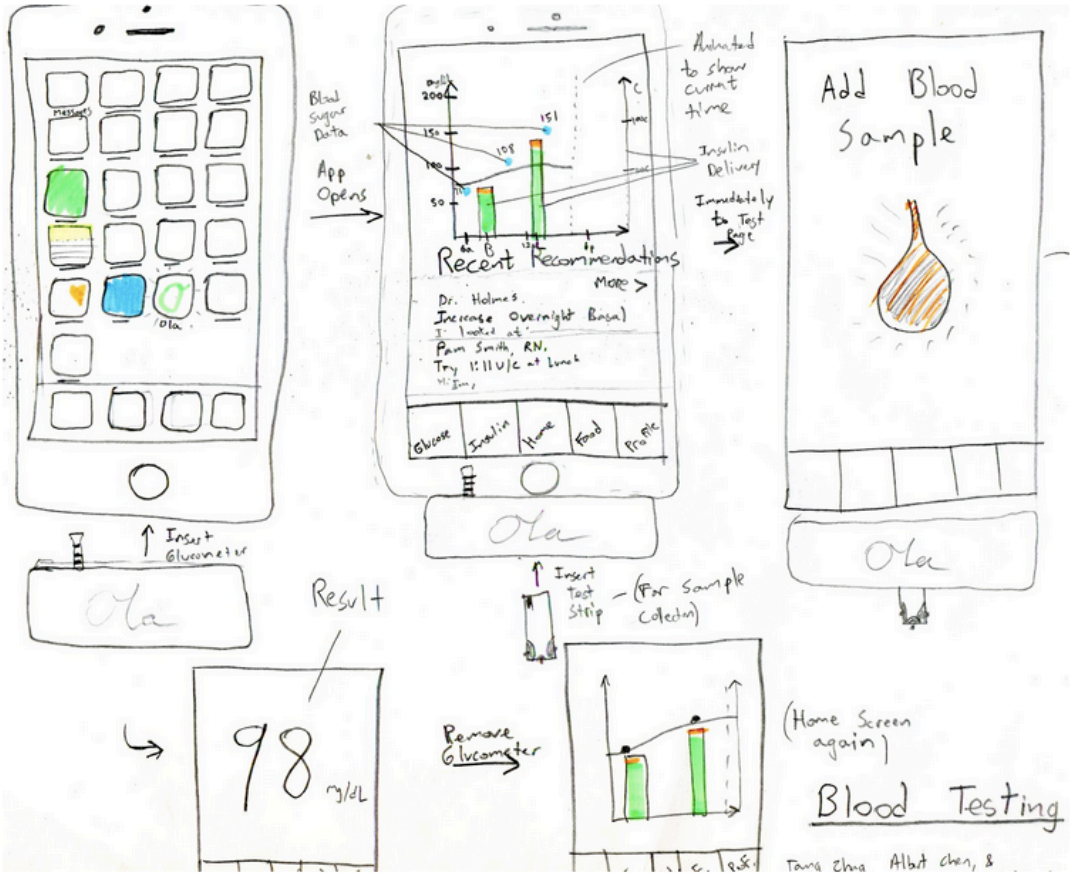


Figure 9 – Task 2: Measuring glucose level

## 3. Emergency care

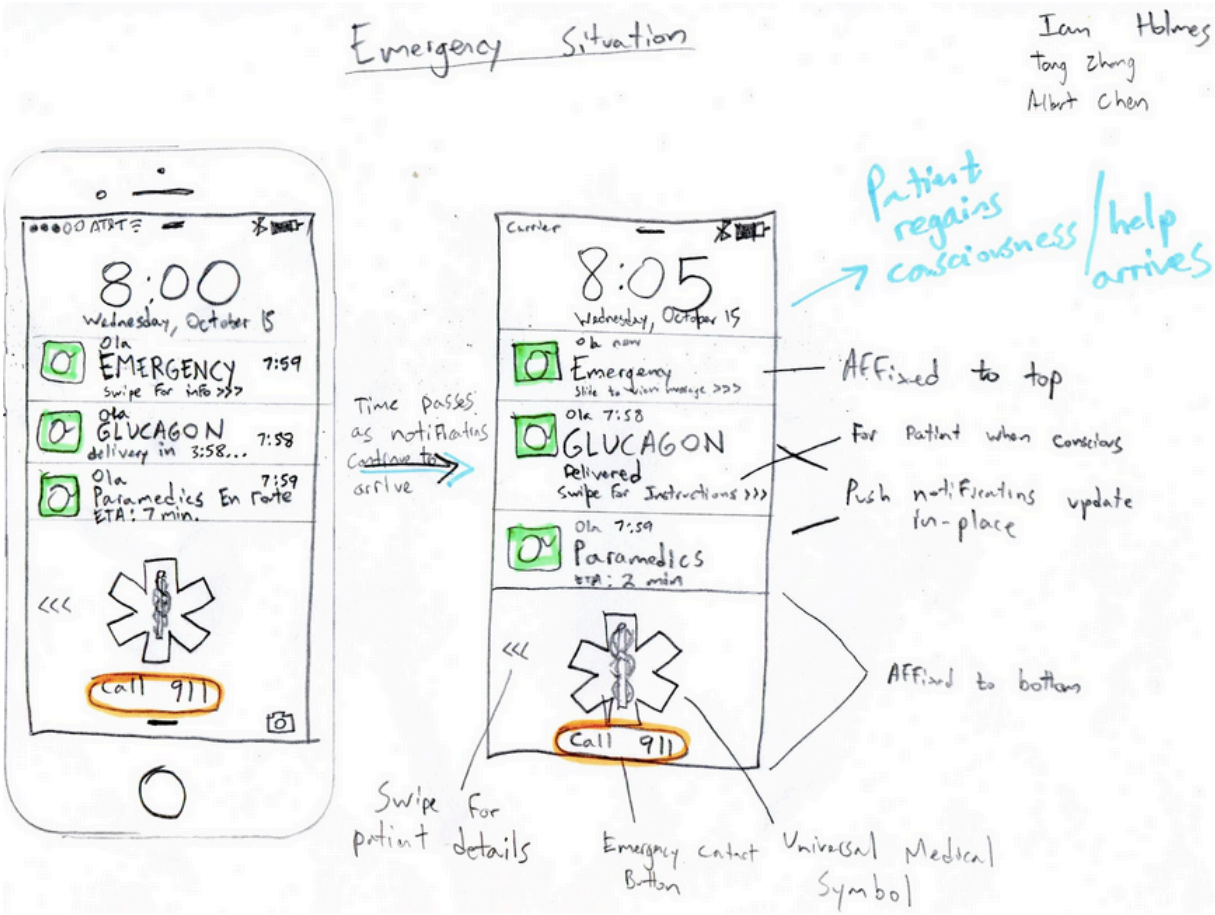


Figure 10 – Task 3: Emergency care

## 4. Changing dosages

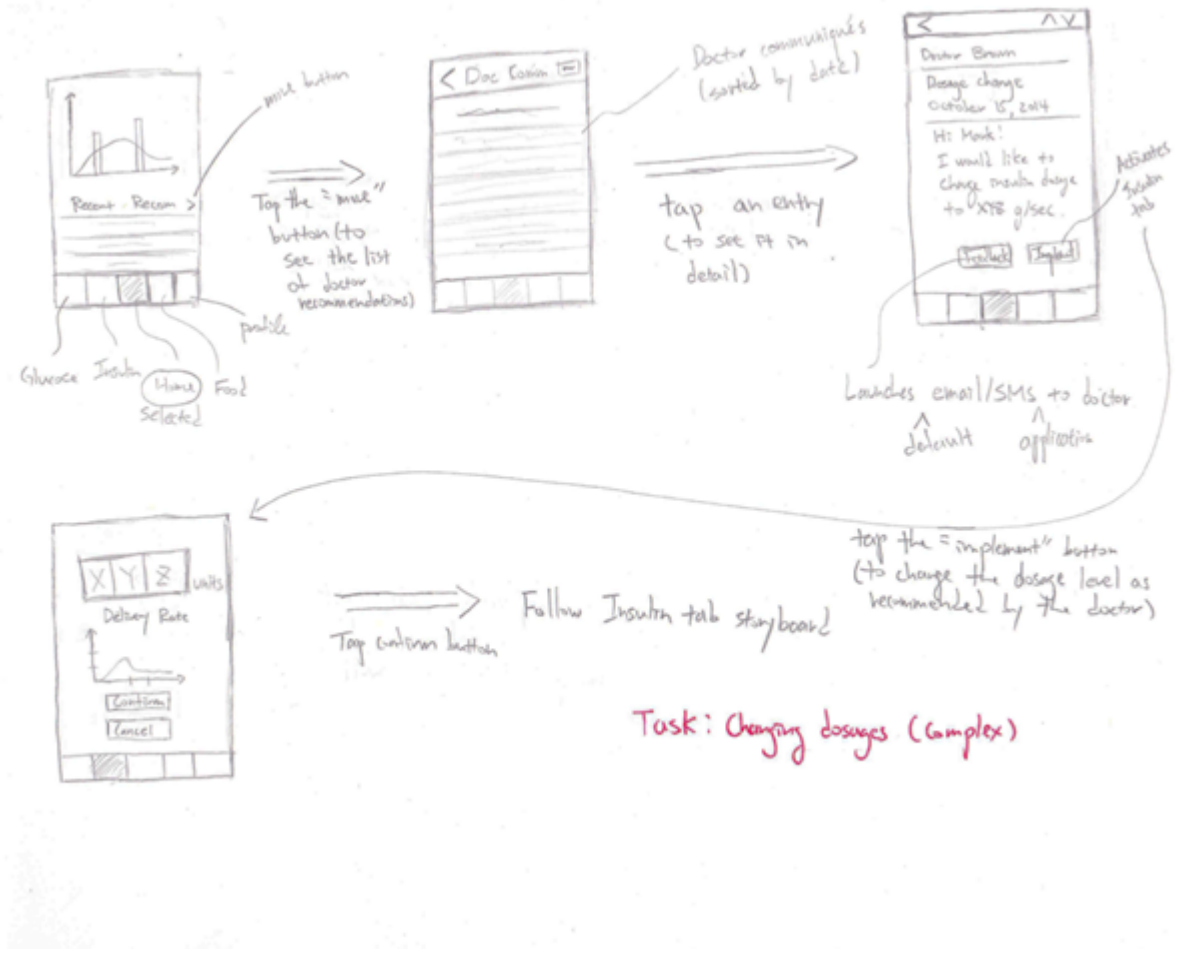


Figure 11 – Task 4: Changing Dosage

## VII. Video Planning Storyboards for 3 Scenarios for shooting video

1. Counting carbs for meals

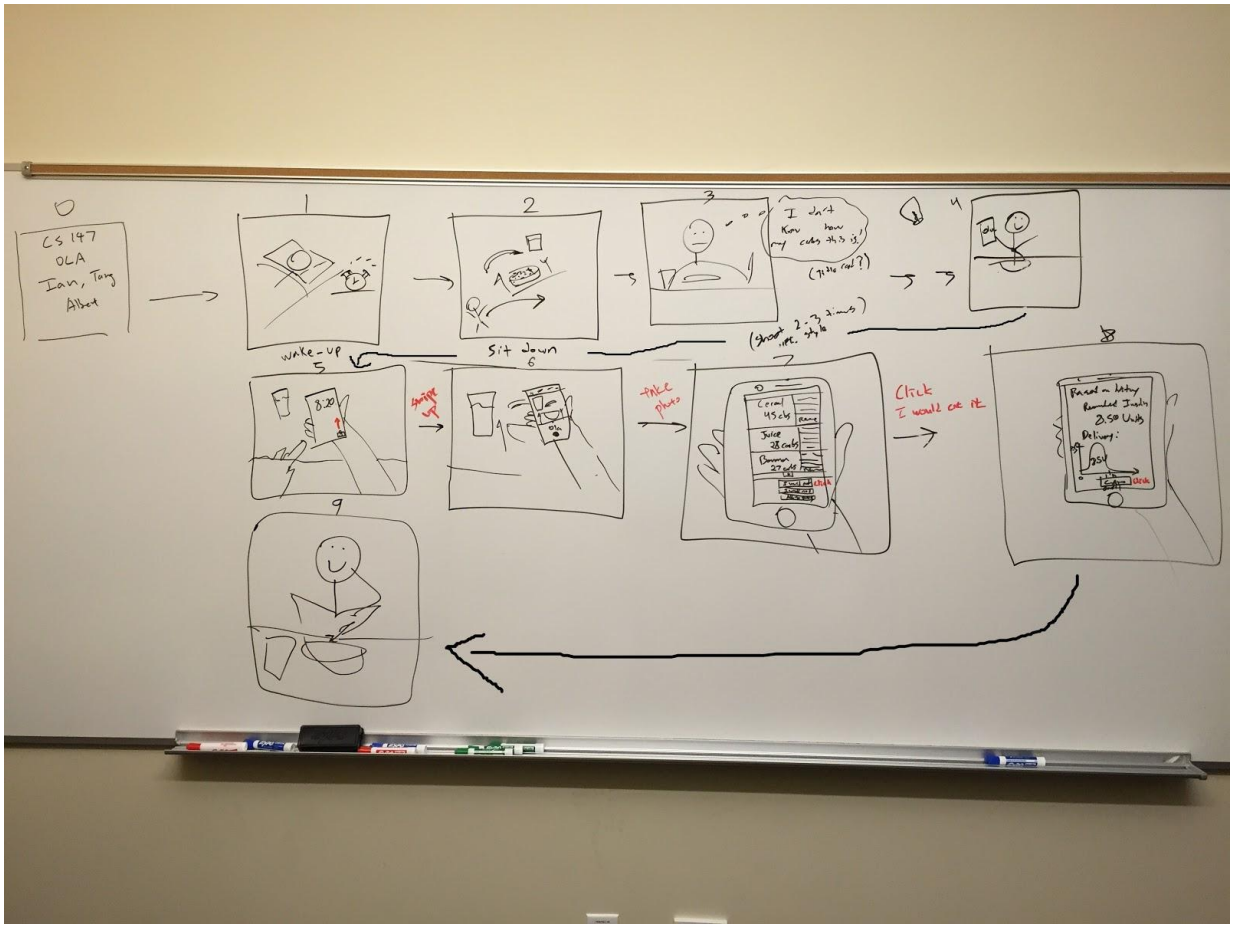


Figure 12 - Video storyboard for counting carbs for meals

2. Emergency care

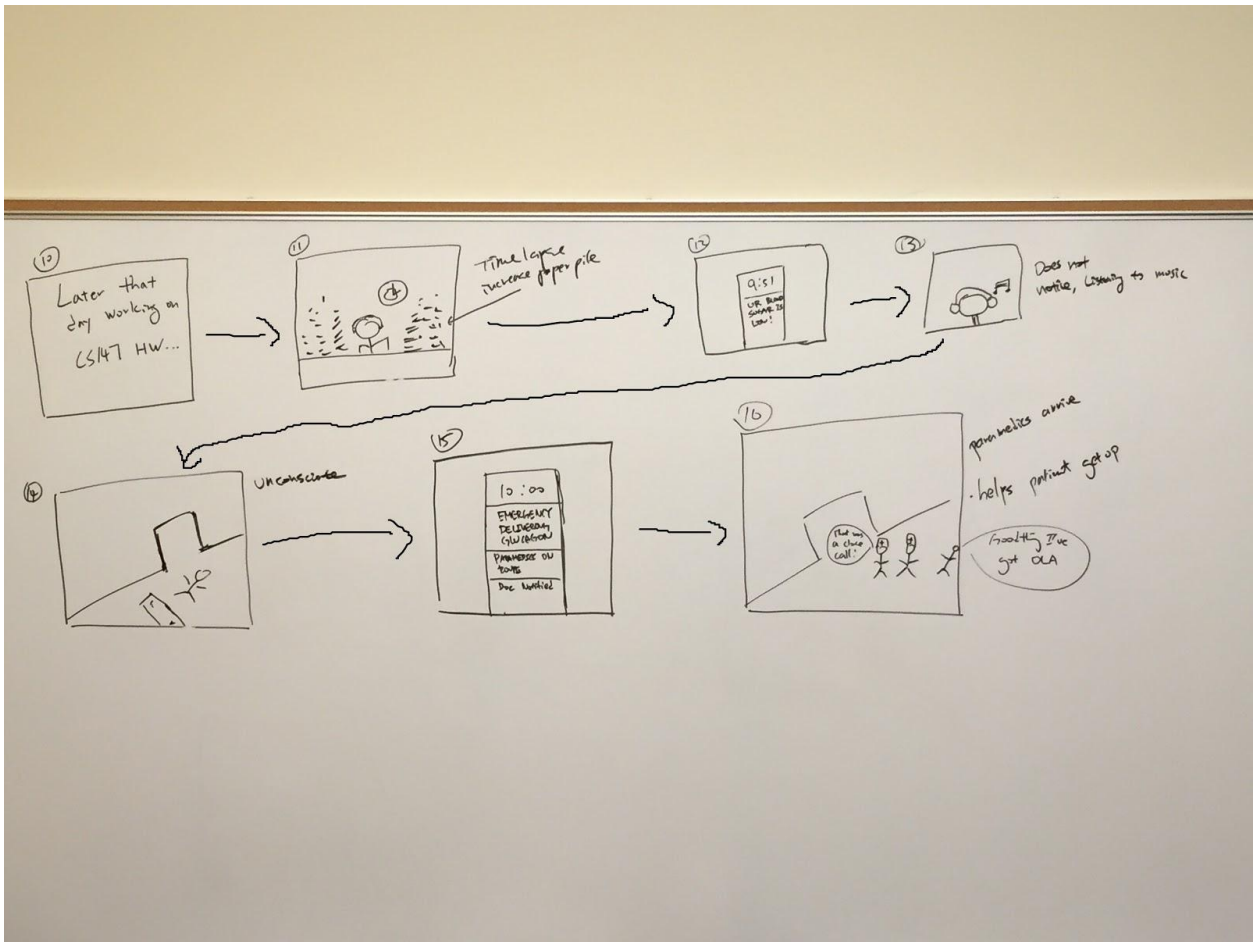


**Figure 13 - Video storyboard for emergency care**

3. Changing dosages

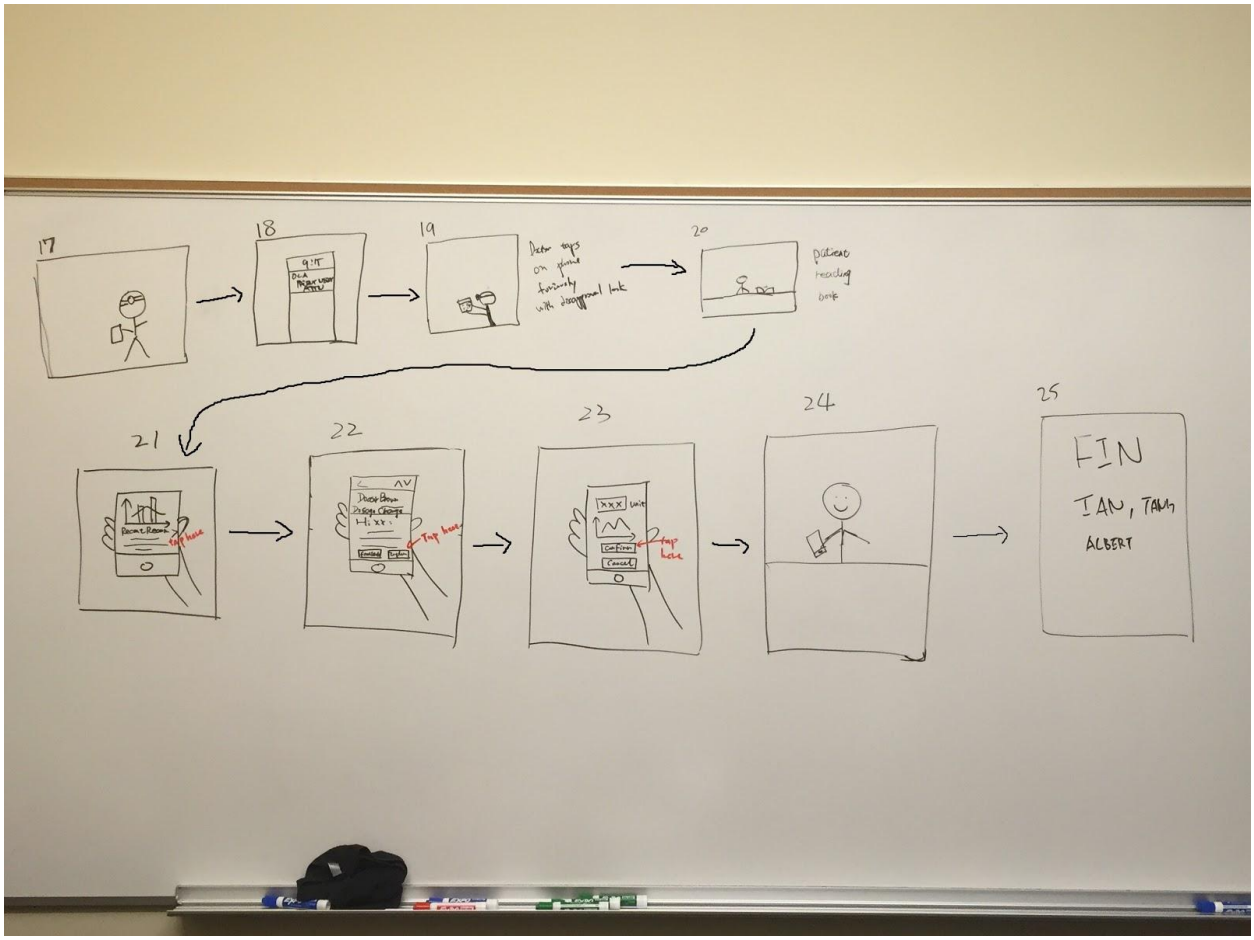


Figure 14 - Video storyboard for changing dosages

## VIII. Concept Video Description

- **What was difficult?**

It is a little difficult to find proper places to shoot the video. According to the storyboard, the video should take place in the morning when the customer gets up from bed, and also in his workplace when he is studying very hard on CS147. So the place should be somewhere indicating these scenarios, whereas it should not be too many people or noise around which might interrupt shooting process.

It was also difficult to include everything we wanted to put in the video in only 2.5 minutes. Namely, we wanted to establish a narrative and show each of the three tasks (with shots of the UI that were long enough to comprehend), but this was challenging with only ~40 seconds to devote to each task.

- **What worked well?**

As we have planned ahead by designing the video storyboard, we have a solid understanding of what story we want to tell and what kind of message we want to convey. We kept a reasonable pace while shooting the video, largely because we listened to each other and did a good job of making adjustments while we went. If there was any disagreement about the camera angle, dialogue, or action, we would just shoot it both ways (so as to have more footage), then make a decision once we had time to come back to it.

- **How long did it take for each phase of design prep, shooting, editing?**

It took about two hours to create the storyboard and about two and a half hours for the shooting. Editing took much longer: about 4 hours in total.