Nutri-GOOD
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1. PROBLEM DOMAIN

Inspired by the studio's theme on wellness and using technology to improve health, Nutri-Good wants to address the issue of the inaccessibility of nutritional information in the context of the elderly. In other words, we want to make nutritional information and food items more accessible to elderly.

2. INITIAL POV

DAVE

When we met Dave, we were amazed to realize that Dave has used all sorts of devices to track fitness, and claims that it is hard to collect and access this information. It would be game changing to give Dave the information he wants simply and easily.

3. ADDITIONAL NEEDFINDING RESULTS

A. Pat

We found that she is taking nutritional classes to take of her family. But, she is having trouble organizing her time between going to class and taking care of her family.

B. Maria

We found that she loves to cook because she finds it relaxing and comforting. However, she does not feel the same way when taking medication. She finds that after taking a pill or tablet, she finds herself feeling discomfort and would usually cook a meal to feel better.

D. Janet and Neal

They realize that technology is a huge source of information. But, they are not as knowledgeable of the technology and how to use as their children and grandchildren.

4. REVISED POVs

A. **We talked to** Pat. **We were amazed to realize** that she is very concerned with the nutritional intake of her family, so much so that she takes a nutritional class to learn about proper eating habits. **It would be game changing** if we designed a system that could give Pat this information without having to attend a class.
   HMW
   - change nutritional values into tangible meals
   - bring the classes to the elderly
   - supplement their current methods of obtaining nutritional information
   - reduce the time they spend searching for the right nutritional information
   - get the loved ones who they care for to acquire this info for themselves

B. **We talked to** Maria: **We were amazed to realize** that she finds cooking and eating meals that she cooked as comforting. However, her medication was not providing the same

level of comfort and ease as her cooking. **It will be game changing** if we changed the process of giving and taking medication so that it could be a more comforting, enjoyable, and stress-free experience.

> *HMW*
> - use cooking to continue fueling the source of comfort.
> - bring in other sources of comfort into their lives.
> - bring the supplements of medication into the food we eat.
> - eliminate the need for medication
> - encourage trust between the doctor and herself

C. **We met** Janet and Neal. **We were amazed to realize** that her grandkids use the apps on their smartphones considerably more than she did. **It would be game changing** to reach the elderly more reliably through their grandkids.

> *HMW*
> - get the kids to download the apps that help the elderly
> - encourage the kids to help their grandparents get familiar with technology
> - get the grandkids to care about their grandparents' nutritional health & talk to them about it
> - get the apps the elderly need into their electronics
> - pass the information through the medium that the elderly use

6. BEST 3 HMW
  1. HMW:
      a. How might we encourage trust between the doctor and herself?
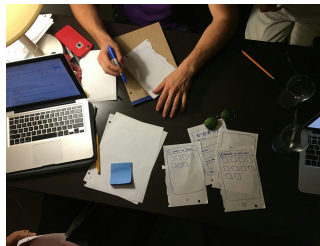   b. Origin: *Maria's* point of view.
  2. HMW:
      a. How might we get the grandkids to care about their grandparents' nutritional health and incentivise the kids to talk to their grandparents about nutrition?
      b. Origin: *Janet and Neal's* point of view

   3. HMW:
      a. How might we change nutritional values into tangible meals?
   b. Origin: *Pat's* point of view.
 7. PROTOTYPES

   1) First Prototype

a) **Assumptions**
   i)   Lots of old people have grandchildren, as we wanted to target elderly that had grandchildren.
   ii) Gamification is an emerging area of research on incentives for maintenance, which have proven somewhat successful.
   iii) Children use more technology than their grandparents.
   .

b) **Making the Prototype**
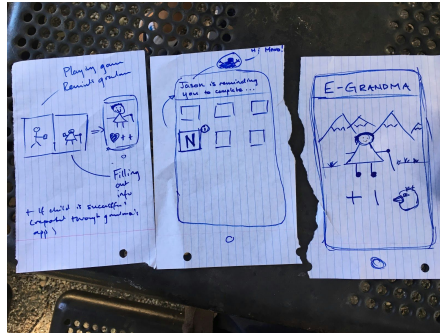
During the brainstorming phase of the prototype, we discussed ways of how the user will interact with each scene of the app and what information to show and what information to hide. In this particular app, we tried to think about how the kid would communicate with the grandma.

c) **Testing**

We talked to Helen and Jessica at the Cactus Gardens. We let them imagine that they were persuaded by their grandchild to download the game. Then , we gave them the screenshots of the app. Then, we told them to view the app through the eyes of both a child and grandparent because both types of users would be using the app. Finally, after the elderly experienced using the app, we began to discuss how they liked navigating the different screens of the IPhone and what concerns and opinions that they had regarding the format and assumptions made on the app.

d) **Feedback**

The elderly, although they did not have grandchildren, reported that they supported the idea of making grandkids more involved in the health and diet of the grandparents.The reminders were very valuable for them, especially as they view dieting as seasonal activities. However, when using the app, they felt that the experience of living a healthy diet is like an interactive journey rather than an end goal or a seasonal activity. Both Mary and Norm were a little uncomfortable with having a little child telling them about nutritional needs.

e) Evaluation of Assumptions

I. Gamification could potentially be bad if left unchecked.
II. Some of the elderly women want to experience learning and doing nutrition rather than reaching a final end goal.
III. Mary and Norm did like the idea of having grandchild interact with their grandparents more, but not necessarily on nutritional topics.

2) 2nd Prototype

a) Assumptions

i) Doctors contain all the information
ii) People would be willing to share information about their meals with strangers
iii) Taking a picture is something common to all groups of people, regardless of age (at least above the age of 5)
iv) Taking a picture is a lot easier than manually recording information down in a journal.

b) Making the prototype
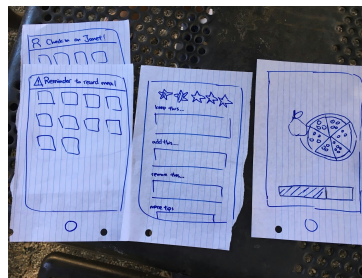
As we were making the prototype, we focused on the interaction between the nutritionist expert and the user. We wanted to make the information that is being provided by the specialist to be concise and organized. Therefore, we decided to add a frame where the doctor rates the food that a particular person eats and provides feedback. Another thing we wanted this app to do is to make the process of dieting a collaborative, supportive, and interactive experience. We drew one frame where you can actually match with some and send daily reminders to each other. We also decided for one frame to enable the feature of taking a photo and sending that photo to the doctor.

c) **Testing**
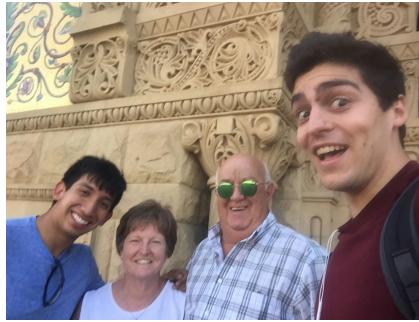
For Tiffany, David, Mario, and Osario, we approached them, introduce ourselves, and explained our mission to improve the communication channels between the patient and doctor. We had them sit at an outdoor table and imagine they are about to start a meal. They pulled out their phones and we placed sample screen shots on their phone. After we had gone through all the scenes, we decided to open the conversation to feedback, opinions, and surprises regarding the app.

d) **Feedback**

We learned that the doctor may not be the best for communicating nutritional advice. In addition, we learned that taking a picture of a meal may not be a habit of all users. Also, this app may work for seasonal, so we need to figure out what to do during this downtime. Osario was fairly inventing of the idea, but he was somewhat worry about constantly recording information.

e) **Evaluation of Our Assumptions**

    I. To a degree the elderly were willing to take pictures of food

    II. We may need to evaluate the expertise of the person giving feedback to the user. In addition, Tiffany wanted both partners to learn more about nutrition.

3) **3rd Prototype**

  a. **Assumptions**

    i. People are okay with having meals prescribed to them, but they also

    ii. People eat 3 or more meals a day.

    iii. People are willing to input personal info (height, weight) into the app

    iv. People are willing to share their nutritional needs with the machine

    v. Each person eats different foods per meal

  b. **Making the prototype**
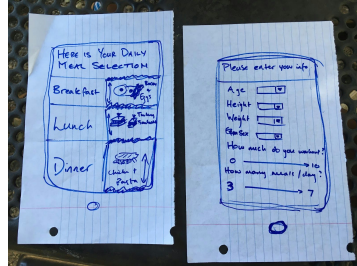
      We wanted some information from the user that will help create meal suggestions based on their personal health. Therefore, the first frame of the potential app requests the users to input personal health information, such as weight, age, dietary restrictions. Then we wanted to present a list healthy, meal options that we could present to the user. These options are organized by breakfast, lunch, and dinner. We wanted the freedom of choosing meals but have these options be presentable and not hinder the user from deciding his or her meal.

c. **Testing**

      Andrew and Manny spoke to Jim, a 60-70 year old man. He doesn't watch his diet much. He liked that this idea would allow him to know exactly what was going into his body without him needing to log everything. Jim also mentioned that he didn't necessarily need a different meal everyday. Jim eats at home 90% of the time, and he found that this idea would allow him to not change up this lifestyle. At the same time, he wouldn't have to go shopping for food as often, and his nutritional intake would be directly quantified based on the ingredients that arrive in the box.

d. **Feedback**

Osario enjoyed that both his wife and him could decide on what healthy food to make for the day. He enjoyed that the description of the meals would make easier or at least more structured when picking up food. David and Jim recommended that the app should include a customizable option that could label a favorite meal They do not mind eat the same meal for breakfast, lunch, and dinner.

e. **Evaluating our Assumptions**
    i.   They were fine with prescription of meals given some choice
    ii.   There was never a concern over inputting in basic health information
    iii.   People enjoyed that there would be options within the meals

8. BEST PROTOTYPE.

The majority of the people that we interviewed enjoyed the 3rd prototype. They felt that this prototype gave them access to important information in an organized and pleasant format. In addition, they loved the feature of choosing different options. They felt that this gave them a lot of independence. Finally, they all enjoyed cooking and loved that this feature did not take away that action from them.