Phoenix

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An application that helps burn patients for improving their confidence and self-searching.

PROTOTYPE: https://xd.adobe.com/view/e9fc5fa7-a078-463f-a753-005a734067d4

OVERVIEW

Severe burn patients suffer both physical and psychological complications than other kinds of injuries. Physical difficulties can be recovery. However, it is hard to deal with psychological problems. To gain some insights from burn patients, we included four tasks in our research phase, which are semi-structured interviews, competitive analysis and business viability. For our semi-structured interview, we interviewed seven patients which helped us knowing that burn patients had problems with tracking their recovery progress and all of them bother with physical problems and psychologist was not helpful for them. For our competitive analysis, we analyzed two competitors, hospitals and foundations. We organized our research and came up with some insights. The application we design serves as a multi-functional platform that the patients can increase their confidence with the designed to-do list function, receive crucial latest information about burn, talk to people with experiences and knowledge about the burn, and request taxi services with the cooperation with the taxi company. Moreover, the patients are able to decide how they are going to use this application in the way they prefer.

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TIMELINE:
01/09/2017 ~ 08/01/2018

FACULTY ADVISOR:
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KEY ACTIVITIES:
Ideation,
Semi-Structured Interviews,
Competitive Analysis,
Concept Sketching,
Paper Prototyping,
User Testing

TOOLS USED:
Sketch,
Photoshop,
AdobeXD

DESIGN PROCESS

PROBLEM SPACE

The impetus, problems, and target use case

In the summer of 2015, over 500 people became severe burn patients within few seconds due to the incident of flammable power explosion happened in the "Color Play Asia" party held in a recreational water park in Taipei, Taiwan. This incident not only made the Taiwanese health-care system face a lot of challenges like never before, but it also raised the public awareness of how difficult it is for the severe burn patients to recover and how much pain, both physically and mentally, they will suffer during the long road of rehabilitation within the nation. Since then, more and more people became more aware of this issue and started to put more efforts to help the patients. It is, undoubtedly, a major belief that the severe burn patients do suffer more than other kinds of patients, and they need extra care from different perspectives along the road of recovery. Thus, this spurs our strong desire to take a deeper look at the issue which will be described as below, and, by better understanding the issue, we strive to find ways to help them feel being taken care along the long way of recovery.

The targeted use cases of our application are for the severe burn patients because they are likely to face the problems in different perspectives that normal people never think of. For them, they will surely suffer physically because it takes

a long time for the wounds to skin over. Moreover, even the healed wounds, they will not function and look exactly the same before the injury. On the other hand, the severe burn patients also suffer a lot from the mental part, for example, they will feel really sad about the never-going-back look they once had, and they may not be as confident as they were before. Their fear of going back to the hospital to receive the seemingly endless treatments and the nightmares the patients have during nights may also be neglected from the public. Plus, it is very likely that they become more sensitive to how people think of and react to them when they have to interact with others. Last but not the least, the relationships between the patients and their family, close friends, and important others will also undergo some degree of challenges. Furthermore, there are some more issues that worth our attention. Take the burn patients due to the flammable power explosion in Taiwan back in 2015 as example, it raised a lot of attention in the public so that a lot of people were trying to help those patients at that time; however, in what ways the public can reach to help the patients and how the patients can receive the warm-hearted help were not very clear, and this kind of situation can be better improved.

To sum up, we know that the severe burn patients will still, inevitably, have to undergo the long way of recovery. However, by cooperating with hospitals and related institutions, we hope to develop nice application and platform to provide well-designed functions to boost their confidence, to let them find ways to express their feelings to the right people whenever they are down, and to give them other considerate help during the time of recovery. We aim at making them feel that they are not alone along the road of recovery.

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RESEARCH

During our research phase, we conducted primary research with seven patients in order to understand their physical and psychological complications during and after burn rehabilitation and what needs could either be improved, or, encouraged further.

Semi-Structured Interviews

We conducted semi-structured interviews with seven burn patients. We asked our participants a number of questions regarding their personal burn rehabilitation, and those questions are divided into three timeline, which are timeline before, during and after burning. Main questions include:

- When talking about the relationship between you and the society, what are the differences before and after burn injuries?
- When talking about burn rehabilitation, what are the most difficulties for you?
- How do you overcome physical and psychological complications?

Through our semi-structured interviews, we gleaned **four important insights**:

- Our participants were generally having a hard time to track their recovery process. Additionally, they agreed that they could be encouraged by knowing how much time they need to spend for the rest of the recovery.
- Five of seven participants admit that the benefit of visiting an psychologist was not obvious. Instead, they got more concerned from parents and friends.
- Compared to physical complications, psychological complications were hard to conquer. Some participants will force themselves to achieve what they had done before the injury. Additionally, psychological difficulties were generally happened after rehabilitation.
- Some participants said that they may recall their burn injury when looking at something similar to fire.

Competitive Analysis

- **Hospital:** When it comes to burn situations, hospital serves as a place not only for physical and mental treatment, but also for information-spreading platform; however, patients and families will stop receiving information when the patients are out of the hospital.

- **Foundations especially for burn patients:** Foundations for the burn provide abundant resources for the patients in and out of the hospitals. However, some patients we interviewed reported that they actually do not enjoy the experiences and the services provided by the foundations because some people from the foundations may not respect the patients, and the situation of too many patients gathering together made them feel bad and so on.

Business Viability (Source of funding

- We cooperate with the hospitals to develop the application. By having complete proposal, we hope to create win-win situations, we receive funding and important information from the hospitals. On the other hand, we can also analyze the dataset we get back from the users of the application to help the hospitals for future care for the burn patients.

- We strive to raise money from the related foundations and the related government departments.

- One of our functions in the application is providing the taxi services like Uber and Lyft. When the burn patients use our application to request for the services, the driver will directly know that the requestor comes from the burn application. Thus, we will have strategic plan to negotiate with the car-service provider to raise funding; plus, the public image for the brand will also improve as well.

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DESIGN

After gathering some insights from seven interviewers, we organized and structured those insights with affinity diagram. We came up with some ideas to design our app. Functions include:

- **News Feed:** Based on interview, some participants can be strengthen and encouraged by other severe burn patients. To achieve this insight, we present a concept as similar to something like news feed from Facebook. News feed shows words and pictures from other patients in order to encourage each other.

- **To-Do List:** Our insight indicates that some participants will force themselves to do something for self-searching. A to-do list helps them to easily track and navigate what they have done for the past or what they want to do in the future. Additionally, this function can encourage them to do something what they are afraid of doing after the tragedy so that can help them think positively and live like the original them before the tragedy.

- **Online Consulting:** A professional psychologists may not be appropriate to some participants. However, some participants are favorable to talk with other burn patients. The function of online consulting is divided into two categories, online consulting from professional psychologists and burn patients. This method allows patients customization for different needs.

- **Organized Resource Platform**: Resources are not easily obtained by some patients. A section of showing what events are held nearby can be helpful for them.

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PROTOTYPING

Based on the four functions mentioned in the Design section, we design the first version of the app "Phoenix." Those main features were divided into five parts: Home, Set up

goals, Write a post, Online consulting, and Resource platform. However, before patients enter Home page, this app requests them to sign-up with their Medical Record Number. This allows only burn patients to access. Few advantages of this design are 1) Users will not be disturbed by none burn patients. 2) After signing in, Patients can directly access their own comprehensive Medical Records through this app 3) Patients can make an appointment directly on this app 4) Patients can consult attending physicians for further instructions or suggestions on physical and mental treatment. In order to make this happen, we have to collaborate with those hospitals and rehabilitation centers to obtain the data of all the burn patients.

- **Home**: News Feed/Timeline and Profile are included. News feed is designed to encourage patients through other patients' posts. Because of this feature, the function of saving post (bookmark) is designed consequently. Users can save others' posts, activities, and subsidization. A user can also follow other patients to continuously receive positive posts. On the other hand, from the interviews, many patients would like to conduct rehabilitation at home and want to know their progress without going to the hospital. We design the function of contacting the attending physician directly. This is under the personal medical record which is obtained from the hospital.
- **Set up goals:** This is same as to-do list. The reason of this design is mentioned in previous section. Besides to set up their own goals to challenge themselves and to gain the courage step by step of living like a normal person with the tracking record, we put the "share" function here to allow patients to encourage others, to be encouraged by others, and to learn how to set a goal from others.
- **Write a post:** We separate this function from the Timeline section because writing has been proven as an efficient way to help a patient clear his/her mind and heal wounds of body and mind. Therefore, we encourage patients to write more although writing takes more time than setting up goals does.
- **Online consulting:** Based on our interview, there is a high possibility for patients

to encounter unsuitable or unfit psychologists assigned by the hospital. We try to solve this problem with online consulting for customization. Since patients' physical and mental difficulties are both complicated and not easy to be solved, oral discussion which is more efficient is a better choice than text one. As a result, the function of calling is designed. Also, most medical professionals are too busy to typing text, phone call is better. By the way, some people may question why patients and doctors not contact to each other through the phone number directly but through this app. We would not deny the same function of both ways but this is on the two premise that 1) the doctor is willing to provide personal phone number and 2) the patient already know the right consultant for him/her. Our app, however, is like a filter to select those medical professionals who are willing to help other patients. This app also provide an opportunity for patients to contact some unknown but possibly fit professionals.

- **Resource platform:** Because some interview participants mentioned they knew the information of some subsidization from other patients after the application deadline. This revealed that the lack of a comprehensive platform for all the resources. Phoenix includes it and divides them into activities, subsidization, and map (car-service: take a ride). Car-service is design for some patients who need it to commute between home and rehabilitation center.

Second Edition

After the user test, we made few revisions. Here, three main changes were introduced below.

- **Embed the title into context:** Without a title of the function of "write a post on timeline," users confused what this function is for. However, instead of adding a page title on the top of the screen, we therefore put the title in the typing context.
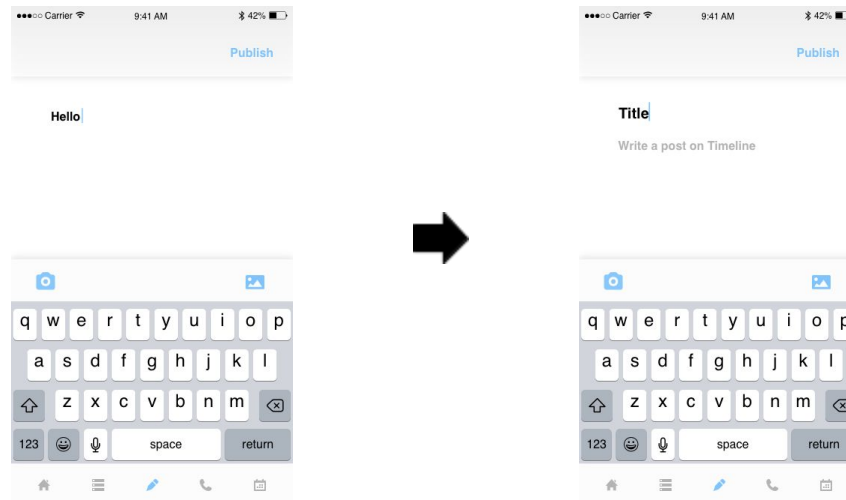
- **Add text message:** Although calling is much more efficient to solve patients' difficulties, users mentioned a text message is a good start for greetings especially for people you don't know. Besides, text is useful to make an appointment for a call. We then include the function of text message.
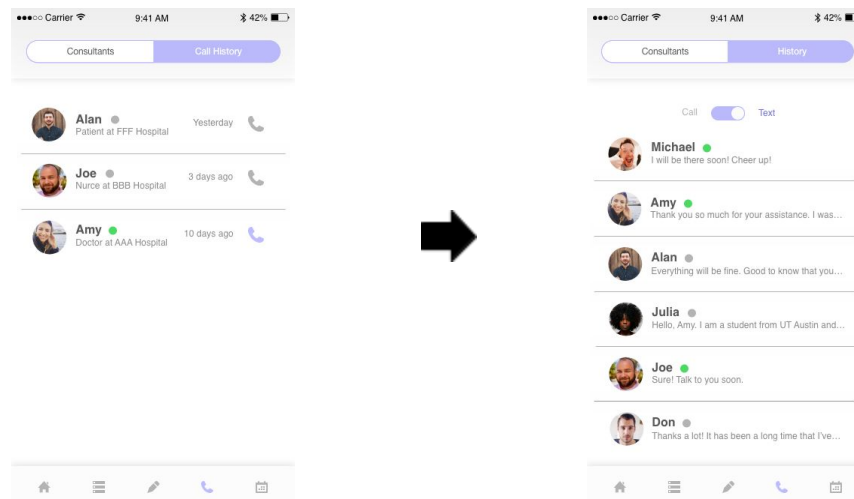
- **Add hospitals for rehabilitation nearby on the map:** Users suggested that we should make good use of the map for car-service. For example, we can put more useful information on the map like the rehabilitation centers.
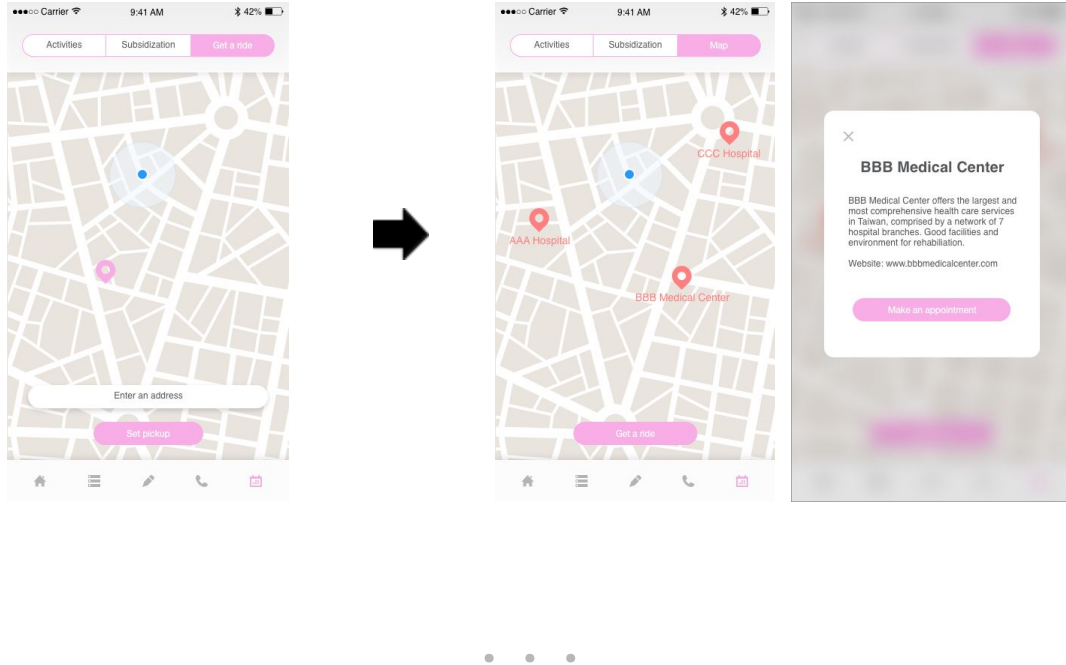
CONCLUSION

To conclude, through the conducted research and the critical insights we got back from the experienced severe burn patients, we designed the application with multiple functions to meet their needs and accompany them on the road of recovery. As mentioned above, we know that the patients will still have to suffer from the physical discomfort and mental issue, but we are here offering help. We strive to create a better environment for the recovery of the severe burn patients. Future steps can be improved by having more connections with the related institutions and promoting the application to make more users aware of our application so that we are able to have a larger user base. We hope that every single burn patient can reborn as "Phoenix."