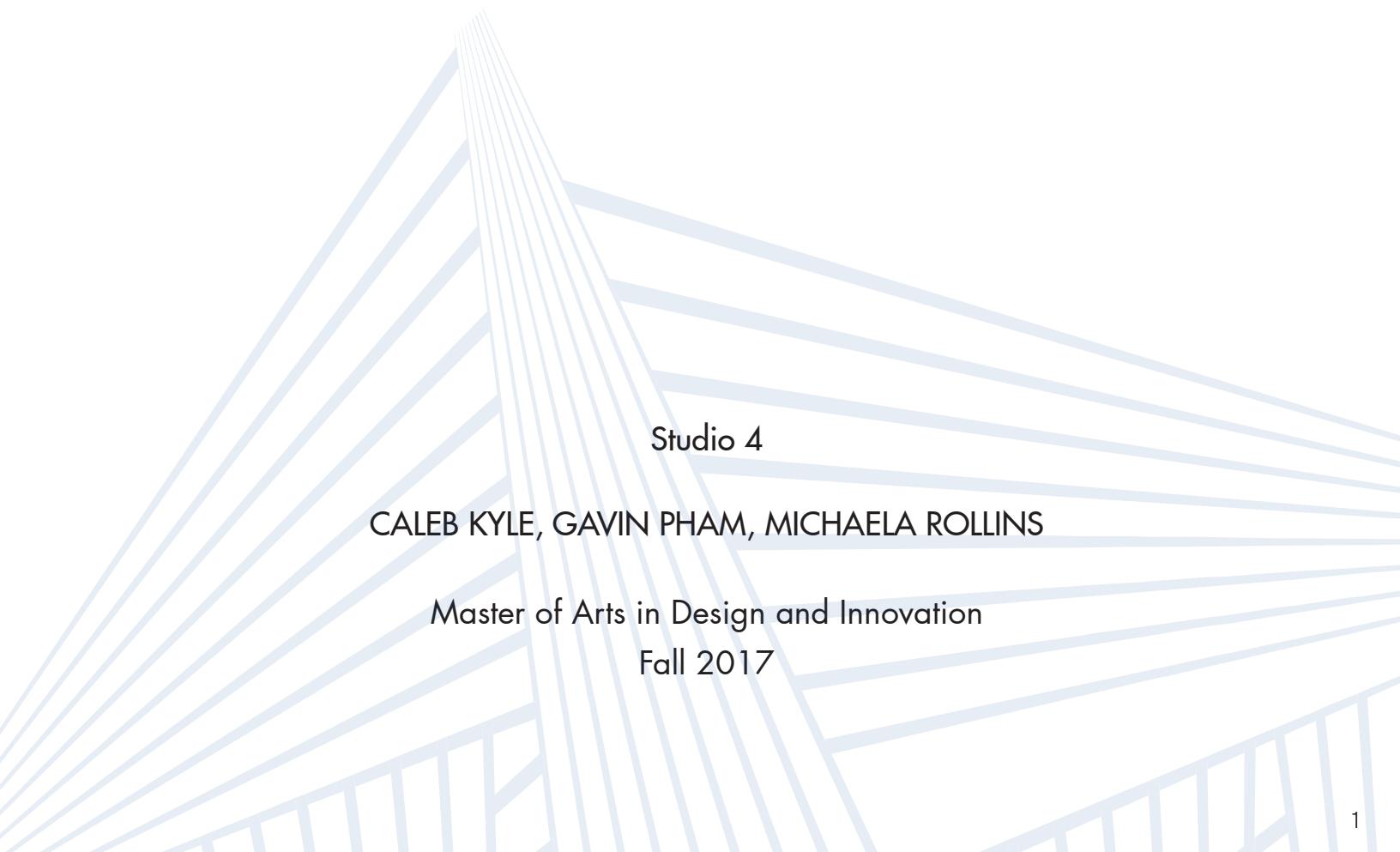




THE COST OF LIVING

DESIGNING A BETTER FUTURE THROUGH PRESCRIPTION AFFORDABILITY



Studio 4

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Master of Arts in Design and Innovation

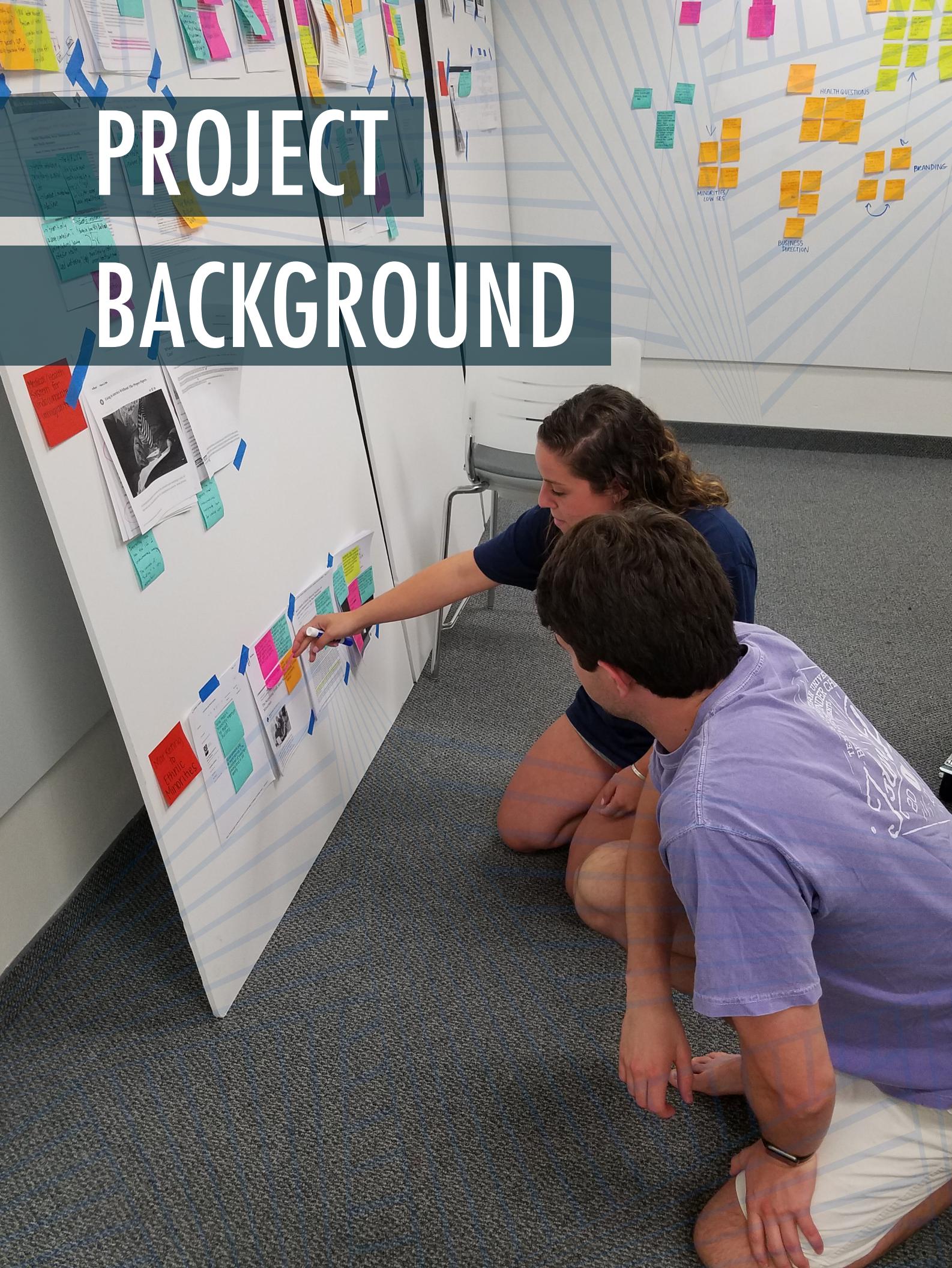
Fall 2017



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PROJECT BACKGROUND



THE PARTNER

This semester, we partnered with RefillWise, a prescription discount card company based in Plano, TX. RefillWise recognises that there are millions of people in the United States that cannot afford to pay for their prescription medications. They created their prescription discount card to help anyone in need; whether the people in need are unemployed, uninsured, or underinsured. The RefillWise card allows members to save money on their prescriptions at any major pharmacy nationwide, and earn cash-back after every 10 prescriptions purchased using their card. They promise to keep discovering and implementing new ways to help the uninsured and underinsured afford their prescription medication. RefillWise operates under the motto: "You shouldn't have to choose between your health and your finances"

RESEARCH CHALLENGE

How might we improve the patient journey with prescription medication? The patient journey takes place at home, in the car, in the waiting room, in the doctor's office, and all the way to the pharmacy. There are so many steps in place, it is hard for anyone to see where pain points truly lie. RefillWise, in conjunction with the MADI program, came up with one overarching question that looks at the issue from a ten-thousand foot view. By looking at the entire patient experience, we were able to organically find and address the most important facets of the patient journey.

THE PROBLEM

There are currently 28 million individuals who lack insurance coverage in America. Among them are undocumented immigrants, low-income people, and those who simply choose to live without insurance. An additional 31 million Americans are underinsured, on plans where out of pocket costs such as deductibles are exorbitantly high. Another 3.1 million seniors fall in the Medicare Part D coverage gap. Patients from these groups often struggle to afford basic medical services and prescription medication, meaning the only care they receive is in the emergency room. It is no wonder, as the cost of prescription drugs is prohibitively high and difficult to predict, that many Americans forego needed medication on a daily basis.

THE OUTCOME

IT'S OK TO TALK ABOUT COST *Empowering Patients to Talk to their doctors*

Our team developed a suite of print materials that help patients to engage with their doctors and make the most of their medical visits. In our research, we had found that patients were not thinking about the cost of the medication until they set foot in a pharmacy, after which there was little they could do to decrease the price. By talking to their doctor about generics and alternative treatments, patients could proactively address the cost of their medication while also learning about how they can achieve better health. Pamphlets, business cards, and posters with conversation guides were used to engage with the patient without being intrusive. Facts and other information on generics gave patients new insight on how they can save money. "It's OK to talk about cost" gives patients a voice, helping them to approach conversations ranging from information about treatment to affordability of medication.

WHAT'S MY COST? *An accessible pricing service for prescription users*

In some cases, doctors may not be knowledgeable of the most affordable medication for the patient. We found that many patients would benefit from receiving additional pricing information, specifically at a time where they can discuss options with their doctor. Our team has created a texting service that allows patients to quickly text a phone number with the name of a prescription and, in turn, receive pricing information about the specific medication. Information on the print materials that we created helps patients find and utilize this tool during downtime in the doctor's office. Knowing the prices can help patients to make a more informed decision on the medication they need to take, as well as give them an opportunity to speak with their doctor about alternatives before the appointment is over. Patients will be given the pricing information that they need in the right place, at the right time.



QUESTIONS TO ASK YOUR DOCTOR

- 1 How can I save money on the medication that you are prescribing?
- 2 Did you prescribe me a generic? If you didn't, is there one that is available?
- 3 Can you tell me what my prescription is going to cost me? I need to know the cost before I leave, so I'll know if it is affordable.
- 4 If the price is too high, are there alternative medications that could work for me?

HOW TO FIND YOUR PRICE

Text **214-214-4367** the name of a drug, dosage, and quantity for pricing information of the prescription at different pharmacies.

Lipitor, 40 mg, 30 tablets

Lipitor:
Walmart \$411, CVS \$417
Generic:
Walmart \$4, CVS \$138

Ask yourself: Can I afford this? If you are worried about the price, **ask your doctor about alternatives.**

ITS OK

TO TALK ABOUT COST

Empowering patients to talk to their doctors

In our research, we heard a variety of stories about how each person navigated their own specific prescription journey. One common thread between stories was that each patient needed to interact with their doctor to obtain a prescription. The doctor's office is a mandatory pathway to healthcare, and within that space we saw a lot of room for improvement. The relationship between patients and doctors is very one sided: doctors tell their patients what they need to do in order to improve their health. However, through interviews that we had with patients, we found that the cost of medication usually is not discussed during the doctor-patient interaction.

Affordability of medication is a key factor in whether or not the patient will follow through with adherence to their medication. We saw a space for improvement in the way patients engage with their doctors to breach this topic and ultimately guide how the doctor will direct the patient care.

Generics, alternative treatments, and lifestyle changes are topics that should be covered in medical visits, but often times are not discussed. Resultantly, patients often reflected feelings of discomfort and vulnerability when breaching the subject of medication price. We saw a window of opportunity to activate patients to have these conversations, and with this information, let them know that "It's OK to talk about cost" with regards to their medication. As a potential solution to this problem, we created a set of print materials aimed at giving patients motivation and assurance to start these conversations.

We brainstormed and prototyped different methods for the delivery of this information through user testing and expert interviews. Interviews at the Agape Clinic, located in Southeast Dallas, gave us direction on how to best deliver the information to patients. We created a poster with basic information to hang in exam rooms, specifically designed to catch the patient's attention in a non-intrusive manner. With this setup, patients can read the poster during the inherent down-time in their appointment, or the doctor can direct attention to what is written.

Alongside the poster, we created pamphlets, intended to be attached to the poster for patients to grab if they wish to find out more information. Inside of the pamphlets are detachable business cards with conversation guides and an introduction to our second prototype, the "What's My Cost" texting service. We wanted to give patients an opportunity to engage with the service at a level that they were comfortable with, utilizing greater depth of information for those who wanted to learn more.

"It's OK to talk about cost" is aimed to help patients find a voice for their concerns. Our research gave us insight on the questions that patients should be asking, but might feel uncomfortable about doing so. We aspire to help patients vocalize their concerns about price, lessening the cost of prescriptions down the road in their prescription journey.

"We would love to have some of these for the office!"

-Stephanie Bowen
(Agape Clinic Executive Director)



WHAT'S MY COST?

An accessible pricing service for prescription users

The second business opportunity that we propose for implementation is the “What’s My Cost” service. In many cases, the doctor’s knowledge on pricing information may be limited. Patients who utilize our parallel service, “It’s OK to talk about cost”, can reach a barrier to information when the doctor they are speaking to is not completely aware of the price. In that circumstance , we saw an opportunity to expand on our service.

Our team implemented a simple, accessible price transparency tool that allows patients to quickly find the price of a medication. By texting a phone number that appears on our posters and pamphlets, patients are provided with the price of their medication, shown across several pharmacy chains. When a patient texts about a name-brand drug, the service also provides the prices of any related generic versions of the medication.

This information can be vital to patient treatment. Patients can utilize the service while in the doctor’s office, allowing them to quickly decide whether or not they can afford the proposed treatment. In the case that they cannot afford the medication, patients are able to immediately speak to their doctor about generic versions, alternative treatments, or lifestyle changes that may similarly improve their condition.

We decided on a text messaging system to facilitate ease of use for any potential user. The “What’s My Cost”

system is usable on any phone that can send text messages, which does not require the user to have a smartphone. By persistently hosting the service on a web server, patients across the United States can text the service at any time of the day, no matter the location. While our prototype was built with a limited database of prices, RefillWise has an opportunity to connect their database and allow for a wide range of supported medications.

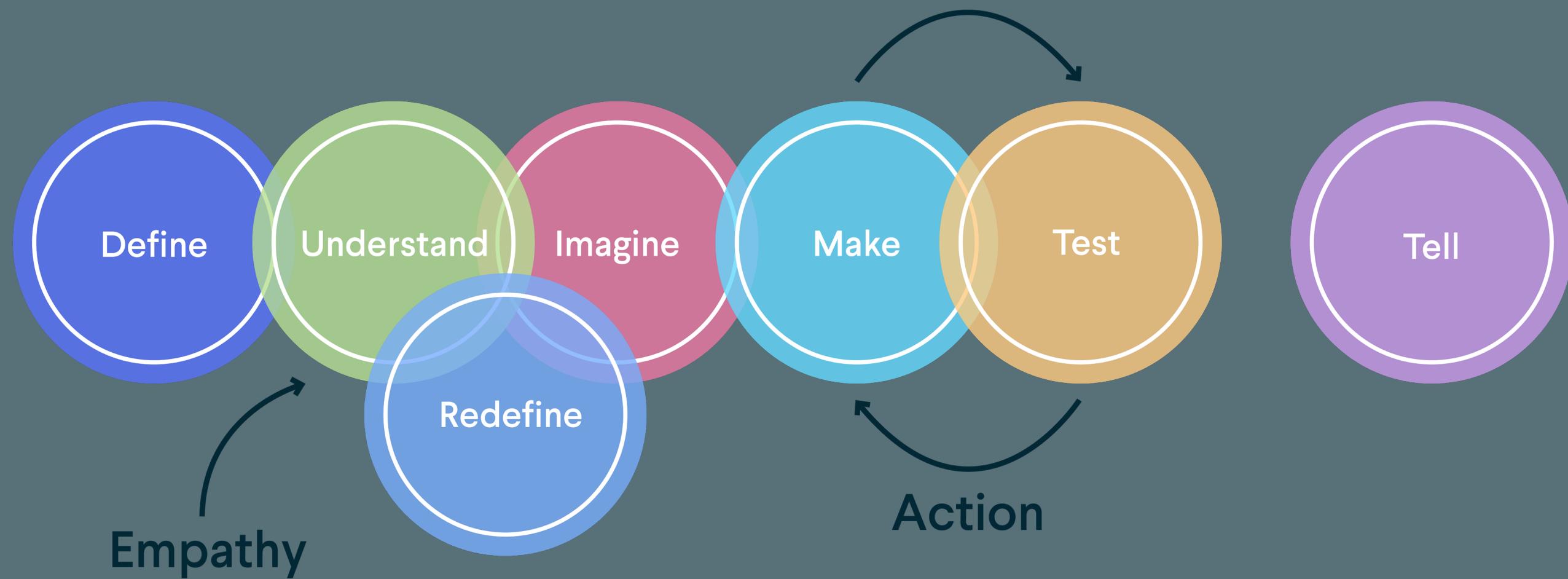
The service itself is completely free for users, existing solely to help them in their journey to better health. Aside from standard messaging rates, the service does not cost any money for the patient to use. At the end of the message chain, the service offers a RefillWise card to the patient, facilitating patients to be brought into the RefillWise system. RefillWise has repeatedly mentioned that onboarding new members is one of their largest costs. With this new system in place, RefillWise is able to ease onboarding for new members of their discount card program by offering a service that streamlines the process.

The “What’s My Cost” service gives patients a means to access price information on their prescriptions in a place where it still matters: at the doctors office. We believe that facilitating the transfer of information can greatly impact the way patients realize price, as well as help RefillWise find another avenue to aid patients in the prescription journey.



HUMAN-CENTERED DESIGN

Human-centered design is a proven methodology used to solve problems that resist solutions. The practice of human-centered design emerged from a variety of social sciences and design disciplines. The process starts with design research, which is all about cultivating real empathy with the target audience through a series of research methods. Design research ends with making and testing a series of prototype ideas and eventually launching an innovative solution out into the world. Designers start this process with no preconceived notion of a final product, but instead open themselves to any and all possibilities. This means that the final solution could be a building, public policy, software, or any other number of forms. It is in this way that those who practice human-centered design are able to bring truly innovative solutions into the world.



DESIGN PRINCIPLES



Patients should know the cost of their medication.

Empower patients to ask about alternatives.

Encourage empathy.

Be unintrusive.

Respect the time of all involved.

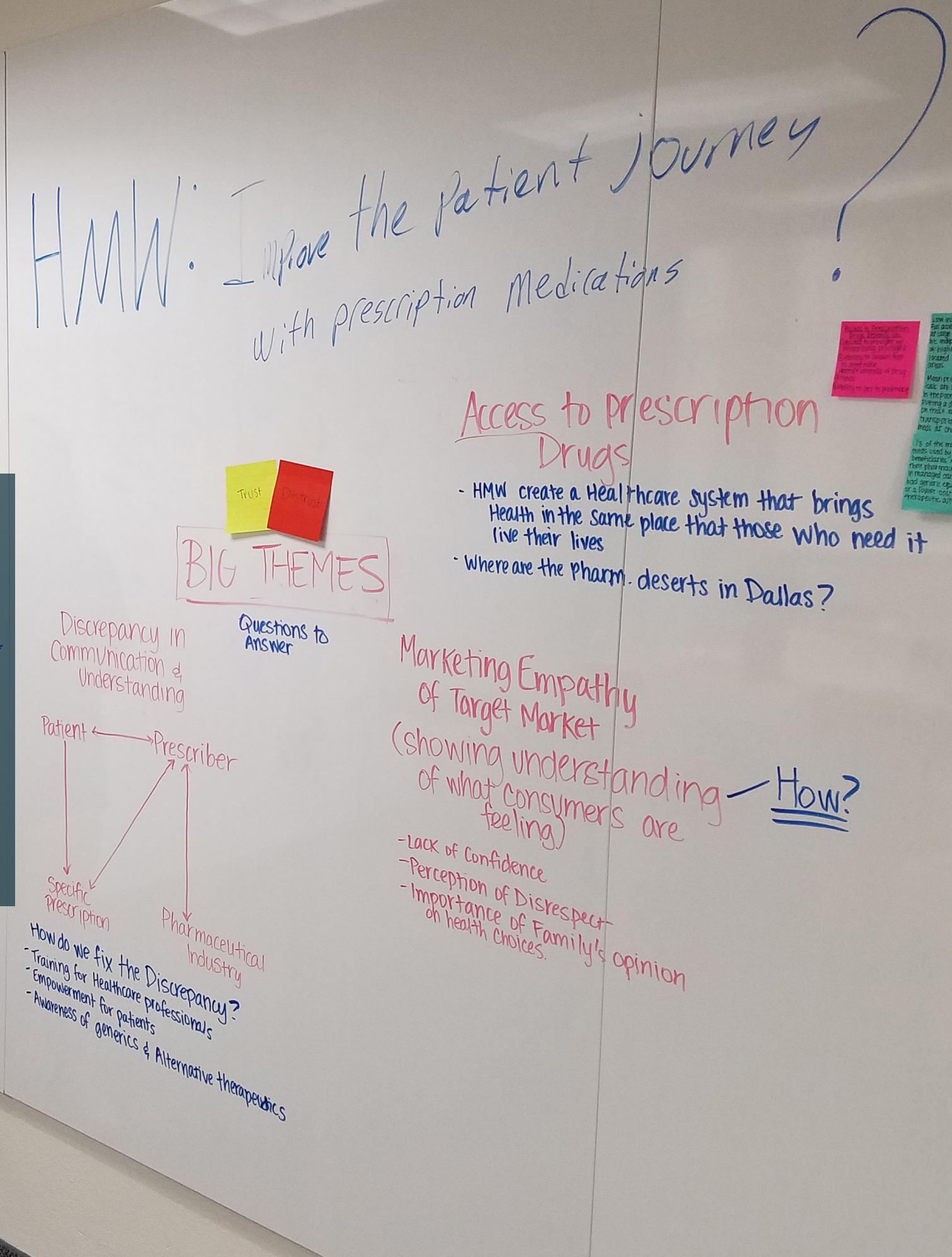
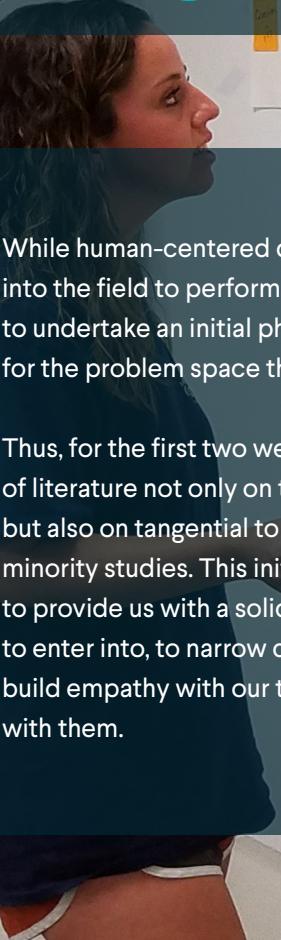
Treat patients ethically.

RESEARCH

SECONDARY RESEARCH

While human-centered design has a large emphasis on going out into the field to perform empathy building research, it is also wise to undertake an initial phase of secondary research to get a basis for the problem space that we are addressing.

Thus, for the first two weeks we consumed a voracious amount of literature not only on the prescription medication system, but also on tangential topics such as consumer behaviour and minority studies. This initial phase of secondary research helped to provide us with a solid overview of the system we were about to enter into, to narrow down the scope of our project, and to build empathy with our target audience before even speaking with them.



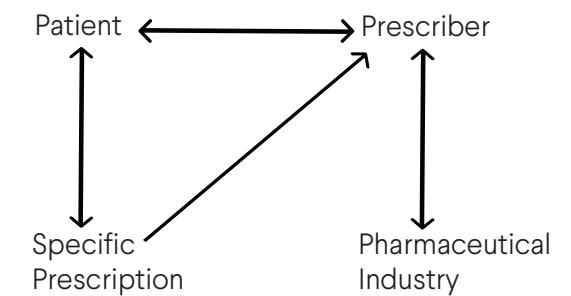
Marketing Empathy to Target Market

- How might Refill Wise show and understand of what consumers are feeling ?

Lack of confidence
Perception of disrespect
Importance of family's opinion of health choices

- How might we leverage trust vs distrust of the medical system?

Discrepancy in Communication & Understanding



- How might we fix this discrepancy?

Training for healthcare professionals
Empowerment of patients
Awareness of generics and alternative therapeutics

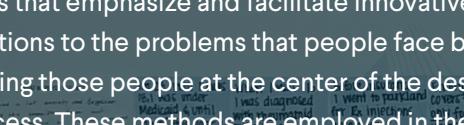
Access to Prescription Medications

- How might we create a healthcare system that brings health in the same place that those who need it live their lives?

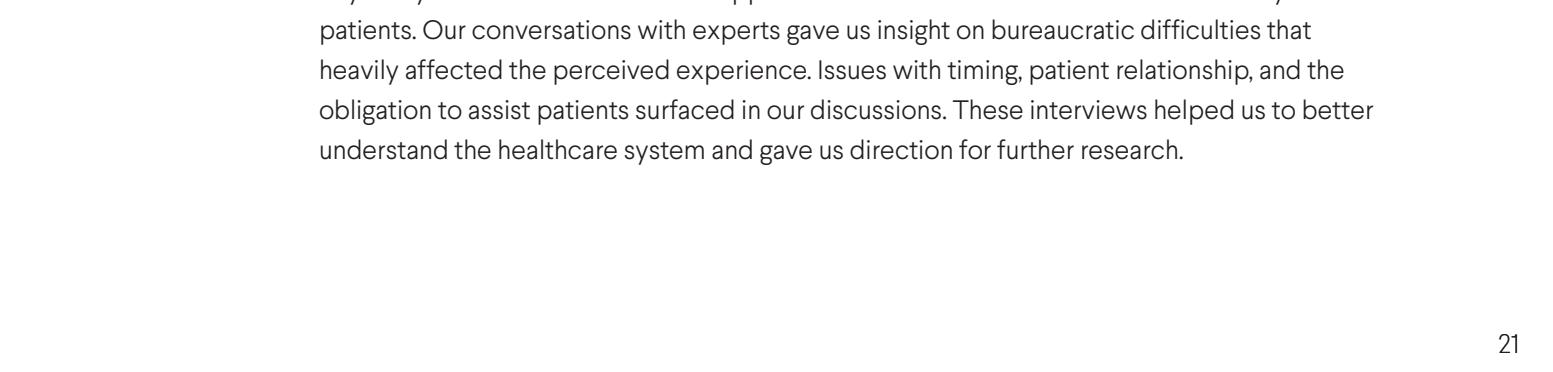
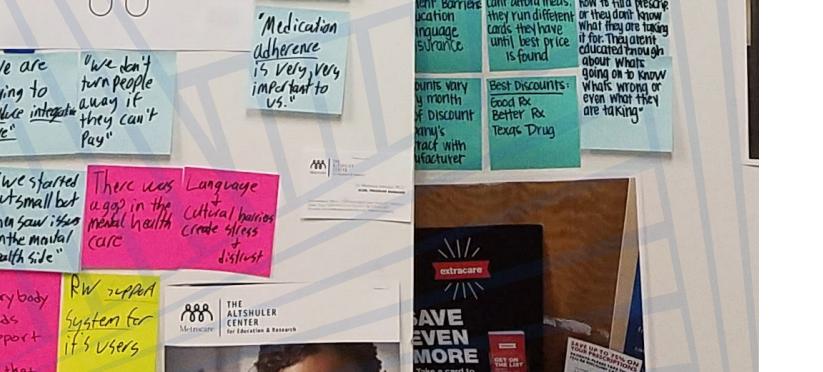
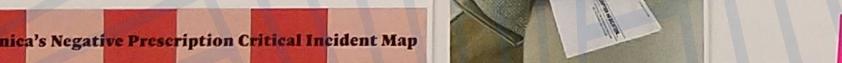
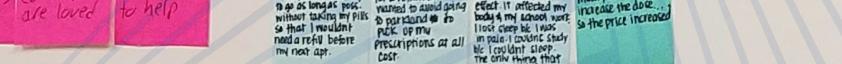
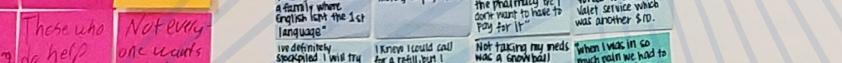
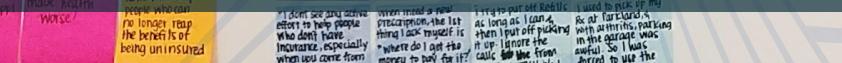
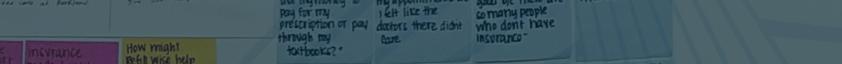
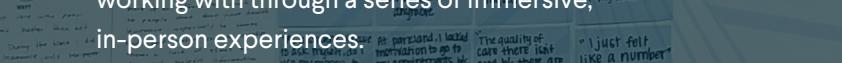
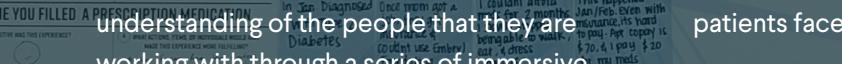
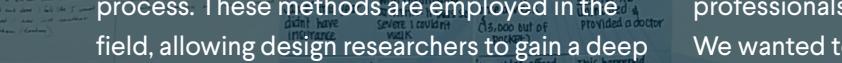
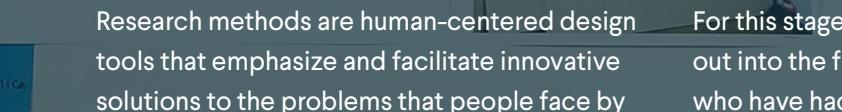
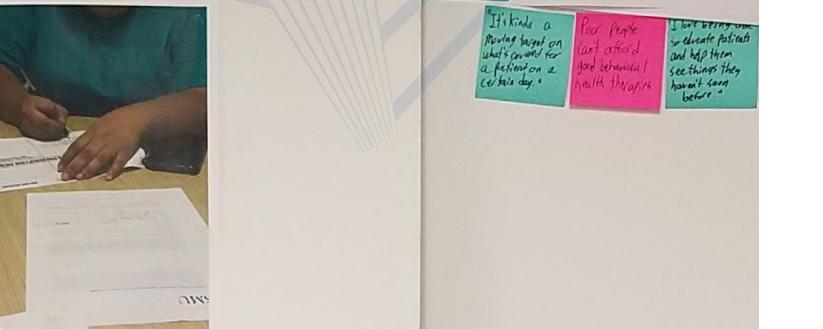
- Where are the pharmacy deserts in Dallas?

RESEARCH METHODS

Research methods are human-centered design tools that emphasize and facilitate innovative solutions to the problems that people face by putting those people at the center of the design process. These methods are employed in the field, allowing design researchers to gain a deep understanding of the people that they are working with through a series of immersive, in-person experiences.



For this stage in our research process, we went out into the field to interview prescription users who have had significant barriers in the access of their medications and spoke with medical professionals who work in this field everyday.



CRITICAL INCIDENT TECHNIQUE

We utilized the Critical Incident technique by gathering stories of events that helped to shape the patient user experience. During our interviews, we asked each participant to share two of these stories with us: one being a positive experience, and the other being a negative experience. After the interviews, we took these stories and analyzed them, extracting the causes, actions taken, sentiments felt, and outcomes from their experiences.

CRITICAL INCIDENT WORKSHEET

We found this tool to be a very effective way to start our interviews. When asking questions about a topic as personal as medical health, it was very helpful to start our conversations in a pseudo-art therapeutic manner. Our participants could answer these questions, looking down at their worksheet, which decreased the level of intimidation that face-to-face conversations sometimes provide. It helped to jog their memory and allow them to open up at their own pace. By the time we transitioned from the worksheet to face-to-face conversation, our participants were more comfortable with the subject matter of our questions, and had begun the process of dictating their experiences to us. The worksheet was also helpful for us after it had been filled out, as we could ask questions about what had been written and refer back to certain points later on in the interview.

PATIENT INTERVIEWS

We talked to six patients about their experience using prescription medication. These patients had either been prescribed medication while uninsured, or felt the need to work around the pharmaceutical system on their own. Each patient's experience was different, with new insights and stories to tell. While the content of these interviews differed, there were several overarching ideas that became apparent in every story. By picking up on repeated themes in our conversations and research methods, we were able to pinpoint key areas of suffering in the patient experience.

EXPERT INTERVIEWS

Speaking with doctors, pharmacists, and other medical professionals helped us look at the experience in a different light. The experts in this field shape the patient experience every day. They are often the reason for happiness and heartbreak within the stories told by patients. Our conversations with experts gave us insight on bureaucratic difficulties that heavily affected the perceived experience. Issues with timing, patient relationship, and the obligation to assist patients surfaced in our discussions. These interviews helped us to better understand the healthcare system and gave us direction for further research.

WORKAROUNDS

Our patient interviews focused on individual solutions that patients practiced for their unique experience. While their stories were different, some themes repeated. We have addressed these themes as "workarounds": core practices that different individuals might employ in order to make the system work for them. We focused on the use of workarounds to aid in classifying our patient interviews. The following section covers each type of workaround in detail.

Secondary Research Insights

- The medical system is convoluted
- Access to prescriptions depends on:
 - Access to a prescriber
 - Affordability
 - Ability to pay for medication
 - Ability to get a prescription
- Support groups help with medication adherence

EMOTIONAL AND PHYSICAL SUPPORT

Patients receiving assistance to overcome an issue that is troubling them. Whether it is the emotional pain of dealing with a medical condition or physical inability to pay for medication, friends and family members have repeatedly shown support to patients in need.



SHORT CIRCUITING

Doing business outside of standard pharmaceutical practice or speeding up standard practice through unorthodox means.



STRETCHING AND STOCKPILING

A patient might stretch or stockpile their medication by taking smaller doses or intentionally hoarding more medicine than required in order to make their supply last for longer than normal.



"The most terrifying thing for a person in pain is to have nothing that you can take..."

"I've kept every medication that I have been prescribed... In case I ever need it. I have this fear that they are going to be taken away from me..."

"I am a person trying to be in the justice system, and I am willing to break the law for this"

"You never have to be able to be a Prozac company. People think it affects you positively. It's important. But it's not."



"I'll walk in wondering if I can skip enough meals to pay for the medication..."

COST-INDUCED NONADHERENCE

The price of the medication needed to treat their symptoms is not affordable for the patient, and therefore they do not take their prescription for an extended period of time.



SELF MEDICATION

The patient seeks an alternative treatment on their own, without the use of a doctor or pharmacist.



PHARMACY AVOIDANCE

The patient avoids taking trips to the pharmacy, talking to the pharmacist, or purchasing their medication due to a previous experience or a preconceived notion.

GAVIN

JACKIE: POSITIVE
CVS
Jackie

JACKIE: NEGATIVE
Short-Circuiting Drug Transport
Stockpiling

Caleb
Caleb

Micheala
Micheala

Gal
Gal

Nathaniel
Nathaniel

Stockpiling
Stockpiling

Veronica
Veronica

23

Veronica

Veronica has had a lifelong struggle with her personal health and with the healthcare system. When she was 16, she was diagnosed with rheumatoid arthritis and received a diagnosis of Type II Diabetes at 18. As a result, she has lived a life with constant pain and medical issues. Some days, her pain was so severe, that she could barely walk.

Until she was 18 years old, she was covered under Medicaid, but then lived without insurance for a few years. Being uninsured actually helped ease the pain of paying for her necessary medical services as she was covered by the Enbrel Foundation for her weekly injections. Once her mother got on insurance and put her on the plan, she was no longer eligible for the free medication and could not afford the new price of Enbrel. For two months, she was unable to take her medication. During that time she lost the ability to walk, eat, and even dress herself due to the terrible effects of the pain. Eventually, she was able to get back on the medication, but at a higher price than she had paid before. Now, when thinking about refilling a new prescription, the first question she asks herself is: "Where do I get the money to pay for it?" Veronica has been to many different doctors and pharmacies for her conditions, and has expressed a dislike for Parkland because she just "feels like a number" there. When she struggles to pay for medication, she doesn't like asking for help from her parents or partner because she doesn't want to be a burden.



Short-Circuiting
Drug Transport



Physical and
Emotional Support



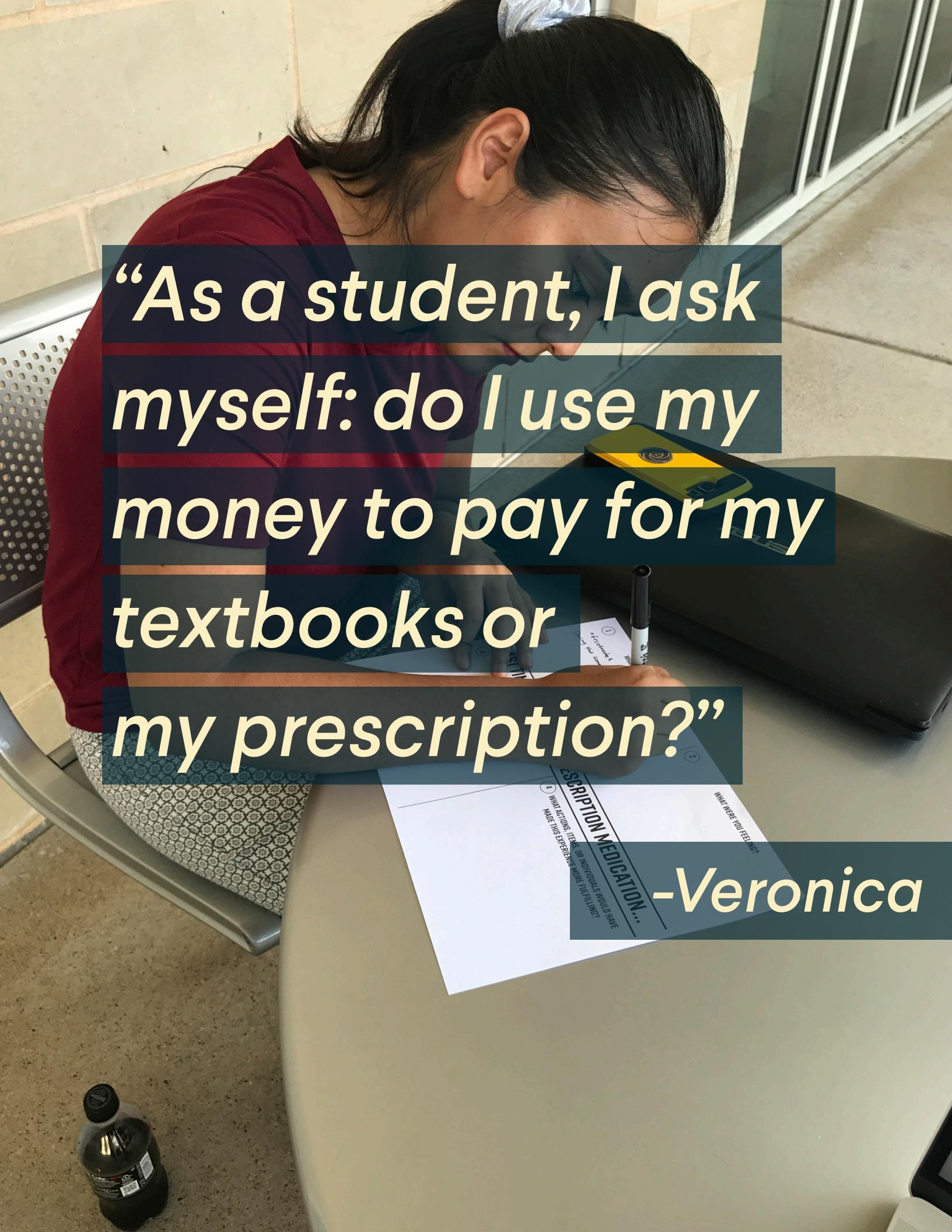
Cost-Induced
Non Adherence



Stretching and
Stockpiling



Pharmacy
Avoidance



-Veronica

Jackie

Jackie finds herself on a numerous amount of different medications, most of them for mental health conditions, which she feels like "are never well covered." Even though she has often had some form of insurance, because of this wide array of medications she often finds herself struggling to acquire the medications she needs. At one point she was using a mail order pharmacy, Prime, that went above and beyond in administering care to her. However, after her pharmacy merged with Walgreens, the customer service severely declined. This caused a situation where she ran out of her anti-depressant for a few days, causing terrible side effects that lasted even days after she received her refill. As a result of this, she has made the switch to the Tom Thumb pharmacy by her house so that she never has to wait for her prescriptions to come in again. Additionally, Jackie remembers that the pharmacist there had helped her mom when she was young, and considers him an advocate for her health. She has also started stockpiling small amounts of medication in case there are future issues.

Jackie believes that "people don't think mental health is as legitimate as other kinds of health and people don't get the support they need." The only person she trusts with her mental health is her psychiatrist she has visited for the past 7 years. She chooses to pay out of pocket to see him because he has actively fought prior authorizations and "got my combo of drugs right, right away."



Short-Circuiting
Drug Transport



Physical and
Emotional Support



Stretching and
Stockpiling

"You never hear,
'Call us, we will be able
to help you' at the
end of a Prozac
commercial. It's like
people think that if it
doesn't affect you
physically, it's not as
important... but it does."

-Jackie

Georgia

Georgia is an ambitious woman. Not only is she pursuing a triple major and double minor, but also strives to hold down a part-time job. Georgia is also a woman with two difficult chronic conditions to manage. For one of her prescriptions, she is only able to purchase a few pills at a time due to the nature of the condition. However, this small amount of dosage does not last her very long and was saddled with the burden of going in for an additional office visit every single time she needed a refill. Not only was this expensive, it was also a waste of time. To overcome this one of her friends offered to help her purchase the drugs on the “darkweb”, an illegal marketplace that exists on the internet.

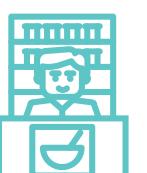
While she has ambitions to someday be a supreme court justice, the opportunity to get her needed medication for less money and hassle was too appealing for her not to try it. Her doctor even encouraged her saying, “there is no reason you shouldn’t do that, if you have a means to buy it on your own please do that.” With this she was able to acquire an entire bottle of 50 pills. She no longer has to worry about getting the drugs she needs for when she needs to take them. Now, she says, “if it’s a weekend and the health center is closed, I won’t have to go three days through this. I just keep it in my backpack.”



Short-Circuiting
Drug Transport



Physical and
Emotional Support



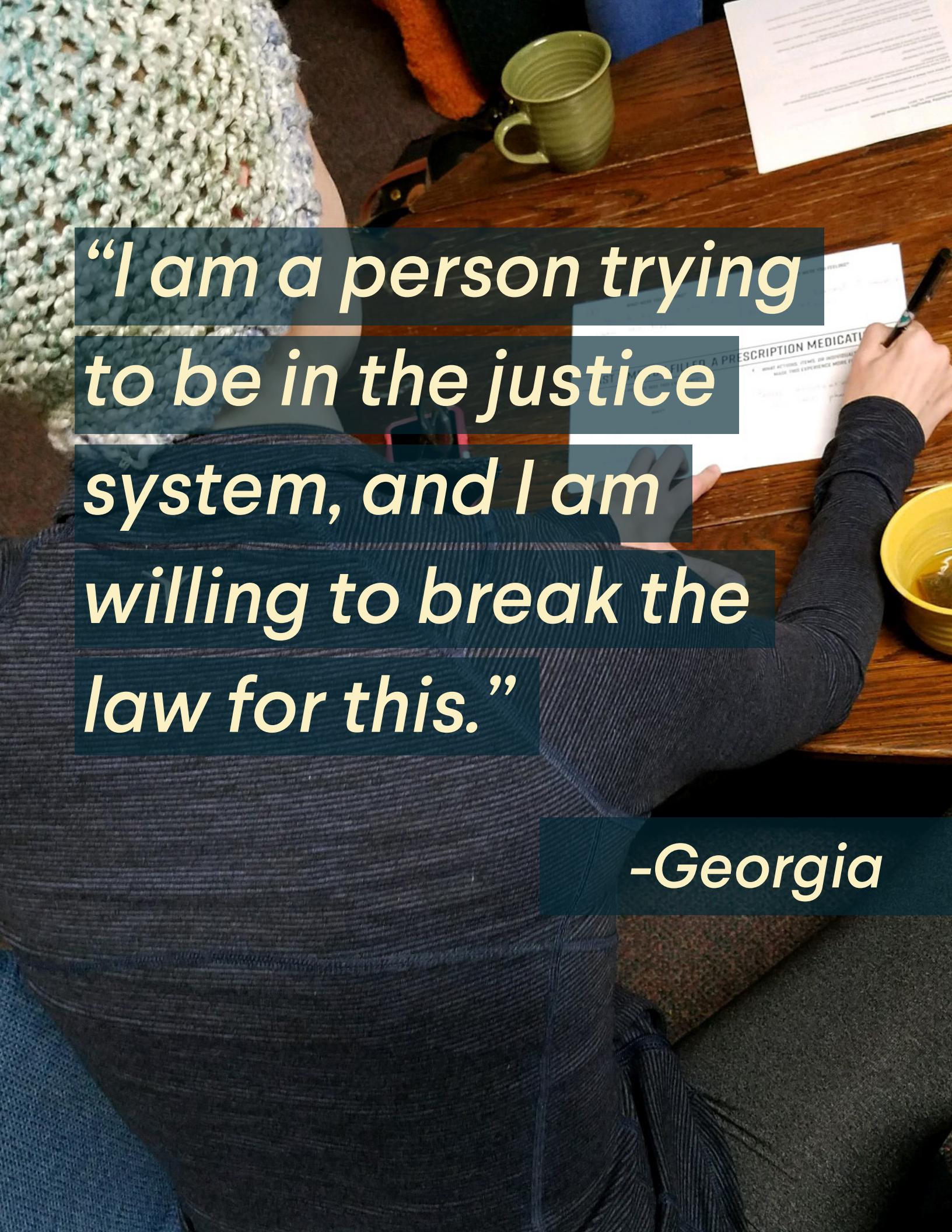
Pharmacy
Avoidance



Self-Medication



Stretching and
Stockpiling



**“I am a person trying
to be in the justice
system, and I am
willing to break the
law for this.”**

-Georgia

Corinne

Corinne hasn't been on a huge variety of medications, but has still struggled to pay the sometimes high price of her anti-depressant and anxiety drugs. She describes that it was a difficult experience finding a psychiatrist she could trust, and was taken aback by how much appointments cost along with the cost of the actual medications themselves. To save on the cost of her prescription, she would only take half of her prescribed dosage. Even though she knew that a half dose wouldn't stop an anxiety attack the way that a full dose would, she knew that she had another half dose when she needed it.. Since she knew that the drugs helped her, she wanted to make them last for as long as possible. However, after a while even that became financially unfeasible for her. She says, "I just stopped taking the medication. I didn't want to spend that much money until I was able to get health insurance. I had made up my mind once I filled the prescription that it wasn't going to happen again."

Instead of using the drugs, Corinne tried some free therapy sessions she had received through Jewish Family Services, which she believed to help in lieu of her expensive drugs. Her prescription experience only returned to normal after she returned back to paying for health insurance coverage. She started seeing a psychiatrist regularly again and has since built a relationship with him; however, she feels no support from her pharmacy or any sense of advocacy from her pharmacist. In her words, "the pharmacist is just like the bank. It's just where you go to pick up your meds."



Physical and Emotional Support



Stretching and Stockpiling



Cost-Induced Non Adherence

"I was relieved to get my prescription, but it was almost counterproductive because I was anxious about getting it again when I needed it.

-Corinne

Gal

Gal is diagnosed with occipital neuralgia and chronic migraines, both of which have caused her an immense amount of pain and keeps her muscles in a constant state of contraction. She has around two migraines every single day and rates her pain at a 6 on a good day and 8 on a bad. She said that, with pain that bad, "you have to learn to live that way every day. I looked tired all the time, and pale, and in pain." At one point recently she came to a decision point where she had the option of going on a new medicine or undergoing severe brain and spinal surgery. Initially, she went with the new medicine because her doctor had recommended that to her; however, when she got to the pharmacy she discovered that the price was \$800 a month. She began crying in the pharmacy because she "didn't know what to do." She said that her doctor wasn't sympathetic at all to her financial situation and just wanted a kickback.

After that original fiasco she decided to go through with the surgery, which has significantly reduced her pain. Even after the operation, her doctor continued to be very unhelpful. When the surgeon prescribed her 20mg of oxycodone to help with the surgical pain, her doctor demanded that she come in and made her flush the pills, choosing to write her a prescription for 15mg again and suggesting she take two if the pain was really bad. She said, "I took two the next day and hated how I felt, so I didn't do it after that."



Physical and
Emotional Support



Stretching and
Stockpiling



Self-Medication



Pharmacy
Avoidance

"I've kept every medication that I have ever been prescribed... in case I ever need it. I have this fear that they are going to be taken away from me."

Butrans® 20 mcg/hour
(buprenorphine) Transdermal System

Systemic delivery of 20 mcg per hour of buprenorphine for seven days.

Because serious or life-threatening breathing problems could result, DO NOT USE BUTRANS for:

- pain that can be treated with immediate-release opioids or non-opioid analgesics
- intermittent (on an as-needed basis) pain

**ATTENTION
DISPENSER:**
The enclosed Medication Guide
MUST be provided to the patient
upon dispensing.

Rx Only

For use in
patients only

-Gal

Nathaniel

Nathaniel is a 22 year old white male currently working at a bookstore in Dallas making "not too much money". This lack of income makes it very difficult for him to be able to afford the prescription medications that he needs. Currently, he avoids going to the doctor as much as possible and will avoid filling any prescription due to cost. He explains, "if it's take as needed, then I'll fight as long as I can to not have to refill it again" and recalls a time where he stretched 20 pills of anti-anxiety medication out over 11 months, a period in which he should have taken "probably 200". If he really needs the medication he describes how he will "go down to a meal every two or three days" in order to pay for the medication. He does this "pretty consistently, four or five times a year."

One of his most negative experiences with prescription medication was when he had a really bad cough for 3 months and went to his university health center. They prescribed him an asthma inhaler that he was told "would be cheap." When he went to fill it, the inhaler was \$85, which was nowhere near cheap for him. He shared, "I felt taken advantage of because they told me it was cheap". For him, "cheap is completely relative," because even "\$200 is as far away as \$700 for me when I can only afford \$4." Because of these false hopes he often stockpiles, stretches, skips meals and uses other people's medications to achieve his level of healthcare.



Physical and
Emotional Support



Stretching and
Stockpiling



Cost-Induced
Non Adherence

**"If you are hungry,
and someone hasn't
finished their food,
and they offer it to
you... you're not going
to say no. The same is
true for prescription
drugs."**

-Nathaniel

SYNTHESIS

Physical and Emotional Support



Stretching and Stockpiling



Short Circuiting Drug Transport



Cost-Induced Nonadherence



Pharmacy Avoidance

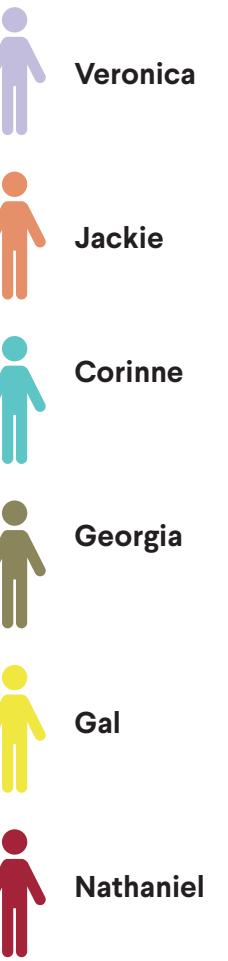


Self Medication



HISTOGRAM

We examined each patient's story with regards to their response to the critical incident technique, worksheet, and interview questions. For each patient, sets of workaround themes became pronounced as they described their personal experience. By creating a histogram of our interview results, we were able to find which themes were most often repeated in our conversations. The most prominent themes were: "Physical and Emotional Support", "Short-Circuiting the Drug Transport System", and "Stretching and Stockpiling". In discussion and review of the reason why these themes existed, we realized that all three linked back to one of our original research topics: access of cost-affordable medication.



We define the moment that a patient realizes the financial burden of their prescription medication as the “**critical moment**” in their prescription journey. It is the moment that defines their experience and determines whether or not they will take their medication as prescribed.

“I'll walk in the pharmacy
wondering if I can skip enough
meals to pay for the
medication”

Nathaniel

INSPIRATION

Create networks for people to reach their drugs in a timely manner?

Through observing human behavior and how people are trying to optimize their own lives, we found that patients created workarounds as a means of designing their own solutions to help them live their lives. After understanding why patients need to design these solutions on their own, we saw opportunity in conducting further research on how we can improve them.

HMW
create a better way for patients to track their meds?

Cover costs of med. transport

Share meds w/ patients

Rate your prof for pharmacies

HMW increase positive communication from pharmacists to patients

RW do the stockpiling for their users

Educate patients on questions to ask

HMW reward passengers at the pharmacy for tagging along?

Educate Rx Users to know what they need to know

HMW educate users on pharmacies closest to them?

Shorten the time btw. Rx submission & acquisition

Effective medication forwarding program

HMW create internet portals of acquisition if meds?

HMW get amazon now for drugs?

give patients the anonymity that they desire

Strike a balance b/w Human & non-human contact

HMW... simulate the dark net

HMW a cd last pr

WOULD YOU DONATE \$1 TO SOMEONE WHO NEEDS THE SAME PRESCRIPTION, BUT WOULDN'T OTHERWISE BE ABLE TO AFFORD IT?

YES

NO

Our research showed that support from healthcare providers inside of the pharmaceutical system has an incredibly positive impact on patients who struggle within the system, and that patients can often feel lost, uncared for, and unmotivated when they do not receive support from their pharmacists and doctors.

1 The first opportunity we saw was to empower pharmacists and doctors to advocate for their patients.

Our research also showed that, while sometimes people want to talk to their pharmacists, sometimes they would rather remain anonymous.

2 The second opportunity we saw was to strike a balance between human and nonhuman interaction.

Third, our research showed that stockpiling and stretching medication provides peace of mind for patients who aren't guaranteed with financial ability to pay for their upcoming prescription.

3 The third opportunity we saw was to find a way to bring the same peace of mind without the need for workarounds.

IDEATION



HOW MIGHT WE'S?

After finishing the initial research phase in the human-centered design process, we move into an ideation phase. During this phase, we develop hundreds of potential solutions based on our research that address our users' needs. These ideas are developed through brainstorming sessions framed around a few simple, generative questions. We call these questions "How Might We" questions. Each word of the term is carefully crafted for the purpose of generating solution ideas. "How" implies that there is a way to solve the problem before us, a powerful mindset to get in when working in these sort of problem spaces. "Might" implies that the ideas we come up with may not actually solve the problem, this freedom to come up with half-baked or crazy ideas helps us get to the ideas that will actually work. "We" adds emphasis to the function of the design team in solving a problem and away from any one individual.

After identifying three key opportunity areas for further research, we brainstormed over one hundred potential "How Might We" questions to frame our brainstorming around. We then selected the three best, most generative ones and selected those for use in a group brainstorming session with a group of recruited friends and colleagues. From these questions, we ended up with hundreds of ideas, so we identified the top 12 ideas most pertinent to our research and illustrated them with series of storyboards, quick depictions of our ideas in the context of a real user experience.

- 1 How might we give people peace of mind that they will have the meds they need?**
- 2 How might we offer support to the people who feel like they have been ignored in their prescription journey?**
- 3 How might we motivate doctors, pharmacists, and office staff to get the cheapest prices possible for patients?**

DESIGN

PRINCIPLES

Utilizing storyboards to illustrate our ideas helped us to choose which of them we should iterate on. In the human-centered design process, we have a strict rule to defer judgement and embrace wild ideas. Some of our ideas were a bit nonsensical, but often times these were some of the most generative concepts.

An example of this is the "Casual Coffee Shop Hangout". In this proposed solution, patients and doctors would have a chance to meet and talk in a casual setting. Patients could inquire about the costs of their medications, ask what alternatives or generics are available, and have enough time to engage in a helpful discussion with their doctors.

Over time, we realized that this idea was not as in-line with our research goal as we would have liked a prototype to be.

Patients should be provided knowledge of what their prescription will cost.

Patients should be empowered with the choice to ask about alternatives.

Respect the time of all involved.

Treat patients ethically.

Encourage empathy.

Be unintrusive.

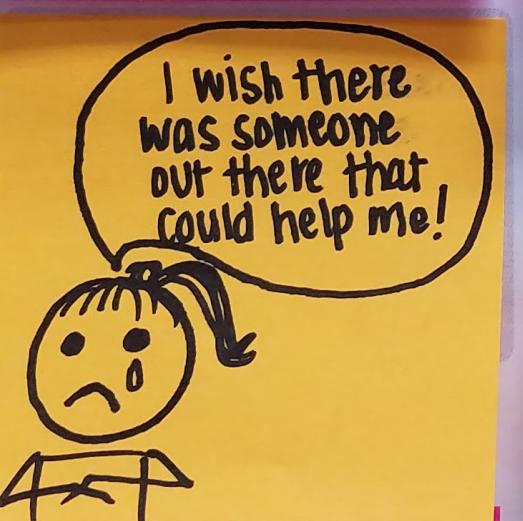
However, we were able to extract several key points of information from it, such as: "Patients should be provided knowledge of what their prescription will cost them" and "Patients should be empowered with the choice to ask about alternatives".

Alongside the rest of our storyboarded ideas, we generated six of these statements, which we have labelled "Design Principles". They are statements of truths that allow us to evaluate which of our ideas have merit and most align with our original research goals.

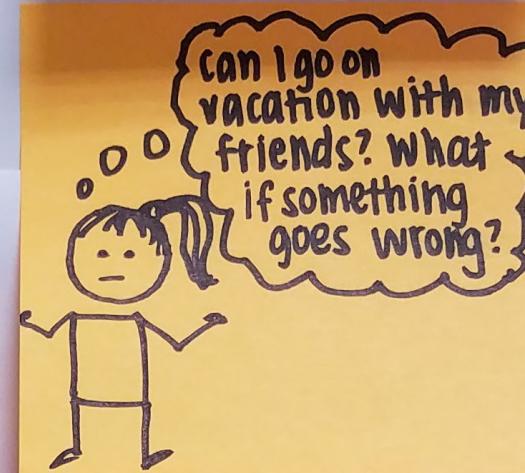
By utilizing our list of design principles, we were able to choose the ideas that we felt had the greatest potential to impact patients who felt a barrier of accessing cost-affordable medications.



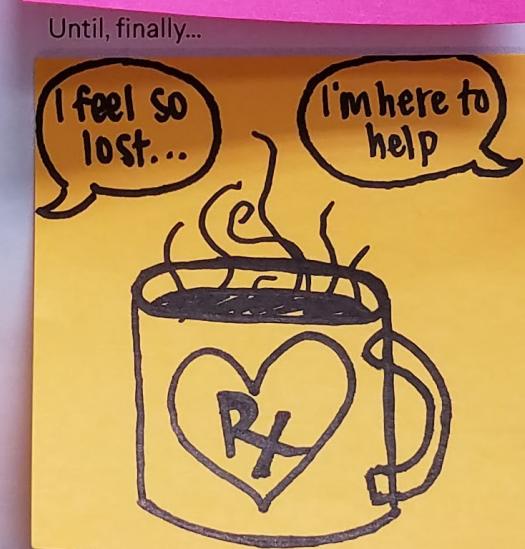
Victoria has lived her life with an autoimmune disease that requires constant attention



Because of that, Victoria is frustrated that this solution is out there, but she can't afford it. She starts to wonder if she will ever be able to live a normal life



Everyday, she struggles to make life decisions b/c she doesn't know how her actions will affect her health



until finally, she found information about a local coffee shop that offers free medical advice/counseling from a licensed professional for her to talk to about her options



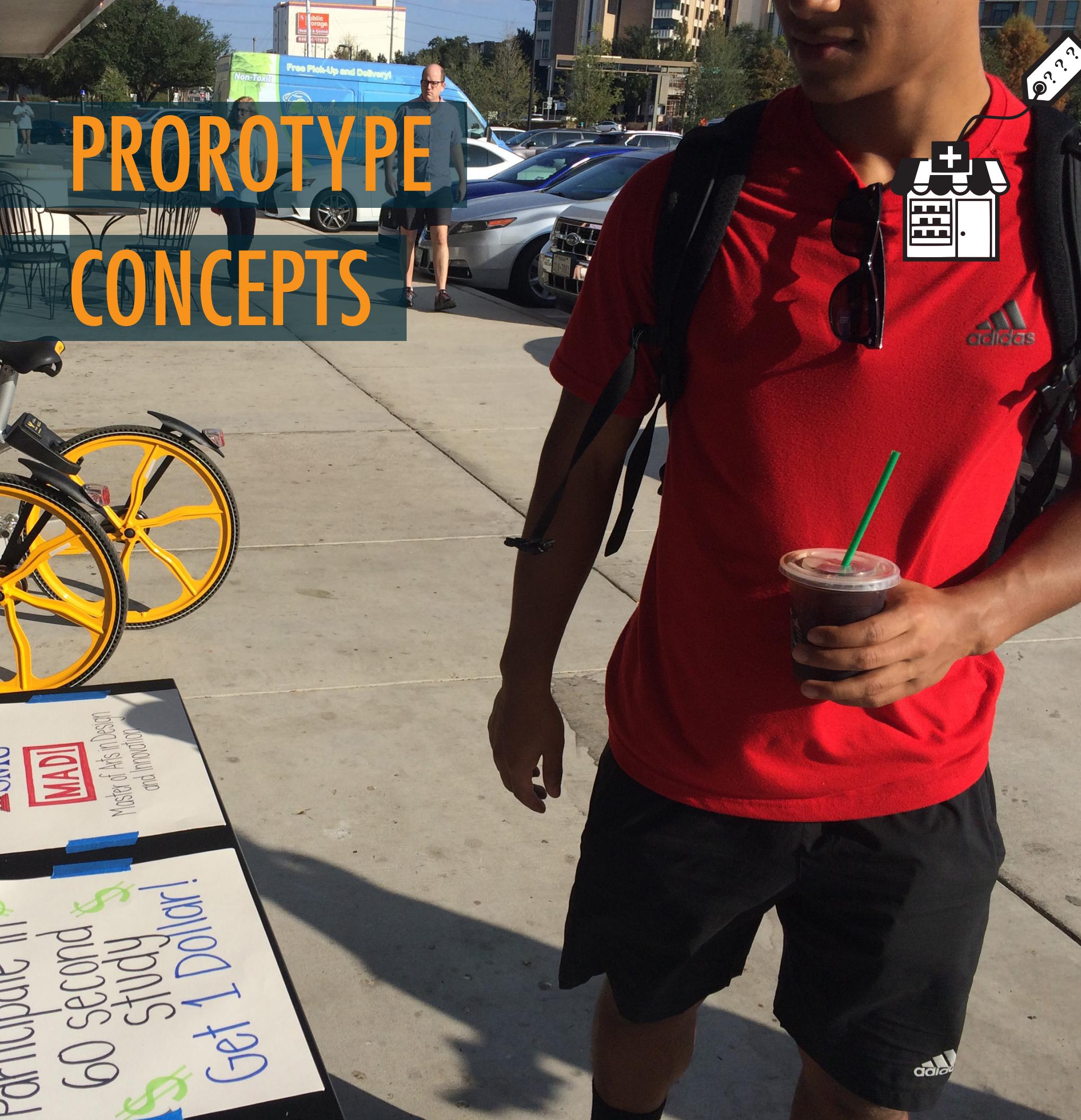
her Doc tells her One day ~~she hears~~ about an alternative drug that she can take that ~~is still~~ experimental - so it isn't covered by her insurance



And, ever since then...
She visits this shop where she wants medical advice that is free from Big Pharma - monopoly & when she needs reassurance that she is making the right choices for her health.

PROTOTYPING

PROROTYPE CONCEPTS



PRICE TRANSPARENCY

We kept seeing a need for price transparency throughout our research process. We heard a variety of stories about patients who went to the pharmacy to fill their prescription, but realized that they couldn't afford the medication after learning of the price at the pharmacy counter. When this happens, many patients are forced to walk away from the pharmacy counter empty handed. This is a frustrating and humiliating experience that people go through everyday. From here, patients are forced to make a decision: Do they call their doctor's office and wait to speak to the doctor until he or she is available again? Or do they forego taking the medication that was prescribed to them, altogether?

We wanted to create a system that brings price transparency to patients in their doctor's offices, moving that critical moment of price realization to an earlier point in the prescription process. If the patient realizes the financial burden of their medication earlier in the prescription process, the critical moment becomes less severe. It creates the opportunity for patients to tell their doctors that they won't be able to afford their prescription, and talk about alternatives before the patient leaves their doctor's office.

PATIENT EMPOWERMENT

This opportunity became apparent as we started to research the benefits of price transparency. Many people do not talk to their doctor about their medications. For example, one of our participants stated,

"I'm uncomfortable talking about the cost of my meds and I feel somewhat ashamed about the type of medication that I take."

We found that many patients are embarrassed, or they don't know the right questions to ask. We wanted to create an empowerment campaign, to allow patients to take back some power in their relationship with their doctor, and ask the questions that they need to ask to feel comfortable with their prescription medication.

EVALUATING IDEAS

Similarly to using our Design Principles to evaluate our ideas, we took time in our prototyping process to ensure that our implementation was genuinely useful. In human-centered design, there is a key focus on iteration through testing, feedback, and re-imagination. We wanted to be sure that our prototypes were not only helpful for patients, but a welcomed introduction into the health space from doctors and other medical providers.

We documented assumptions that we had about our prototypes and verified whether or not they were correct by talking to several medical professionals. Through this additional research, we were able to ensure that our prototypes were still in line with the needs of patients and professionals.

Testing Assumptions

Findings

Assumptions About Patients

Patients will have time to contact
us

Patients will want to utilize service

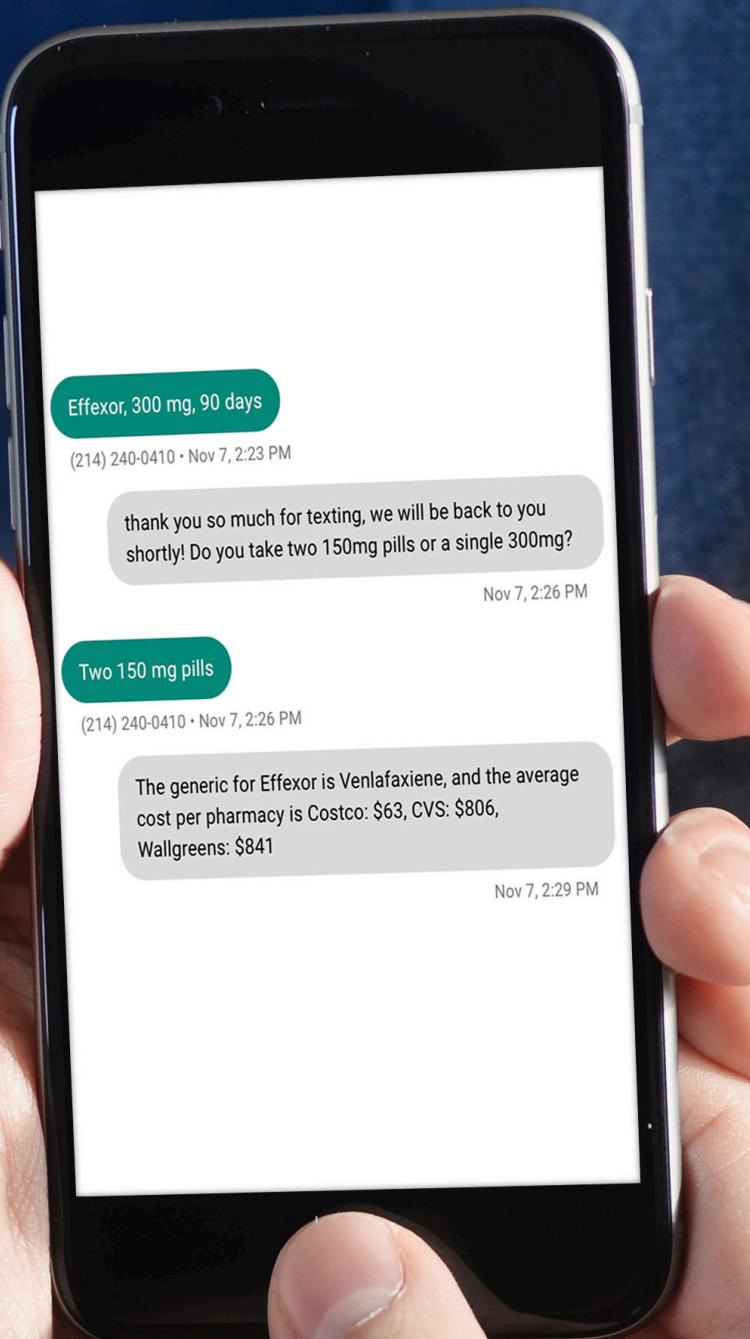
Patients will trust informant about
service

Patients worth the
time

The patient has the ability to tell the doctor or medical assistant that they want a cheaper alternative after the prescription is written/offered, and the doctor will change the prescription. They may not be alone in the room to use the service, but there opportunity, everyone wants to save money. But they will only use it if it comes from a reputable source.

Only if it is from a medical prof.
from someone located
we are stud...
our

TEXTING SERVICE



We developed a texting service for patients to use during their doctor's appointment to find out the cost of their medication. Our initial idea was that, after doctors told their patients what they were going to be prescribed, the patient could text their prescription, and, in turn, receive the prices for those prescriptions at different major pharmacies, as well as the prices of the available generics.

In our research, we found that the price variation of a single prescription across different pharmacies can be quite large. We also discovered that showing patients where they can find their medication at the cheapest price can have an incredibly positive impact on their lives.

"I was uninsured between grad school and work, and had to take a break from my meds. Had I known it was only \$63 at Costco, I could have taken it"

-Jackie

EMPOWERMENT CAMPAIGN

In this stage of the prototype we created an information card that patients could pick up in the waiting room, with simple steps to follow to receive the price of their prescription.

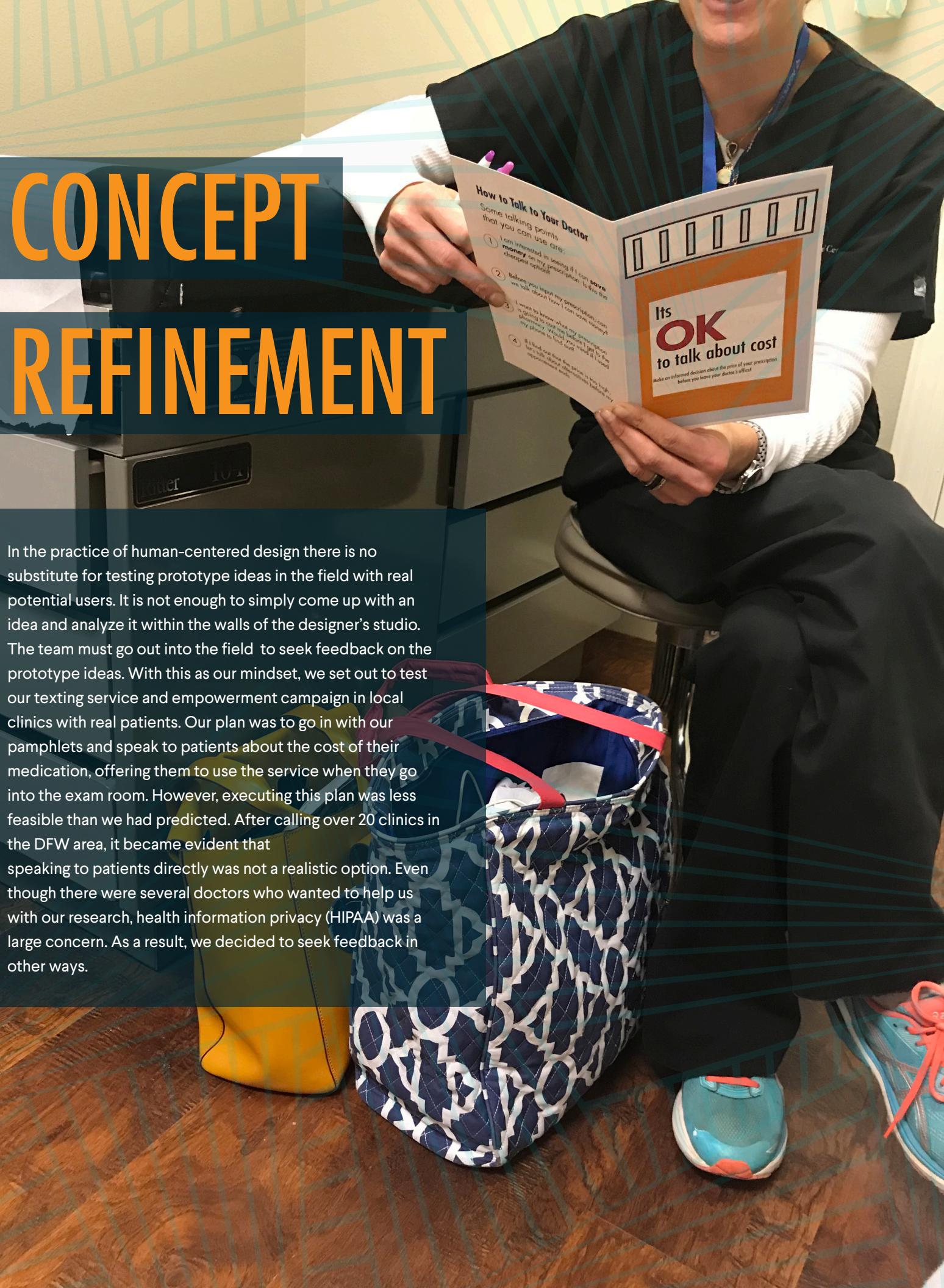
For the empowerment campaign, we created a pamphlet which held the card. We originally envisioned that patients could find the pamphlet in the waiting rooms at their doctor's offices, read it while they were waiting, slip the card into their pocket, and feel more confident as they entered the exam room.

The pamphlet included information on the cost benefits of using generics and why generics are as effective as brand name medications. It also included conversation prompts for patients to use, so that they could begin asking questions about their medications more comfortably and confidently.



CONCEPT REFINEMENT

In the practice of human-centered design there is no substitute for testing prototype ideas in the field with real potential users. It is not enough to simply come up with an idea and analyze it within the walls of the designer's studio. The team must go out into the field to seek feedback on the prototype ideas. With this as our mindset, we set out to test our texting service and empowerment campaign in local clinics with real patients. Our plan was to go in with our pamphlets and speak to patients about the cost of their medication, offering them to use the service when they go into the exam room. However, executing this plan was less feasible than we had predicted. After calling over 20 clinics in the DFW area, it became evident that speaking to patients directly was not a realistic option. Even though there were several doctors who wanted to help us with our research, health information privacy (HIPAA) was a large concern. As a result, we decided to seek feedback in other ways.



REFINING THE SERVICE

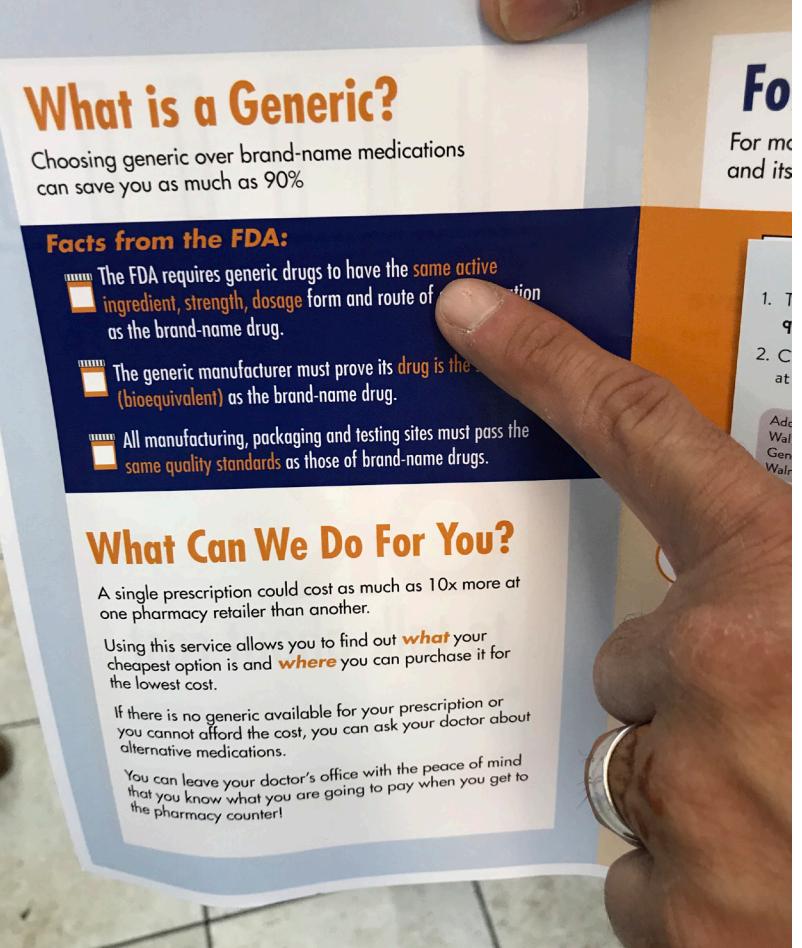
First, we visited the RefillWise office and spoke with Matt Gorman, who runs customer service for RefillWise. We found that our team and he had come to the same conclusions about the importance of price transparency and the difference in price from pharmacy to pharmacy. Scrawled on his whiteboard was the statement: "Customers want price lookup to compare pharmacy pricing, not discount card pricing... Customers prefer potentially inaccurate prices to no prices." In addition, due to our research methods we were able to see:

- 1 *Price transparency is most helpful when communicated inside of the doctor's office.*
- 2 *Patients prefer texting as a means of retaining anonymity.*
- 3 *Text messaging is an accessible form of media that does not alienate any potential user.*



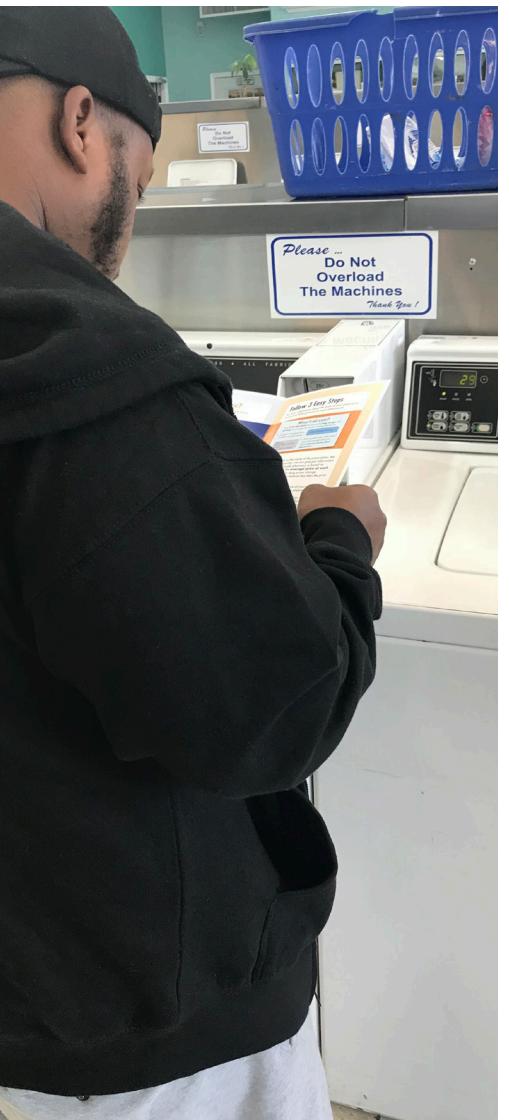
We can use CostCo to make it look like we have awesome prices

- Price Requests account for most of our email volume
- Customers prefer the ~~wrong~~ potentially inaccurate prices to no prices
- 80%+ just need pricing for major pharmacies
- GoodRX gives ^{at least some} pricing off historical
- We lose a ~~ton~~ of credibility because every other digital card has price lookup
- Customers want price lookup to compare pharmacy pricing, not discount card pricing
 - ↳ Being able to compare prices is the underlying value. Them + for us!



REFINING MATERIALS

We also wanted to refine the material we had developed for patient empowerment and get feedback on its effectiveness. We spoke with individuals at a local laundromat, offering to pay for their laundry in exchange for feedback on the pamphlet we had developed. Laundromats are full of people from a wide variety of socioeconomic and racial backgrounds, all of whom sit idly as their laundry is drying. Speaking to this user base allowed us to gain valuable information without being intrusive in our participants' everyday lives. During these conversations, we specifically tested whether or not the information and visual design made sense to users and if it would help them ask the questions they needed to their prescribers. The feedback we received helped us to craft a more robust and more easily understandable pamphlet to be used in the clinic.



"I love this... this is so needed!"

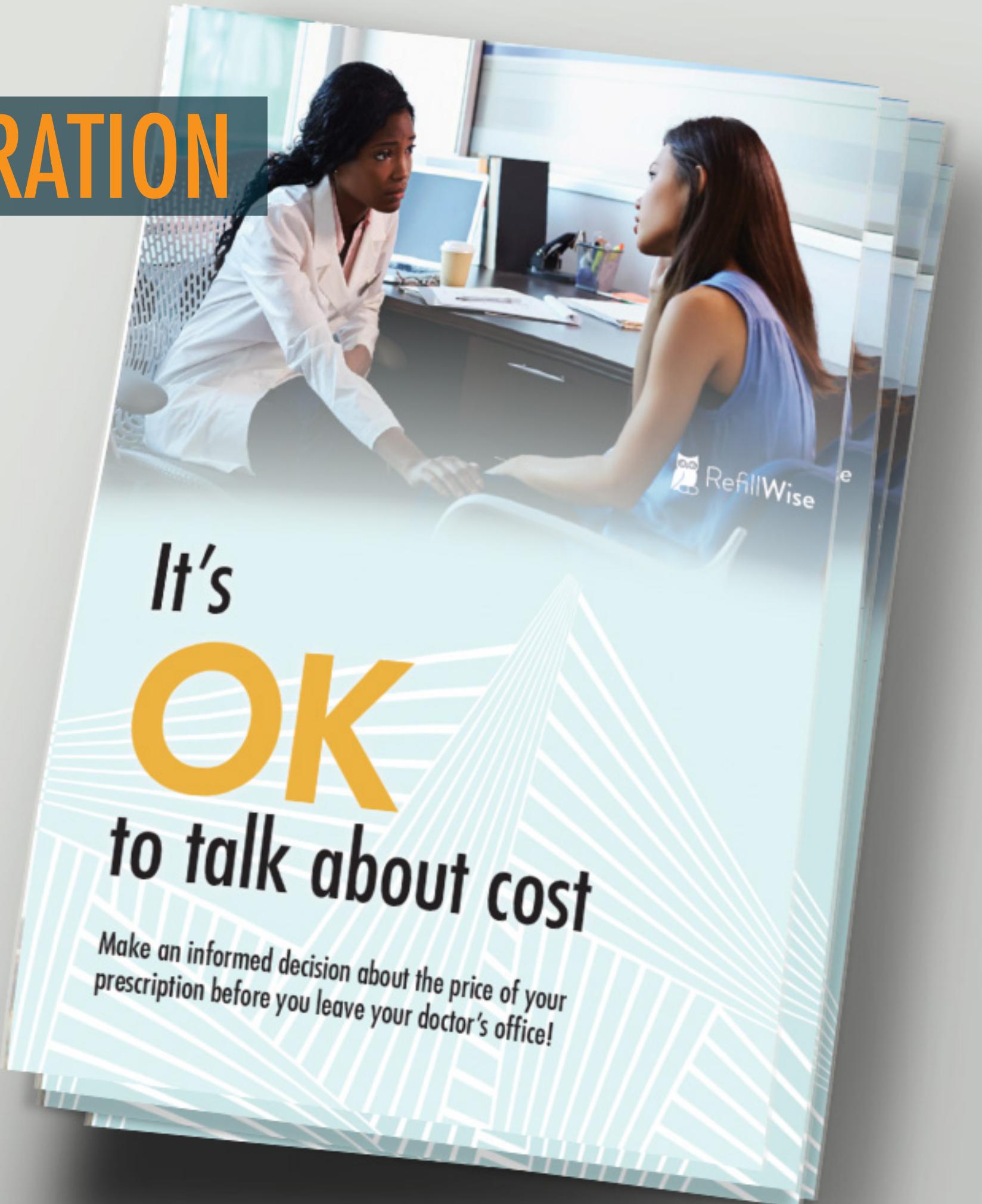
- Stephanie Bohen, Executive Director

TESTING AT AGAPE CLINIC

Finally, we were able to get into a non-profit community health clinic, Agape Clinic, to test what their staff thought of our product. We spoke to Barbie, one of the nurses, who told us that this service would be very helpful to her and her patients. She thought that we were prompting patients to ask the right questions, but in a way that would go over the reading level of many low-income patients. She gave advice on how we could better appeal to our target audience. We also spoke with the executive director, Stephanie Bohen,

who enthusiastically welcomed our idea and told us she wanted to distribute the empowerment pamphlets and utilize the price lookup service in her clinic. She suggested that we design an informational poster that could be placed in the exam room as a more effective means of empowering patients to ask the right questions and find the price of their medication. We took the feedback from our visit to the Agape Clinic and utilized it for future iterations.

ITERATION



IT'S OK TO TALK ABOUT COST PROTOTYPE

After our visit to Agape Clinic, we realized that there are so many handouts, fliers, and discount cards available for patients, that another mass produced pamphlet would just get lost amongst all of the other information.

To make our print materials more attractive to potential users, we set up a consultation with Justin Childress, creative director at Switch, a local graphic design and brand development firm. We conducted a complete design overhaul on our original materials. We reformatted the content, simplified the language, and made the pamphlet more relatable. Instead of the pill bottle on the original materials, we used human-centric imagery, and added an introduction that “sets the stage” for patients. The introduction lets patients know that we understand what they are going through, we know how vulnerable they are, and that we want to give them the information that will empower them to take charge of their patient experience and help ease their journey with prescription medication.

WHAT'S MY COST PROTOTYPE

Alongside the empowerment artifacts, we continued to iterate on the texting service. Originally, we had prototyped this service with very low fidelity. The first prototype for the service utilized three different points of communication: the patient, our team as middlemen, and Matt Gorman for database querying.

The previous system would require patients to text information on a prescription. Upon receiving the message, we would forward the information to Matt Gorman, who manages customer service at RefillWise. He would calculate the prices of the medication based off of historical data, as well as aggregate data on any available generic version. Matt would then echo back that information over the phone, and we would send it back via text to the patient.

While the prototype shed light on the experience of utilizing the service, it was not elegant, nor did it show the scalability that RefillWise might require in a full product. The turnaround time to get pricing data back to the patient was at least three minutes. We felt that this time might be prohibitive to patients, a sentiment that was confirmed through testing the low-fidelity prototype with different patients. Since two members of our team have backgrounds in Computer Science, we felt a need to continue developing the product. After a brief development phase, we were able to produce a much higher quality of the prototype. The service is now hosted on an Amazon web server, allowing anyone to text the service at any time. As a proof of concept, it accepts “Lipitor” as an initial start to conversation.

Not only does this upgraded service provide pricing information, it also contains elements of the empowerment campaign. Patients are given the opportunity to be sent different conversation prompts and questions that they can ask their doctor during a medical visit. The RefillWise card is integrated at the end of the service, with an optional prompt for the patient to receive a card over text. Future iterations of this product could utilize a spanish option, as well as short phone codes to lower the activation energy required from the patient. We see a huge potential for this product to change the way patients receive pricing information, moving the critical moment of price realization up to a point where it can still be addressed by medical professionals.

BUSINESS VIABILITY AND NEXT STEPS

BUSINESS

VIABILITY

HOW IS OUR SOLUTION BETTER?

How is our proposed service different from those already offered by GoodRx and Blink Health? While the ability to look up a price is already offered by RefillWise's competitors, RefillWise's current system and our proposed system would be easier to use than what the competitors currently offer. Both GoodRx and Blink Health are only available to users with Internet access, meaning that anyone seeking to use their services needs a smartphone or access to a computer. Neither offer much support services to users, as they focus on the transactional side of buying medication, not the patient experience.

Additionally, Blink Health requires that patients have a form of electronic payment, such as a debit or credit card, in order to purchase medication through their platform. A large portion of low-income, uninsured, and undocumented Americans do not have consistent internet access, and are not eligible for a credit card or a bank account. Blink effectively bars them from utilizing their service.

Both services are intended to be used after the patient leaves the doctor's office, but what we have uncovered is that this point is too late in the process. The patient is no longer with their doctor, and will have to call back to their doctor for any potential alternatives. Often times, that call back may not even happen and the patient will choose to go without their medication. Our service is meant to be utilized while the patient is still in the exam room and while changes can still be made to the plan of care.

We believe that RefillWise already excels in ways that its competitors do not: by providing empathy for those in need. However, there is significant opportunity to grow in ways that would put RefillWise ahead of the competition. Our proposed solution would make RefillWise truly superior to their two main competitors, delivering the right information in the right place at the right time through the right medium.

DOES THIS MAKE FINANCIAL SENSE?

Not only would our price transparency and patient empowerment tool solve a need in patient care, helping to carry out the stated mission of RefillWise, but we believe that it would also add value to the company as a whole. Building out this service and distributing it through the pamphlet and poster at clinics throughout America would bring more users into the RefillWise network at the same time as saving those users money. Patients who text the service in the doctor's office are able to optionally receive a

discount card and would be able to utilize the card at the pharmacy shortly after their medical visit. Since RefillWise makes money every time one of their users saves money, this could mean substantially more revenue for RefillWise.

But exactly how viable is this idea? With information provided to us by RefillWise and through some research into other pharmacy discount card companies, we believe that our product could capture:

\$190,000

Projected Revenue Within the First Year

We arrived at this number through an exercise undertaken with Simon Mak, Professor of Entrepreneurship in the Cox School of Business at SMU. He helped us to find a reasonable estimate for some of the unknowns such as the percentage of those who will actually utilize the service and the industry average transaction fee for pharmacy discount card companies. We used the following equation to estimate the total:

$$25 \times 50\% \times 50 \times 10\% \times 15\% \times 7 \times \$8$$

Low-income Clinics in Dallas Captured in First Year Patients each Clinic Sees per Day Utilize Price Transparency Service Patients who Actually Fill Rx with RW Members Rx's Filled per Year by RW Members Industry Average Transaction Fee

Regardless of the actual transaction fee that RefillWise is making when a prescription is filled using their card, we predict an increase in usership by 3,500 within the first year of our product being on the market.

3,500 NEW USERS

These numbers are backed up by research and standard practice for financial projections. Even though the projections are estimations, they illustrate that the price transparency service and the patient empowerment campaign we are proposing are not just great ideas, they are actually viable for RefillWise to implement. This new product could bring true value to thousands of Americans at the same time as building the value of RefillWise.

MOVING FORWARD



Through our research we have found that the texting service and empowerment campaign would address the needs that we found among patients. The steps to produce a working pilot are fairly straightforward and would be feasible for RefillWise to take.

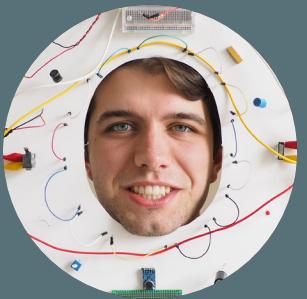
First, RefillWise needs to build out the technology that would make this system robust and complete. This includes mainly building out a querying service to get the pricing information for requested drugs from the database and adding on to the existing texting service to allow it to take the inputs necessary for price transparency.

Second, RefillWise would need to refine the print materials for the empowerment campaign we have developed, and bring them within the RefillWise brand. It would also be beneficial to develop spanish versions of both the pamphlet and the poster, as well as language support for the texting script.

Next, deploy a pilot to Agape Clinic. Stephanie Bohen, the executive director, told us that she would be excited to be the first clinic to get to try out the new product and would welcome the opportunity to host the pilot testing. This pilot testing would involve placing posters and pamphlets in the exam rooms, waiting for patients to use the service, and then assessing the effectiveness and success of the system. Our team believes that this price transparency service and empowerment campaign would address a real need that patients are experiencing daily. The path forward is clear. Through our research we have found the what, when, where, why, and how of this product, now all one must do is build and execute it.

Our Team

The Master of Arts in Design and Innovation at Southern Methodist University is an interdisciplinary program training students in the skills of human-centered design, innovation, and creative problem solving. MADI students come from a variety of backgrounds and are encouraged to utilize their prior educational and professional experiences to complement the projects in the program. Students will graduate MADI with a strong foundation in human-centered design, a process which values solutions that balance human desirability, business viability, and technical feasibility.



CALEB KYLE

Caleb seeks to be a well rounded consultant with proficiencies in technology, human centered design, and business. He graduated with a B.S. in Computer Science from Southern Methodist University and is in his last year of the Master of Arts in Design and Innovation at SMU, hoping to take on a consulting or product management role after graduation. He enjoys craft beer, freelance web design, and lighting things on fire.



GAVIN PHAM

Gavin graduated with a B.S. in Computer Science from Southern Methodist University and is working towards an M.A. in Design and Innovation. He aspires to utilize both of his degrees to help make the world of software, technology, and the Internet more human-centered.



MICHAELA ROLLINS

Michaela is in her second year of the MADI program. She graduated from Indiana University with a B.A. in Psychology and Art History, and has a certificate in graphic design from the SMU CAPE program. MADI has allowed her to integrate her diverse interests in a meaningful way, and plans to take this multidisciplinary approach and apply it to her pursuits in the real world.

FINAL

THOUGHTS

moment to a point where it can still be addressed by the doctor. Both of these solutions address the real issues we saw in our research, driven to be useful products in the eyes of patients. Together, they offer a dynamic solution to issues that patients experience every day, all across the United States. RefillWise has the opportunity to bring these ideas to life, at a scale that would truly impact the patient experience.

MADI

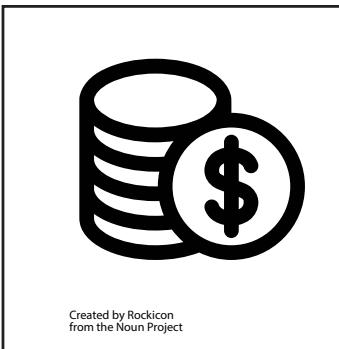
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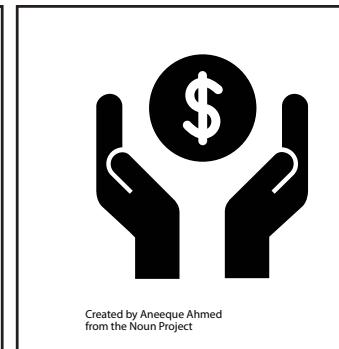
Created by Martyn Jasinski
from the Noun Project



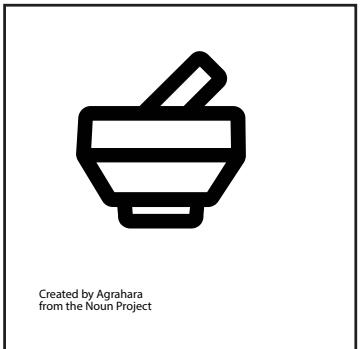
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from the Noun Project



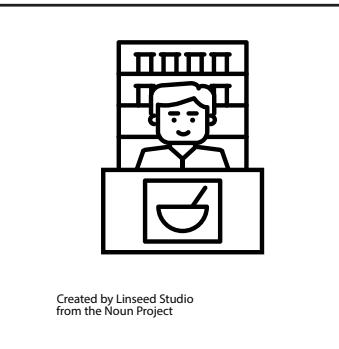
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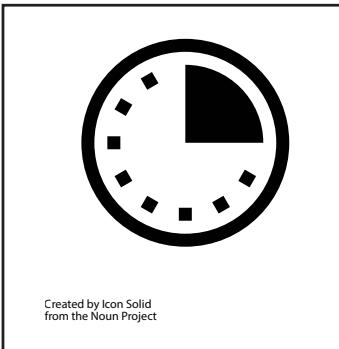
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from the Noun Project



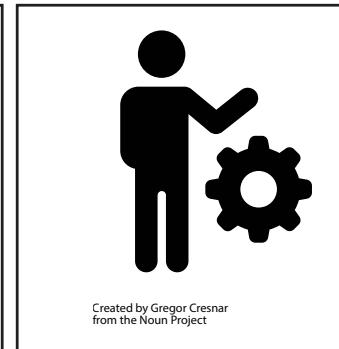
Created by Agrahara
from the Noun Project



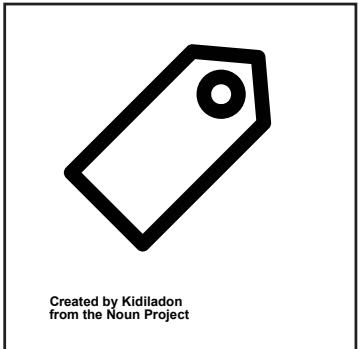
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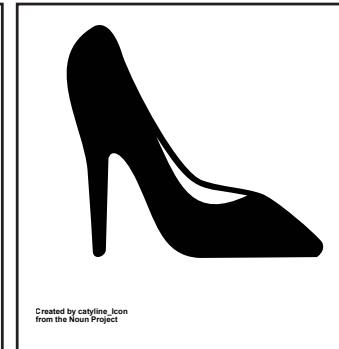
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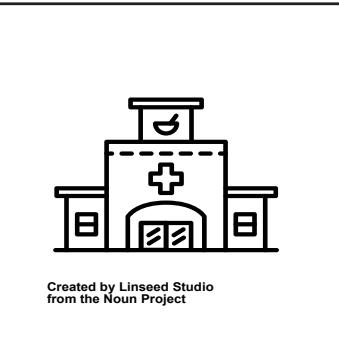
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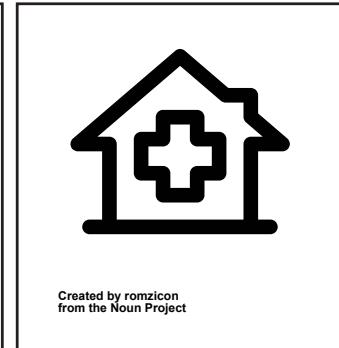
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