

# PROCESS OVERVIEW

## **Understand & Discover**

Survey

Interviews

Discover pain points

Analyze competitors

## **Ideation & Hypothesis**

Brainstorm ideas

Create Hypothesis

Identify Opportunities

## **Content Strategy**

Empathy and Journey Maps

Personas

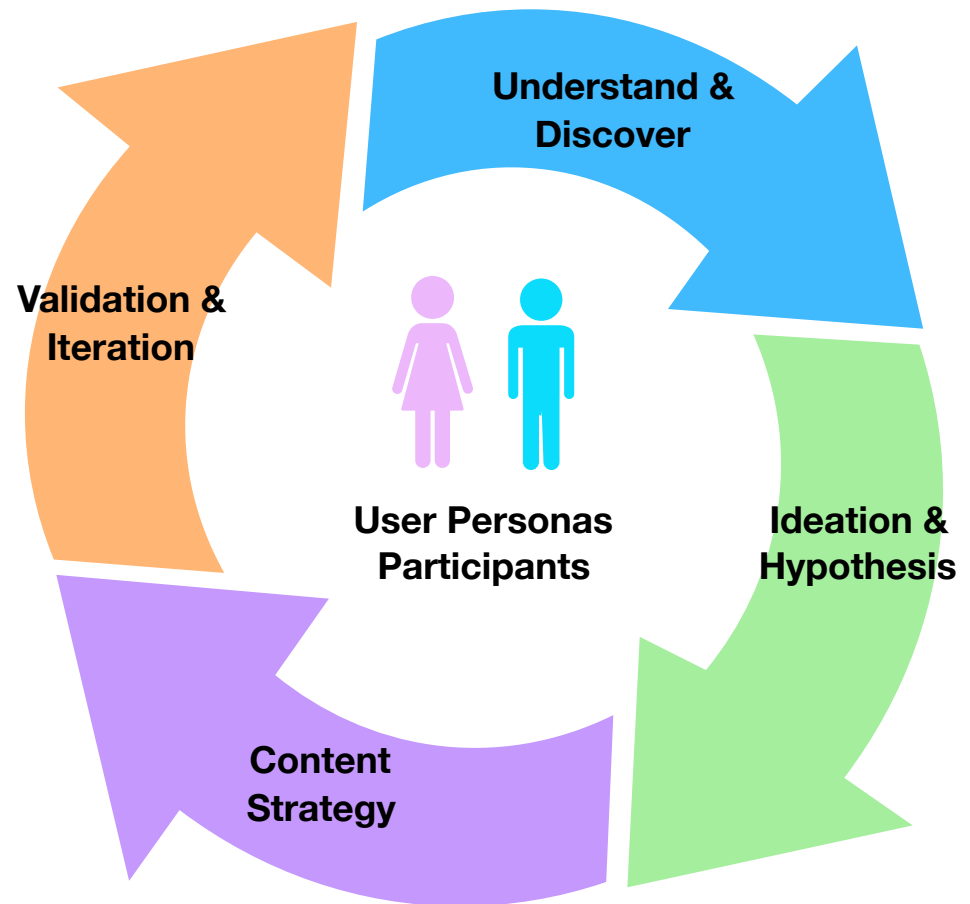
User flows

Card sorting

## **Validation & Iteration**

Wireframing and prototyping

Evaluation and usability



## PROBLEM SPACE

---

- Negative emotions associated throughout patient experience (scheduling to check out)
  - Long wait times and disorganized information
- Explore **how might we reduce wait times and organize information to improve overall patient experience**

# PRIMARY RESEARCH

---

- Conducted 30 surveys and 5 interviews
- Observed different healthcare facilities
- User Values
  - Time
  - Clear communication
  - Transparency
- Pain Points
  - Lack of efficiency in scheduling
  - Unclear wait time estimates
  - Opportunity to better utilize wait times
  - Disorganized patient and appointment information

# SECONDARY RESEARCH & COMPETITIVE ANALYSIS



- Healthcare Technology
- Digitization/ "Smart Hospitals"
  - 'hospitals embed new technologies into their design and operations to **improve customer experience, as well as outcomes and costs**'
- Telemedicine

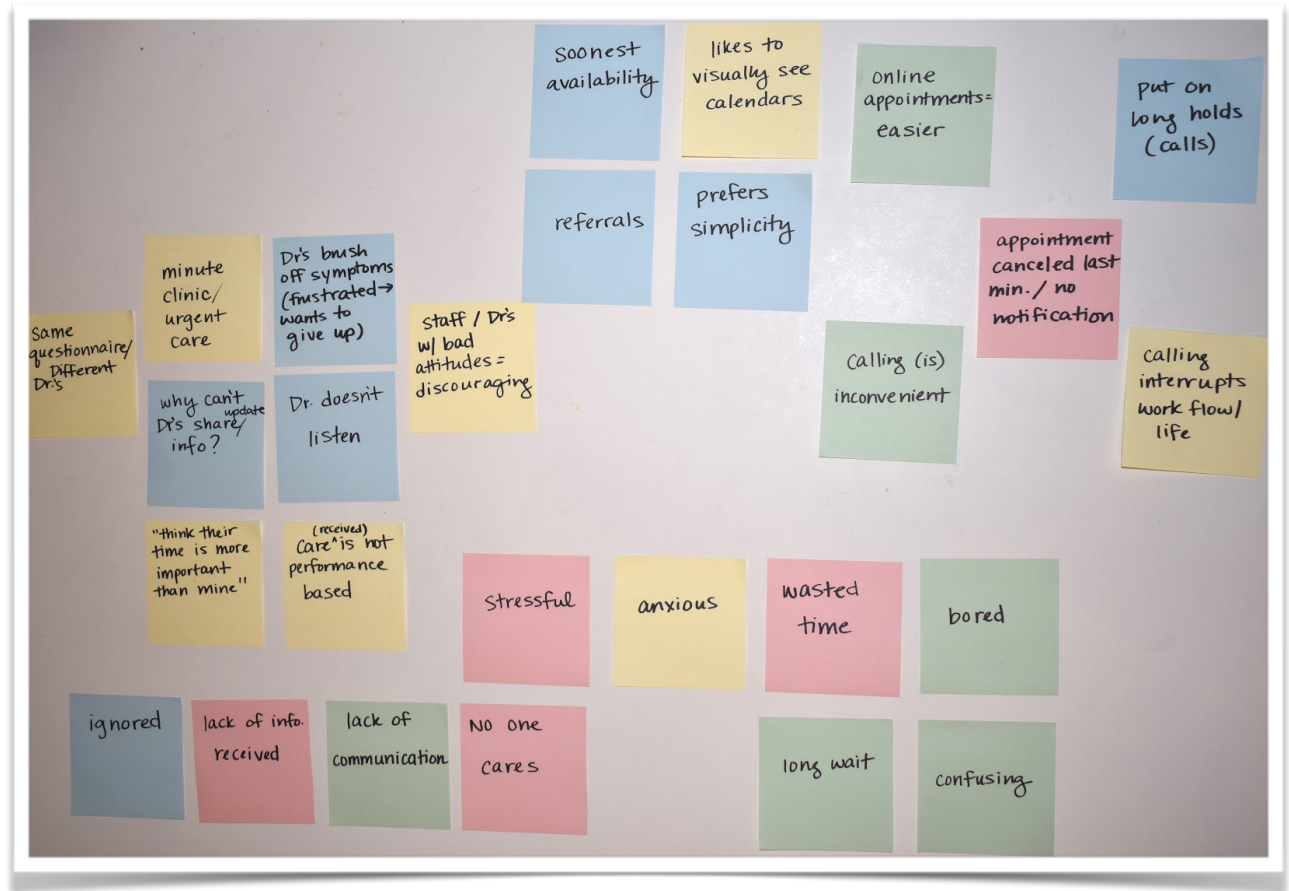
<https://healthcare.mckinsey.com/finding-future-care-provision-role-smart-hospitals>



# AFFINITY MAP

Quickly mapping out key takeaways from user surveys and interviews. Then finding patterns and grouping them.

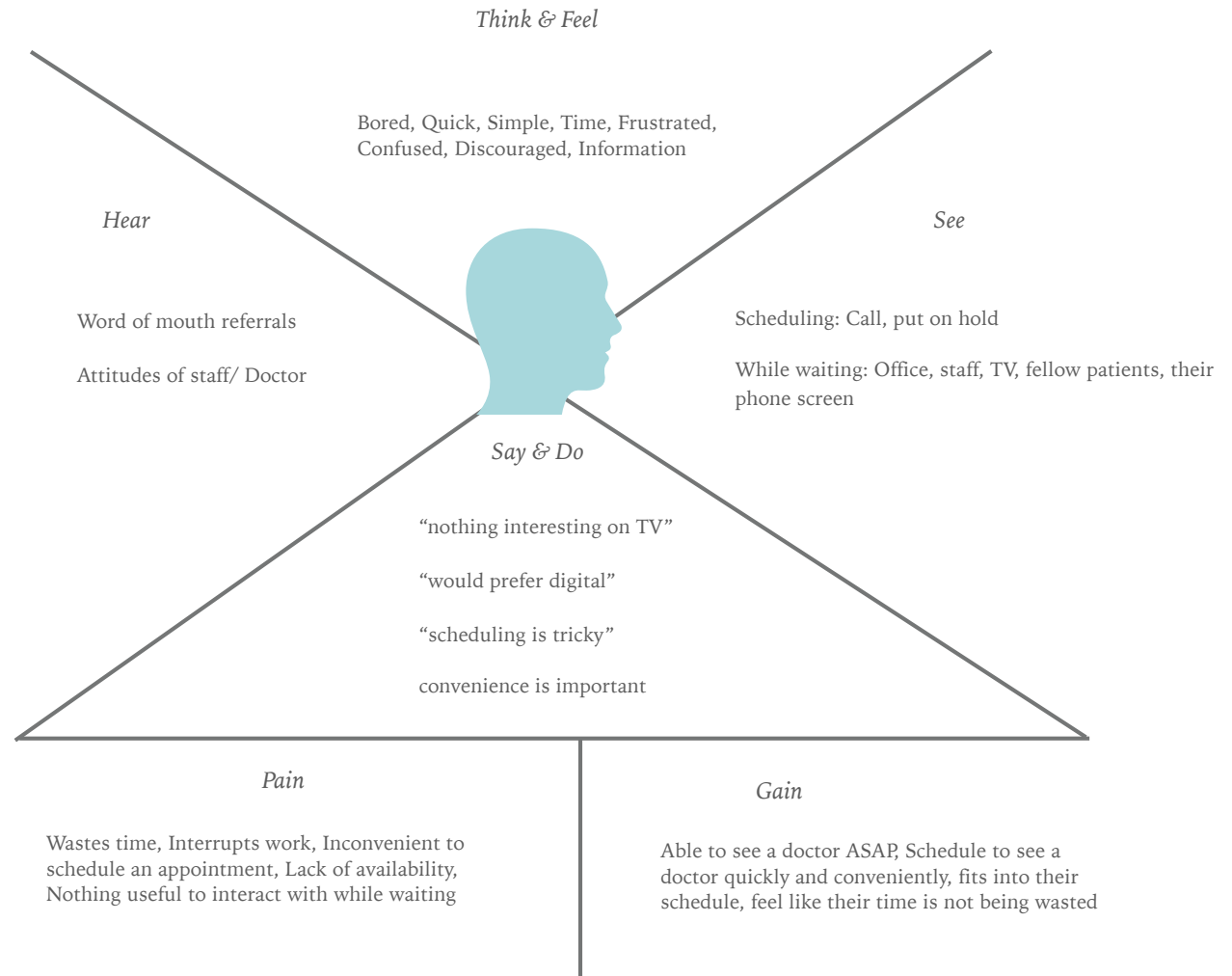
I have determined categories based off feelings experienced throughout the process, decision making, and overall experience and feedback.

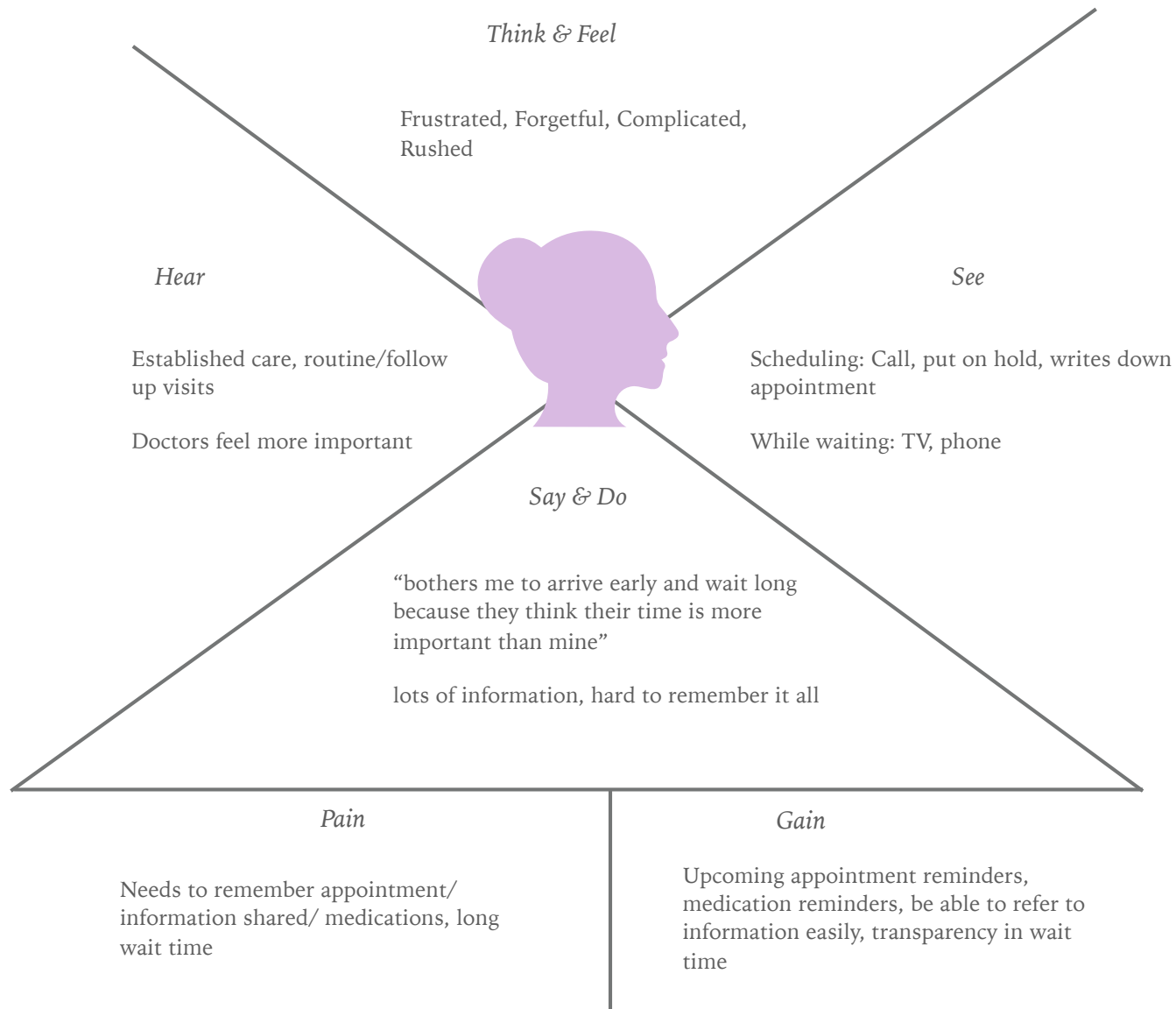


# EMPATHY MAP

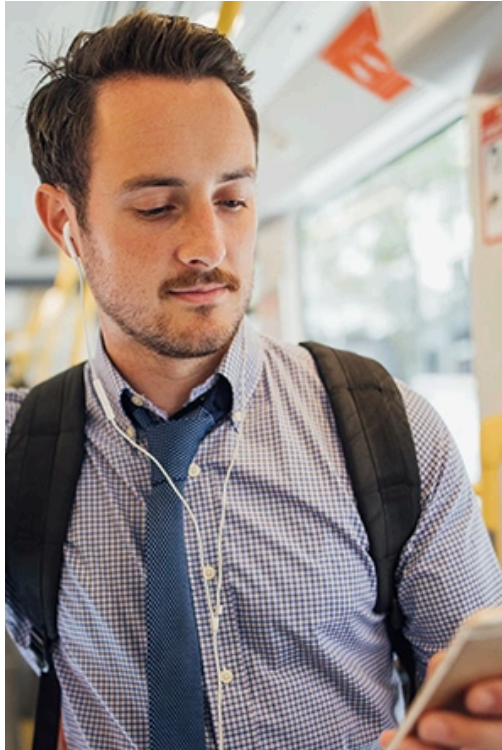
Empathy maps were created to help focus on users in a holistic way, including their main obstacles.

From the **five interviews**, **two main personas** were identified and synthesized. Empathy maps helped support the user personas.





# UNDERSTANDING AUDIENCE WITH PERSONAS



## MINUTE MATT

- **Background:**
  - **Age:** 29
  - **Education:** Graduated university 2012
  - **Occupation:** Software Engineer
  - **Marital Status:** Single
  - **Kids:** None
- **Matt's Story:** Matt has been a software engineer for 5 years. He is focused on growing in his career and describes his lifestyle as active and "on the go." Matt sees the doctor when he needs to, and is overall healthy.
- **Device:** Spends majority of his time on mobile
- **Obstacles Faced:** Calling to schedule an appointment is frustrating because it causes an **interruption to his workflow** and often involves **long hold times**. Needs to **see a doctor as soon as possible**. Has had **appointments canceled on last minute** without any notification. Wait times for appointments are long, experiences **boredom** in the waiting rooms, and does **not** receive **enough info, interaction, or communication**.
- **Goals, motivations:**
  - **Information-** find a good doctor with availability that fits into his work schedule, updated on any changes to appointments
  - **Effortless scheduling** - to be seen by a doctor immediately. A quick and more convenient way to set up an appointment.
  - **Transparency-** of wait times and any notifications regarding appointment
  - **Communication-** easy, simple, valuable (fun health facts, updates to any changes or follow up procedure), interactive and more personalized.






















# STRAIGHT-SHOOTING SALLY

---

- **Background:**
  - **Age:** 68
  - **Education:** High School Degree
  - **Occupation:** Retired (Previously a Homemaker)
  - **Marital Status:** Married
  - **Kids:** Yes, and 3 grandkids
- **Sally's Story:** Sally worked as a bank teller for a brief time before becoming a full time homemaker. She is now retired and the proud Nana of three grandchildren. She sees several doctors for routine check ups.
- **Device:** Sally has a smart phone and texts / FaceTime's with her grandkids often. She also calls her friends to catch up.
- **Obstacles Faced:** Long wait time, filling out the same questionnaire each visit, feels like Doctor thinks their time is more important. Forgets appointment dates/times if not written down. Also has trouble remembering all of the content discussed during visit. Multiple medications to keep track of.
- **Goals, motivations:**
  - **Organization-** a better way of keeping track of appointment, information, medications, etc.
  - **Efficiency-** being able to update questionnaires as necessary
  - **Trust and respect-** in quality of her care and her time

# ORGANIZING A JOURNEY MAP

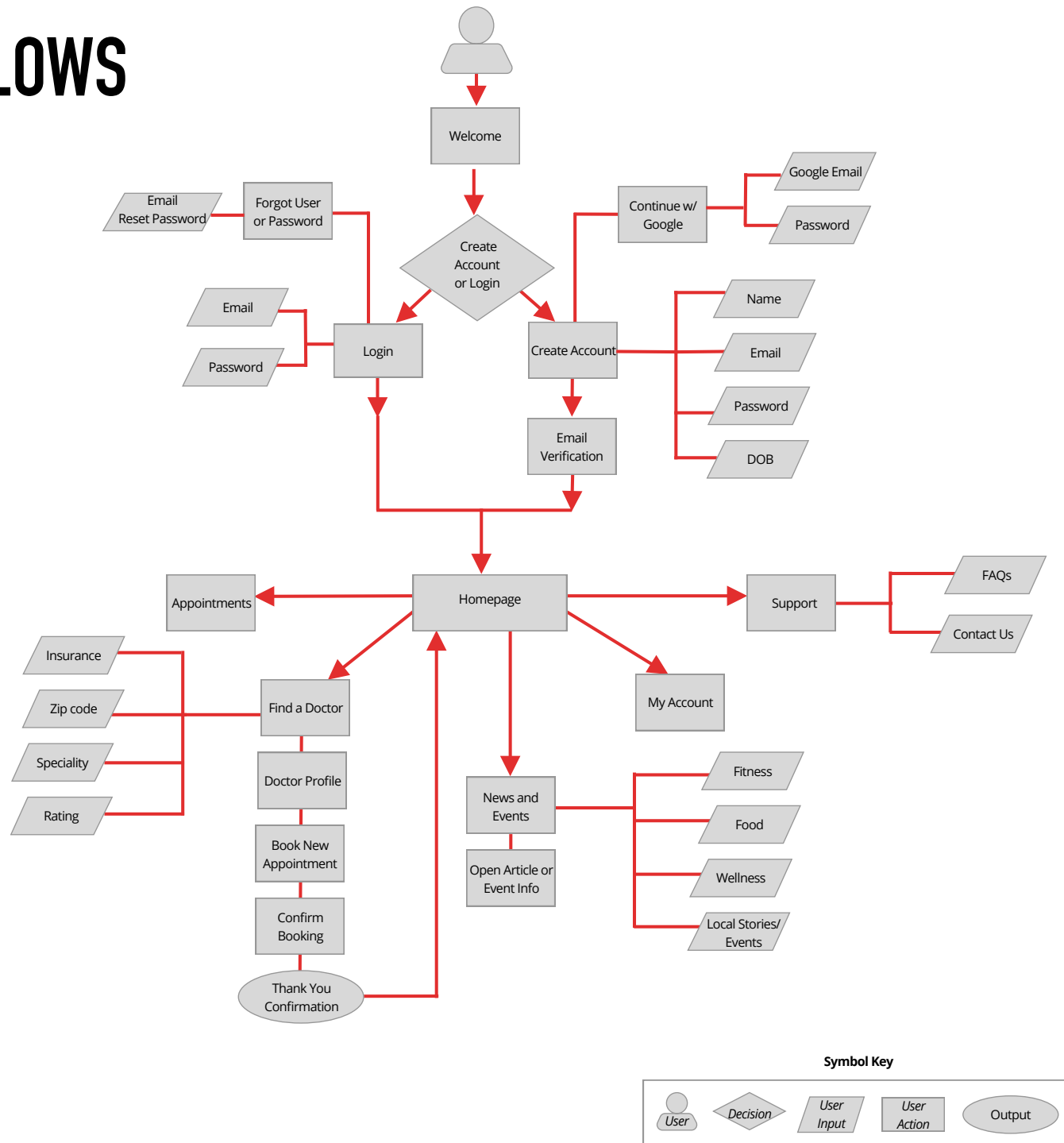
| STAGES        | RESEARCH  | BOOK APPOINTMENT  | CHECK IN   | WAIT  | VISIT  | CHECK OUT   |
|---------------|---|---|--|---|--|---|
| DOING         |     |    |                                        |     |    |    |
|               | 10-15min  | 20min   | 35min+   | 35min+  | 15min  | 10min   |
| THINKING      | <ul style="list-style-type: none"> <li>-Where does my insurance cover?</li> <li>-What is the nearest doctor?</li> <li>-When is the soonest I can be seen?</li> <li>-Has the doctor been recommended to me?</li> </ul> | <ul style="list-style-type: none"> <li>-How do I make an appointment?</li> <li>-What is the soonest appointment that fits my availability?</li> <li>-How do I check/make changes to appointments?</li> </ul>  | <ul style="list-style-type: none"> <li>-Where do I go? Who do I talk to?</li> <li>-How long will the wait be?</li> <li>-Is there a cost/copay?</li> <li>-Do I need to fill out a questionnaire?</li> </ul> | <ul style="list-style-type: none"> <li>-What should I do while I wait?</li> <li>-When will I be seen?</li> <li>-What is available for my entertainment?</li> </ul>  | <ul style="list-style-type: none"> <li>-How is the doctor's bedside manner?</li> <li>-Will the doctor listen to me?</li> <li>-Will I be able to remember everything discussed?</li> <li>-What are the next steps?</li> </ul> | <ul style="list-style-type: none"> <li>-Where do I go? Who do I talk to?</li> <li>-Where can I access information re: my visit?</li> <li>-Do I want to see the same doctor or a different one?</li> <li>-Do I need to schedule an additional appointments?</li> </ul> |
| FEELING       | <ul style="list-style-type: none"> <li>-Apprehensive</li> <li>-Clueless</li> <li>-Sick</li> <li>-Hopeful</li> </ul>                 | <ul style="list-style-type: none"> <li>-Confused</li> <li>-Frustrated</li> <li>-Annoyed</li> </ul>    | <ul style="list-style-type: none"> <li>-Anxious</li> <li>-Surprised</li> </ul>    | <ul style="list-style-type: none"> <li>-Bored</li> <li>-Frustrated</li> </ul>   | <ul style="list-style-type: none"> <li>-Discouraged</li> <li>-Rushed</li> </ul>    | <ul style="list-style-type: none"> <li>-Confused</li> <li>-Discouraged</li> <li>-Disappointed</li> </ul>  |
| EXPERIENCE    | <ul style="list-style-type: none"> <li>-Sift through information to find best fit</li> <li>-Research doctor, insurance, and location online</li> <li>-Referral from another doctor or someone they know</li> </ul>    | <ul style="list-style-type: none"> <li>-Book an appointment by going to the website and calling</li> <li>-Often put on hold for a long period of time</li> <li>-Write down manually appointment information</li> </ul>                                | <ul style="list-style-type: none"> <li>-May be unexpectedly cancelled on last minute</li> <li>-First time patient or returning patient fills out questionnaire</li> <li>-Pay for appointment</li> </ul>    | <ul style="list-style-type: none"> <li>-Long wait times</li> <li>-No communication about wait time</li> <li>-Nothing interesting on TV</li> <li>-Spends time idly browsing, texting, or otherwise using their smart phone or tablet</li> </ul>  | <ul style="list-style-type: none"> <li>-A lot of information to digest afterward</li> <li>-May think of questions afterward</li> </ul>   | <ul style="list-style-type: none"> <li>-Has to remember and digest a lot of information</li> <li>-Satisfied or not with vsii</li> <li>-Wait for available staff member</li> <li>-Go home and repeat (call to schedule an appointment)</li> </ul>                      |
| OPPORTUNITIES | <ul style="list-style-type: none"> <li>-Straight forward navigation</li> <li>-Ability to search for and filter doctor's based on criteria</li> <li>-5min</li> </ul>   | <ul style="list-style-type: none"> <li>-Allow users to quickly make an appointment and visually see availability</li> <li>-Digitize/ ownership of appointment process</li> <li>-Set up notifications and reminders</li> <li>-5min</li> </ul>          | <ul style="list-style-type: none"> <li>-Streamline check-in —&gt; Prior to appointment, send questionnaire and expected cost based off insurance</li> <li>-3min</li> </ul>                                 | <ul style="list-style-type: none"> <li>-Provide accurate wait times</li> <li>-Update health information</li> <li>-Better utilize wait time (ex. time to educate)</li> <li>-Patient concerns readily accessible</li> <li>- 15min</li> </ul>  | <ul style="list-style-type: none"> <li>-Ability to take notes</li> <li>-Rating system to grade level of care</li> <li>-Simple way to to contact nurse/ Dr. after visit</li> <li>-30min</li> </ul>                            | <ul style="list-style-type: none"> <li>-Patient profile to help organize information</li> <li>-Ability to rate doctor</li> <li>-Simple follow-up instructions</li> <li>-Easily able to schedule another visit</li> <li>-3min</li> </ul>                               |

# DEVELOPING USER STORIES

| User                         | Task   | Priority |  | Key |                          |
|------------------------------|--|----------|--|-----|--------------------------|
| As a user                    | I can create an account  | 1        |  |     | User Profile             |
| As a user                    | I can login to my account  | 1        |  |     | User Search              |
| As a user                    | I can fill out healthcare questionnaires before appointments                       | 1        |  |     | Appointment (Scheduling) |
| As a user                    | I can make changes to my profile   | 2        |  |     | Check-in                 |
| As a user                    | I can reset my password  | 2        |  |     | Wait time                |
| As a user                    | I can specify pharmacy preferences (location)                                      | 2        |  |     | During wait time         |
| As a user                    | I can add a profile picture  | 3        |  |     | After-visit              |
| As a user                    | I can search for a doctor by zipcode   | 1        |  |     |                          |
| As a user                    | I can search for a doctor by insurance provider                                    | 1        |  |     |                          |
| As a user                    | I can search for a doctor by specialty   | 1        |  |     |                          |
| As a user                    | I can search for a doctor by ratings/reviews                                       | 1        |  |     |                          |
| As a user                    | I can search for a pharmacy based on zip code                                      | 1        |  |     |                          |
| As a user                    | I can book an appointment online   | 1        |  |     |                          |
| As a user                    | I can see availability per each Doctor   | 1        |  |     |                          |
| As a user                    | I can schedule a follow up appointment   | 1        |  |     |                          |
| As a user                    | I can get notifications / reminders re: my upcoming appointment                    | 1        |  |     |                          |
| As a user                    | I can modify an appointment  | 1        |  |     |                          |
| As a user                    | I can cancel an appointment  | 1        |  |     |                          |
| As a user                    | I can call the Doctor's office regarding my appointment                            | 2        |  |     |                          |
| As a user                    | I can check in for my appointment  | 1        |  |     |                          |
| As a front desk staff member | I want to see who has checked in and who still needs to check in                   | 1        |  |     |                          |
| As a user                    | I can add a payment method   | 2        |  |     |                          |
| As a user                    | I can pay for my visit before my appointment                                       | 2        |  |     |                          |
| As a user                    | I can see where I am in the queue (while waiting)                                  | 1        |  |     |                          |
| As a user                    | I can see an estimated wait time   | 1        |  |     |                          |
| As a user                    | I can see hospital news or announcements   | 1        |  |     |                          |
| As a user                    | I can see updates to my insurance(benefits)  | 1        |  |     |                          |
| As a user                    | I can play health trivia   | 2        |  |     |                          |
| As a user                    | I can get seasonal tips (ex. how to prevent flu during flu season)                 | 2        |  |     |                          |
| As a user                    | I can see health-related events offered near me (ex. free flu vaccine on Tuesdays) | 2        |  |     |                          |
| As a user                    | I can learn about the latest healthcare research                                   | 3        |  |     |                          |
| As a user                    | I can collect points and level up for completing certain tasks                     | 3        |  |     |                          |
| As a user                    | I can rate my doctor visit   | 1        |  |     |                          |
| As a user                    | I can write a review for my visit  | 1        |  |     |                          |
| As a user                    | I can contact my health care practioner directly with any questions or concerns    | 1        |  |     |                          |
| As a user                    | I can request a refill for my medication   | 2        |  |     |                          |
| As a user                    | I can see notes regarding my healthcare plan and information                       | 2        |  |     |                          |

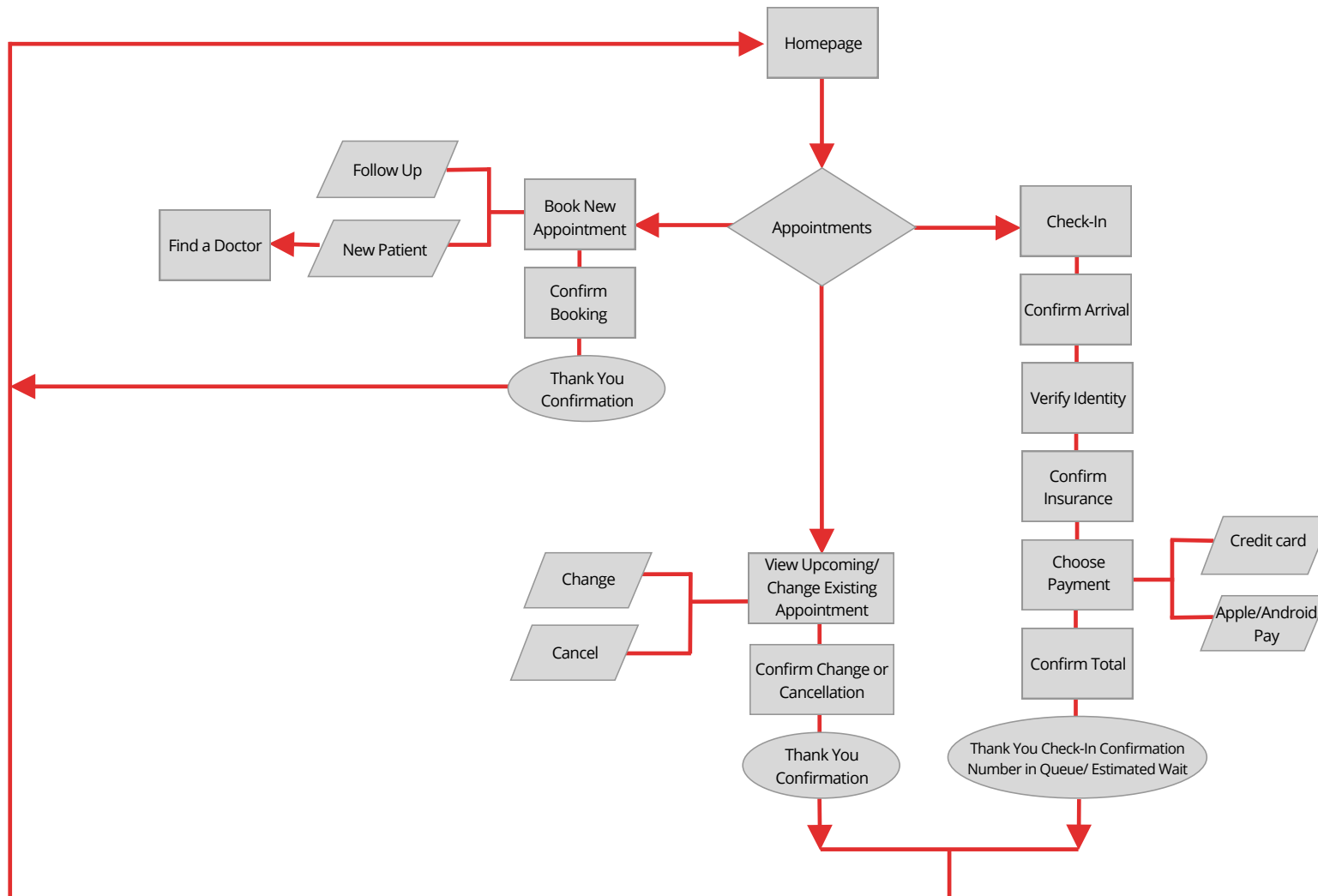
# CREATING USER FLOWS

Here is a user flow for sign up and homepage. The **red routes** signify the most important action to be taken by the user. The symbol key helps to identify the user decision, input, and action as well as the output.

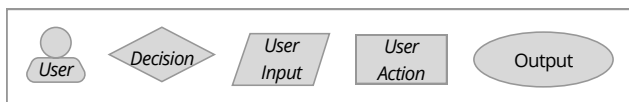


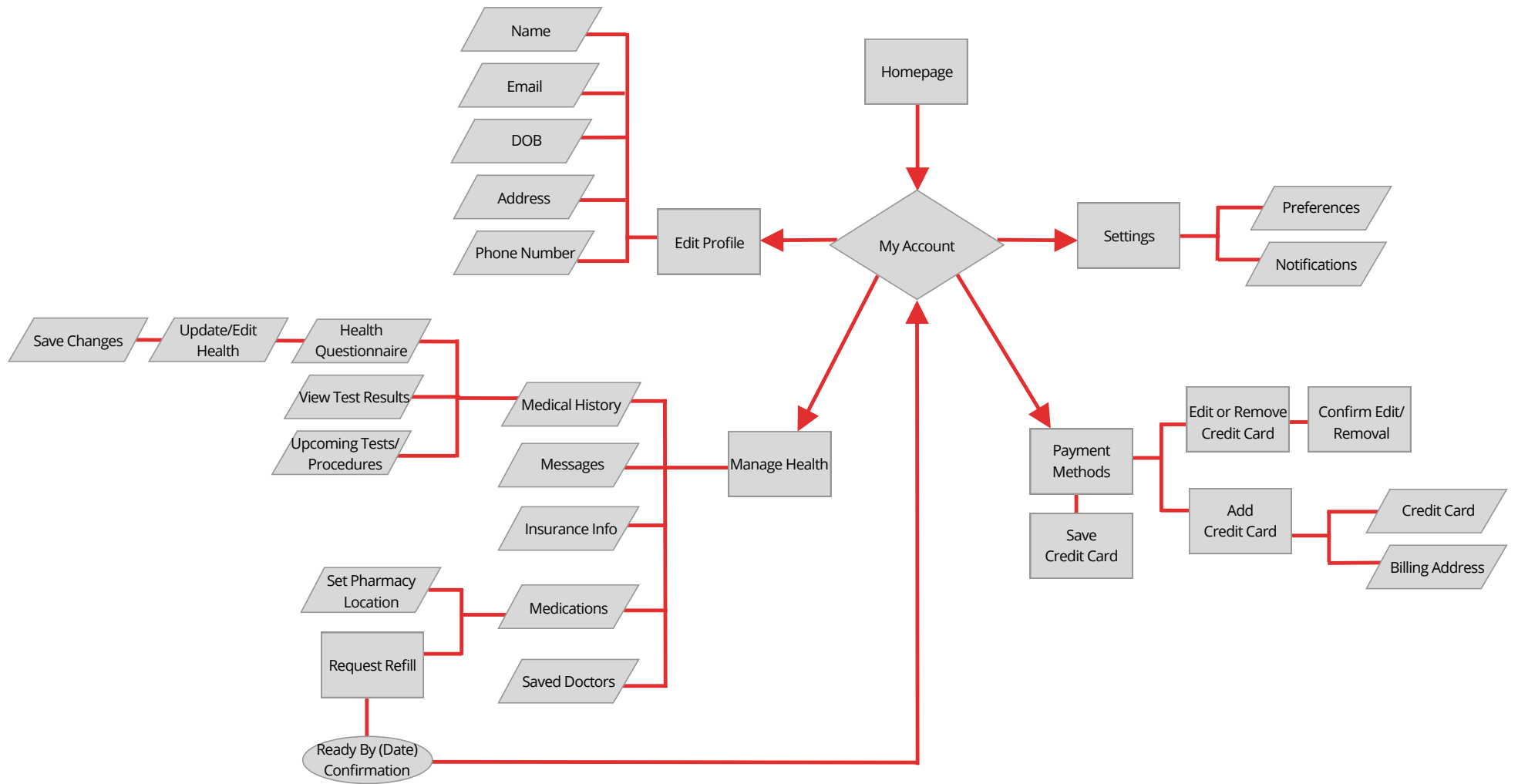


From the homepage, this is the user flow for the 'Appointment' landing page (from deciding to book, change, and check in). Below you will also see the user flow for 'My Account.'

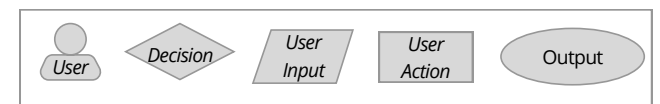


**Symbol Key**

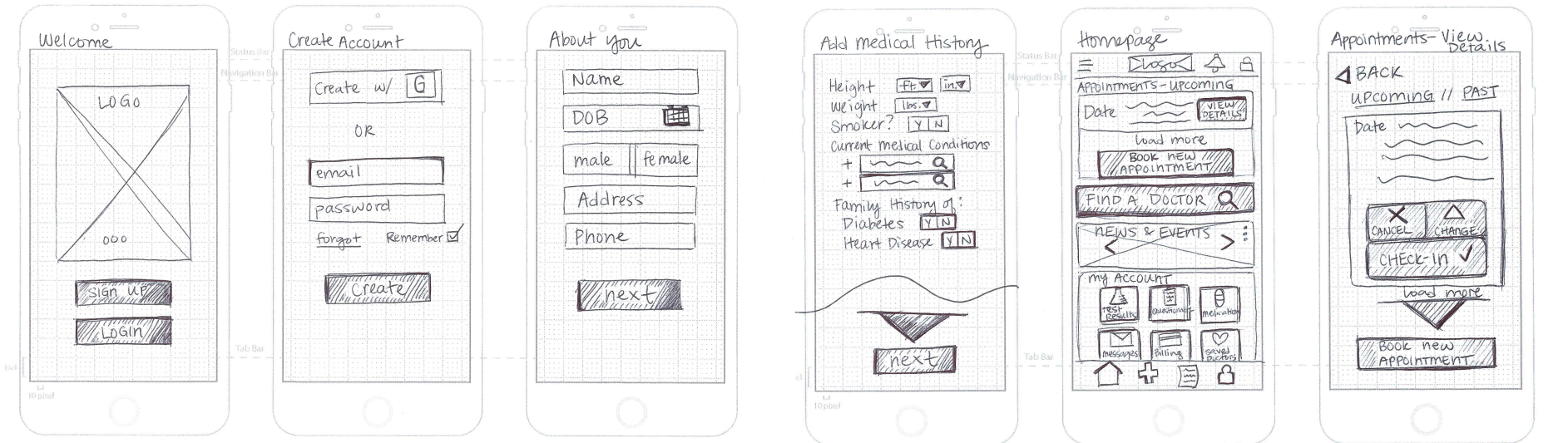




**Symbol Key**

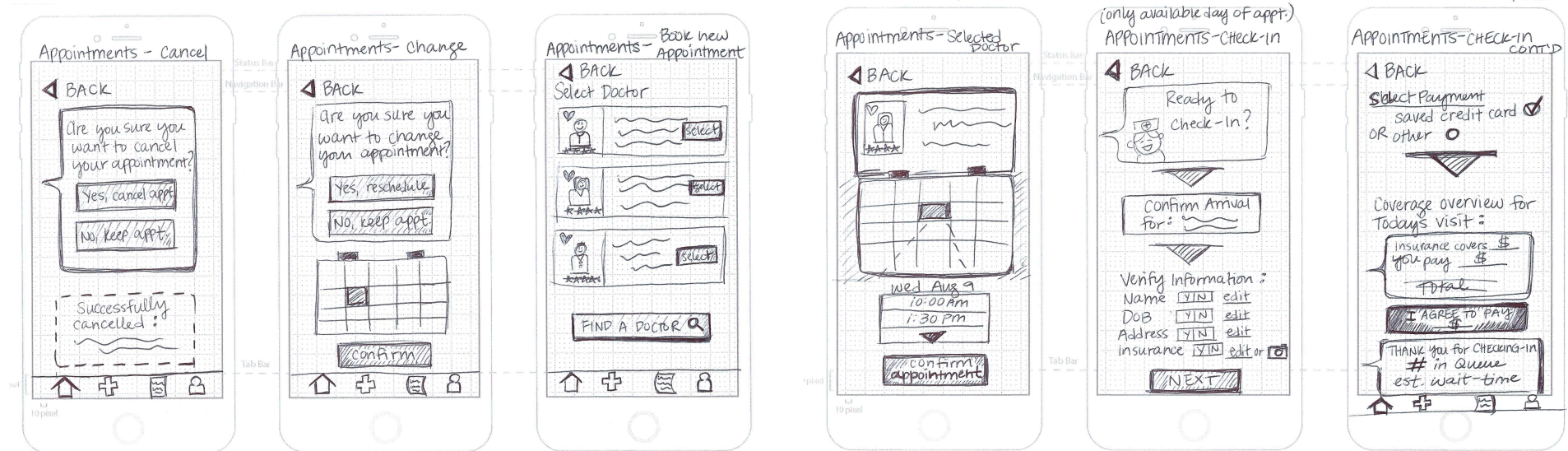


# BUILD WIREFRAME PROTOTYPE



marvelapp.com

PG 1



marvelapp.com

PG 2

marvelapp.com

PG 3

marvelapp.com

PG 4