

UPMC

RESEARCH / DESIGN

Key Headlines

SEEING THE FOREST FOR THE TREES - HUMBLING & HARDWOOD



Learn what truly transforms
actual human experience and let that
drive our approach to digital



Key Headlines

Human
Experience

Plain Talk

Wisdom of
Crowds

Process Focus

Time Pressure

Context Rules

Design for
Transparency

Health.ai



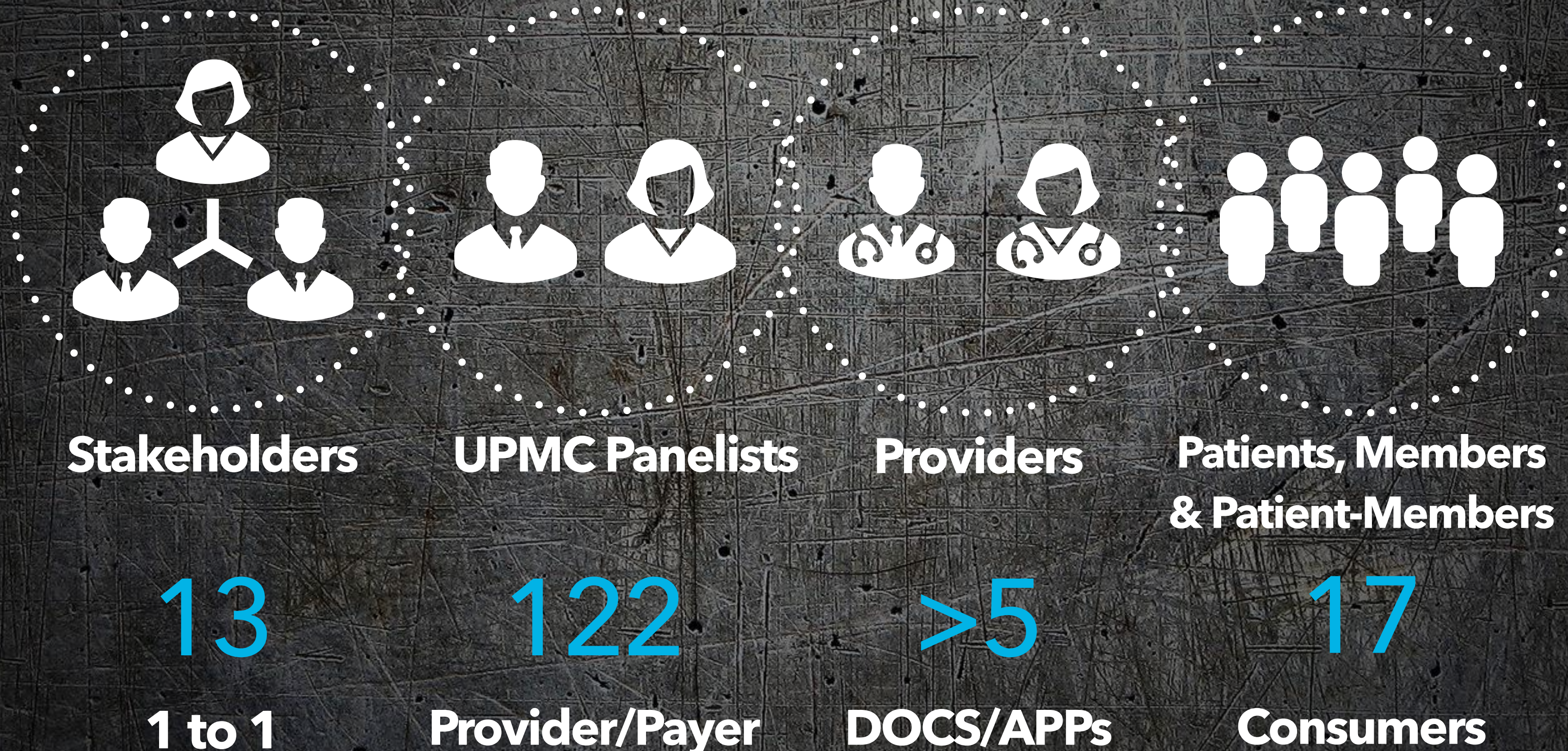
Next Steps

- Instantiate the Program (PMO = Plan/Payer Solution)
- Prioritize Features and Release Plan, Assess Impact Across UPMC (Change Mgt.) & KPIs Planning
- Resource Planning for Enterprise/Mobiquity Needs (e.g. 3.0, 4.0?)
- Agree on Plan/Staff and Kickoff Initiation of Plan/Staging/Phasing
- Establish Steering & Governance Team
- *Assess Adjacent Regs/Compliance/Environment topics etc...
- Keep the Consumer in for the duration

What We Did

WHY WHO AND WHAT DID WE DO TO GET TO HERE

Participants



By the Numbers

86 INTERVIEW
SESSIONS

132 HOURS OF
INTERVIEWS

25 DAYS
ON SITE

5 INDIVIDUAL
RESEARCHERS

17 PATIENTS
& MEMBERS

6 DOCTORS
& APPS

Health
& Wellness

Doctors
& Hospitals

Bills
& Claims

Appointments

Medicines

Test Results

Patient Themes

Wellness

Find

Money

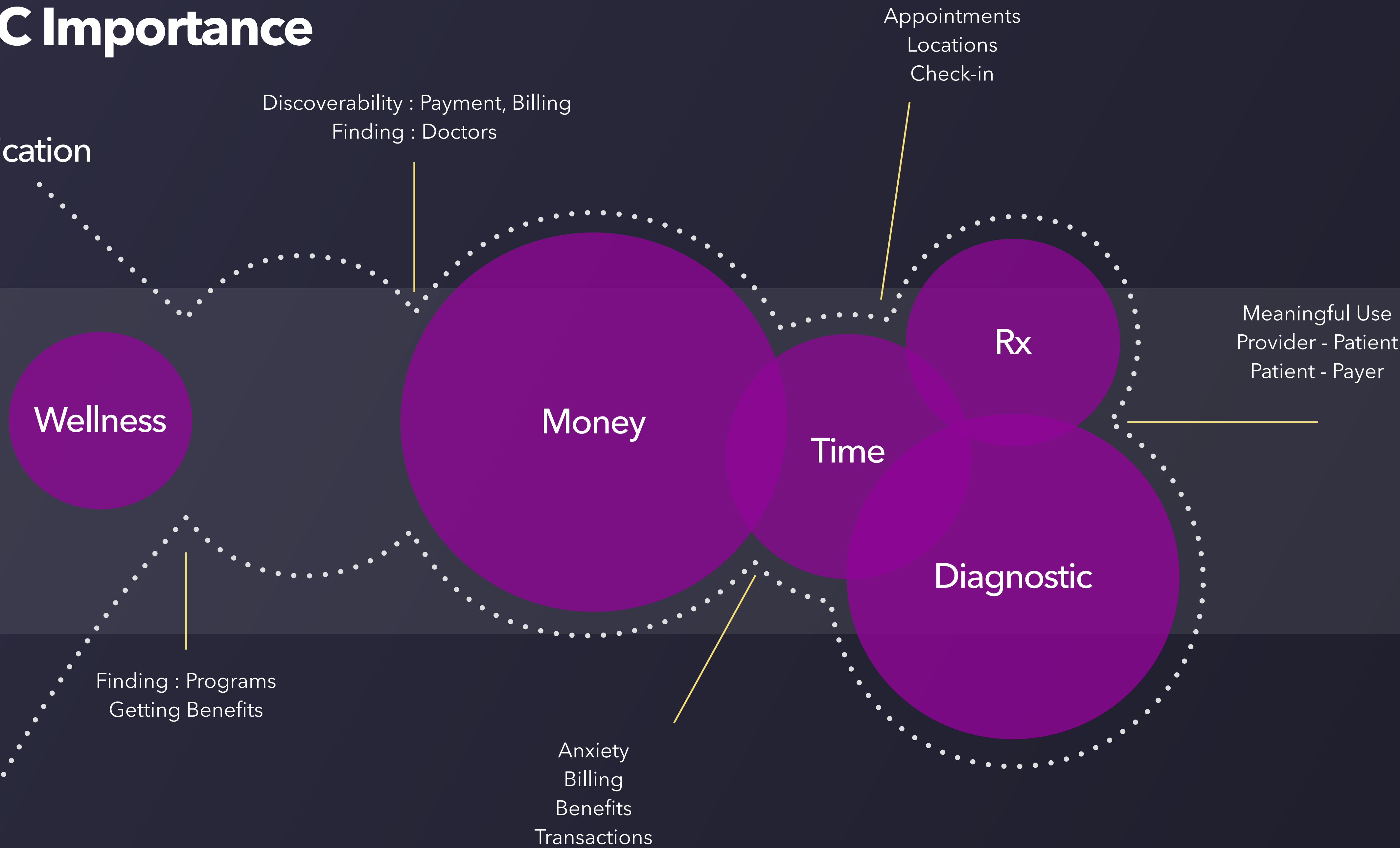
Time

Rx

Diagnostics

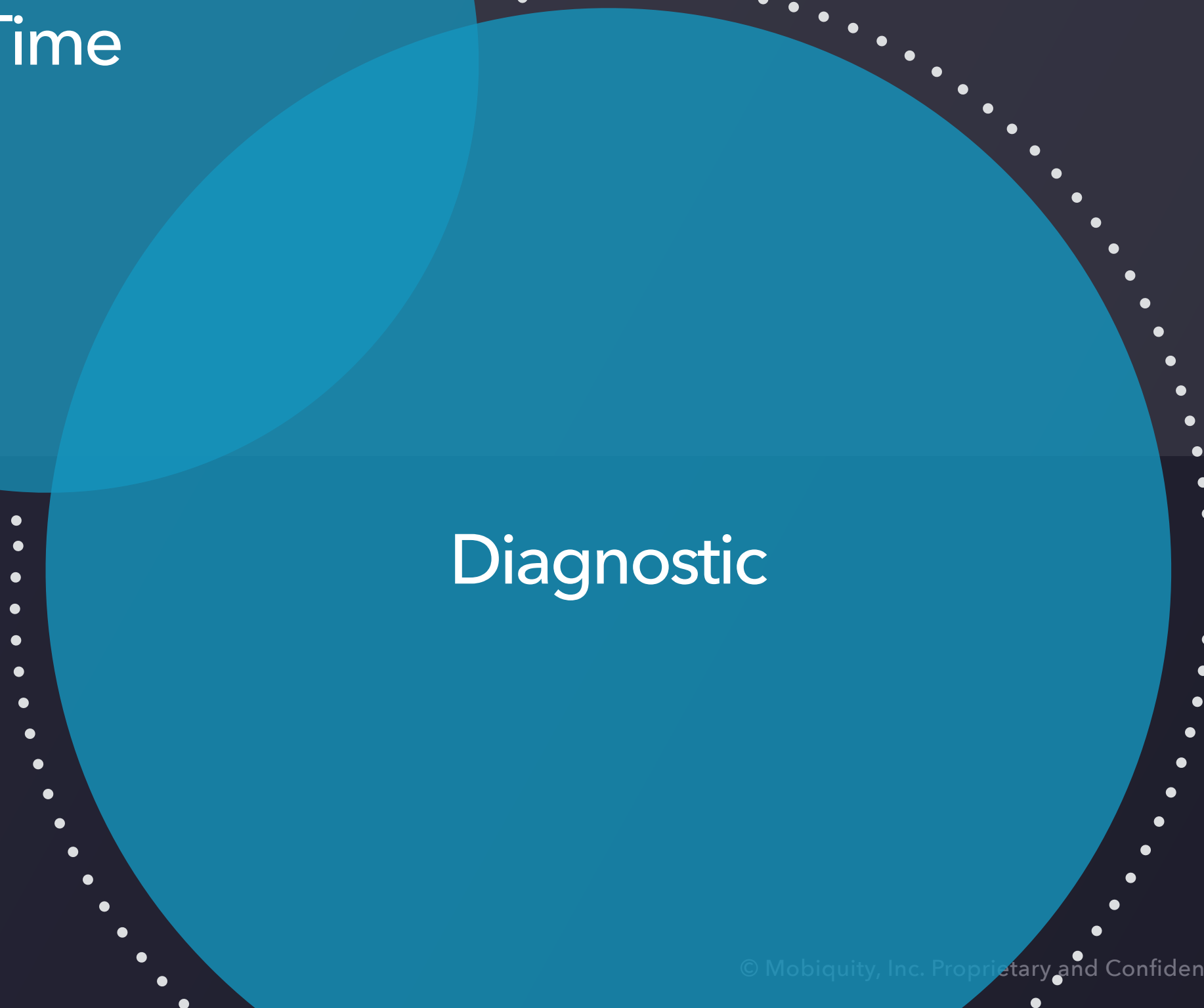
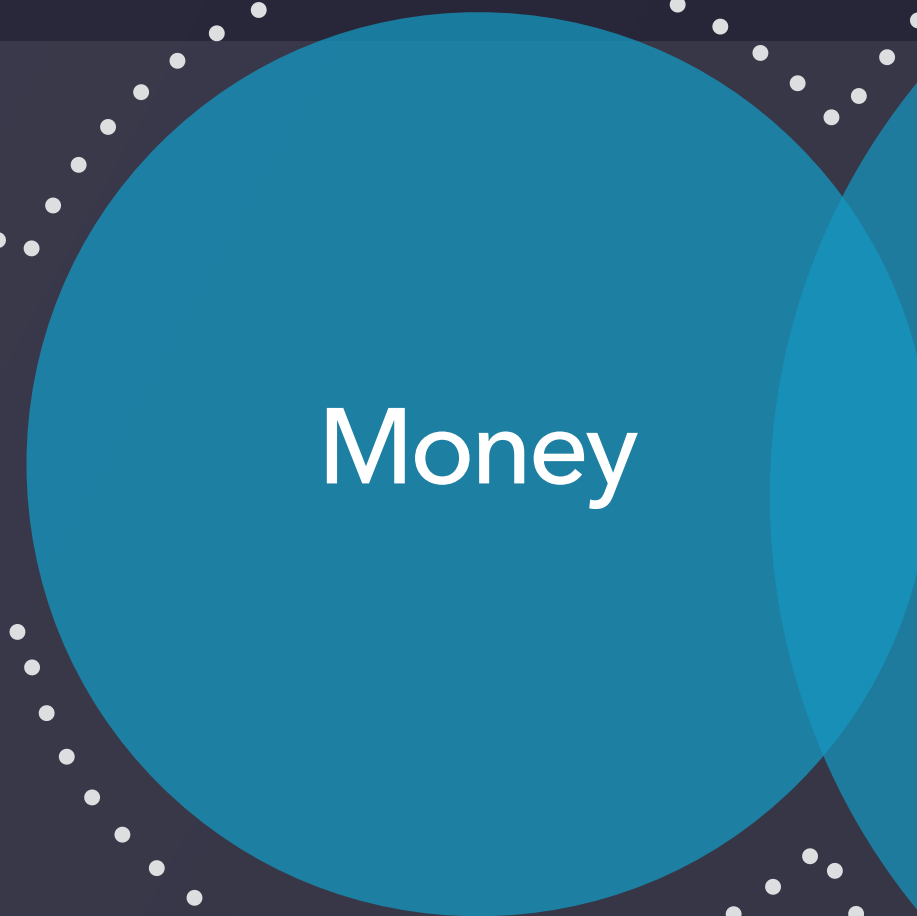
UPMC Importance

Communication



Patient Perspective

Communication



App Experiences Discussed



Amazon



Capital One



Charlie



Facebook



Instagram



Joyable



LiveATC



Mint



Paypal



Snapchat



Spark



Turbotax



Uber



USAA



Waze



Wells Fargo



WhatsApp



Yelp

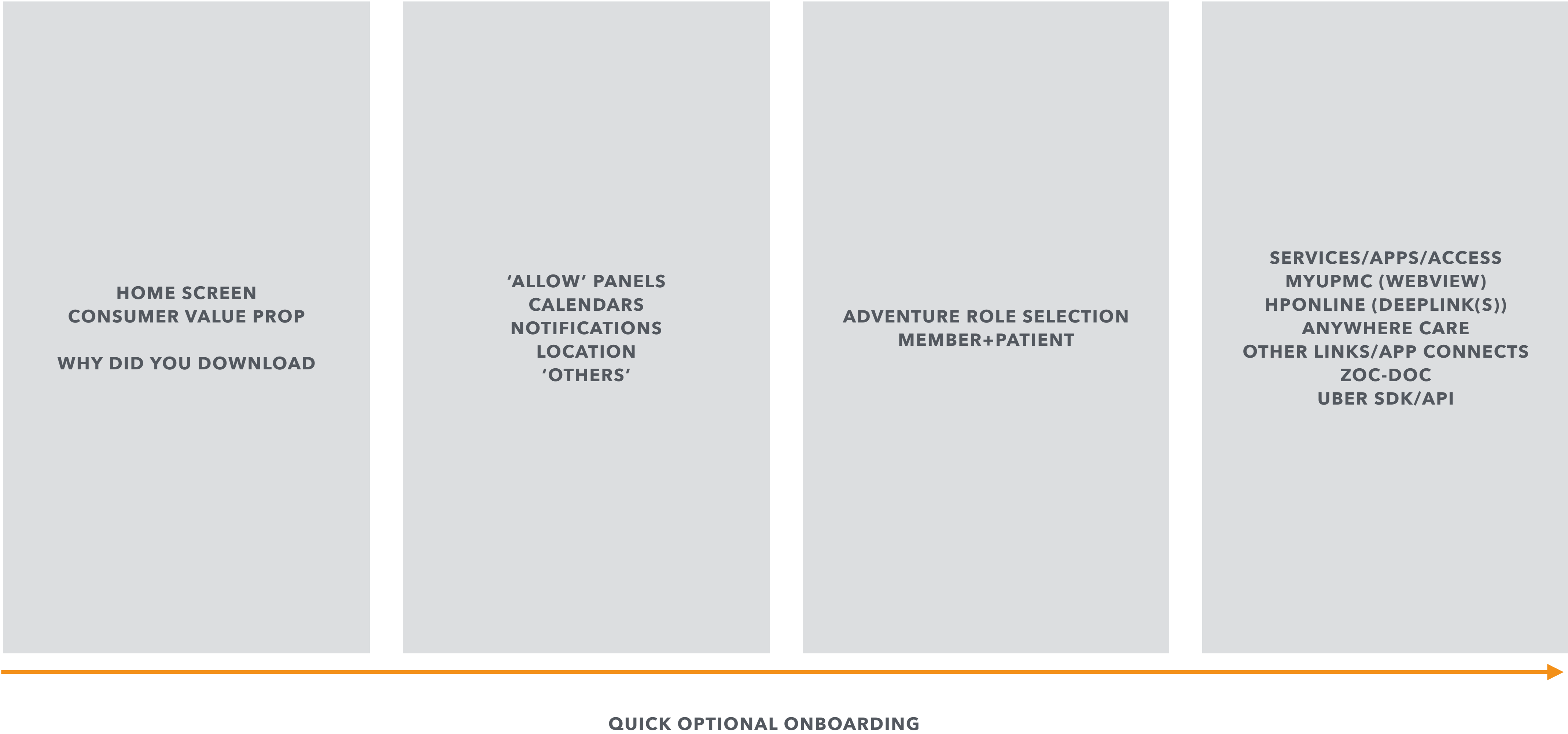
MARCH 29, 2017

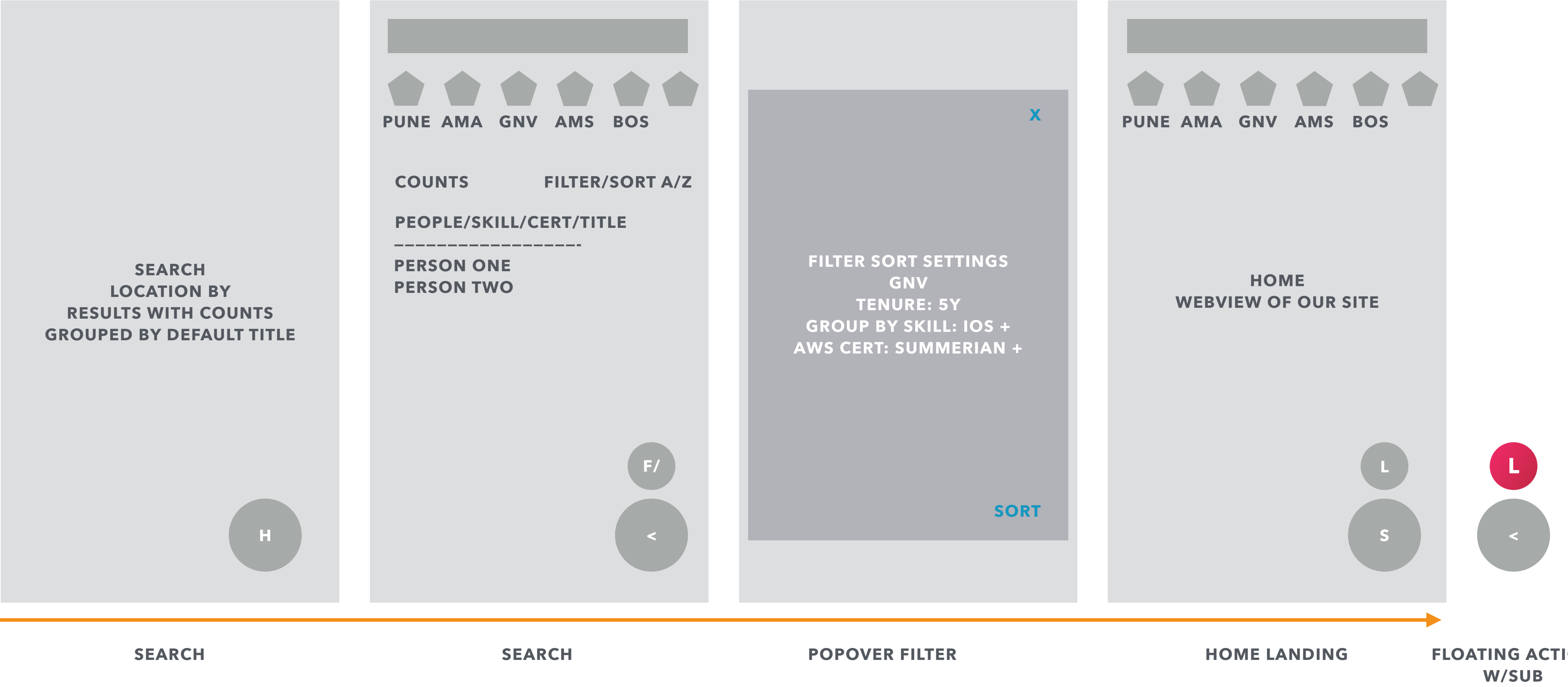
Summer 1UPMC.MVP

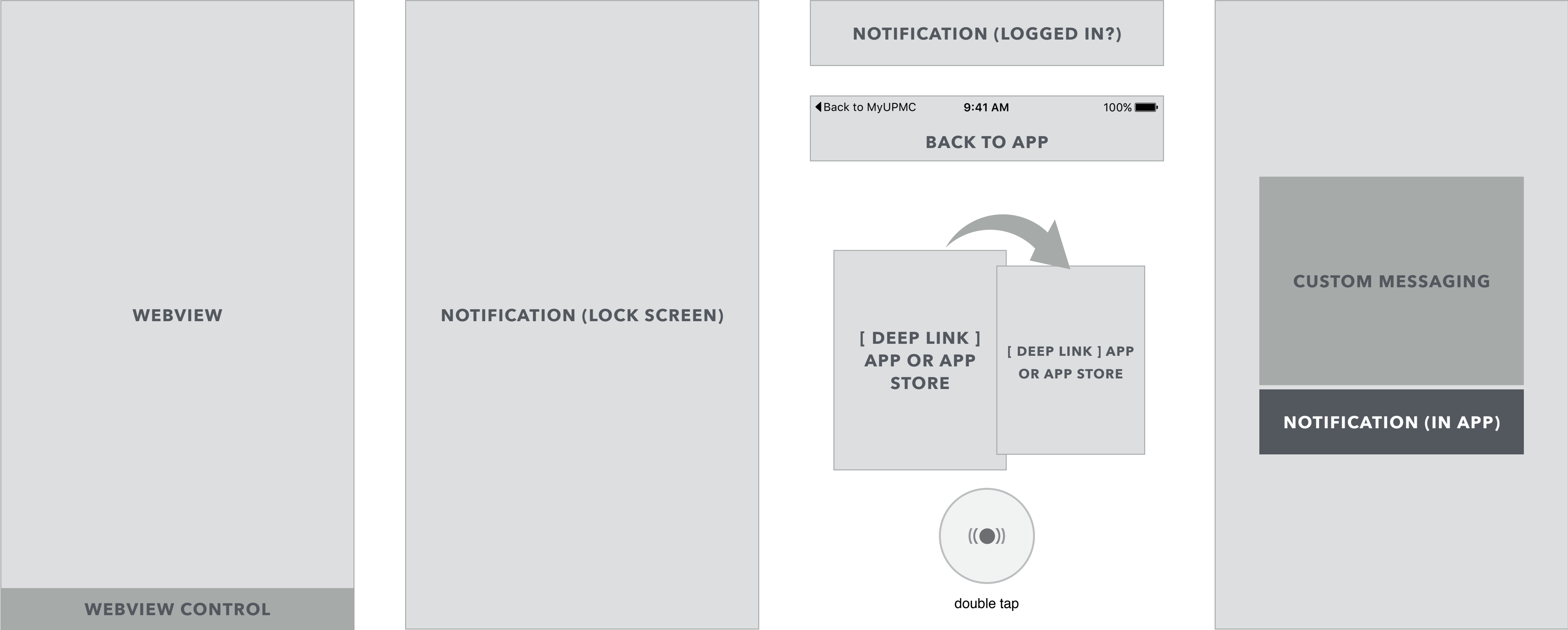
CONCEPT DISCUSSION OF POSSIBLE SCOPE FOR 1UPMC

mobiquity™

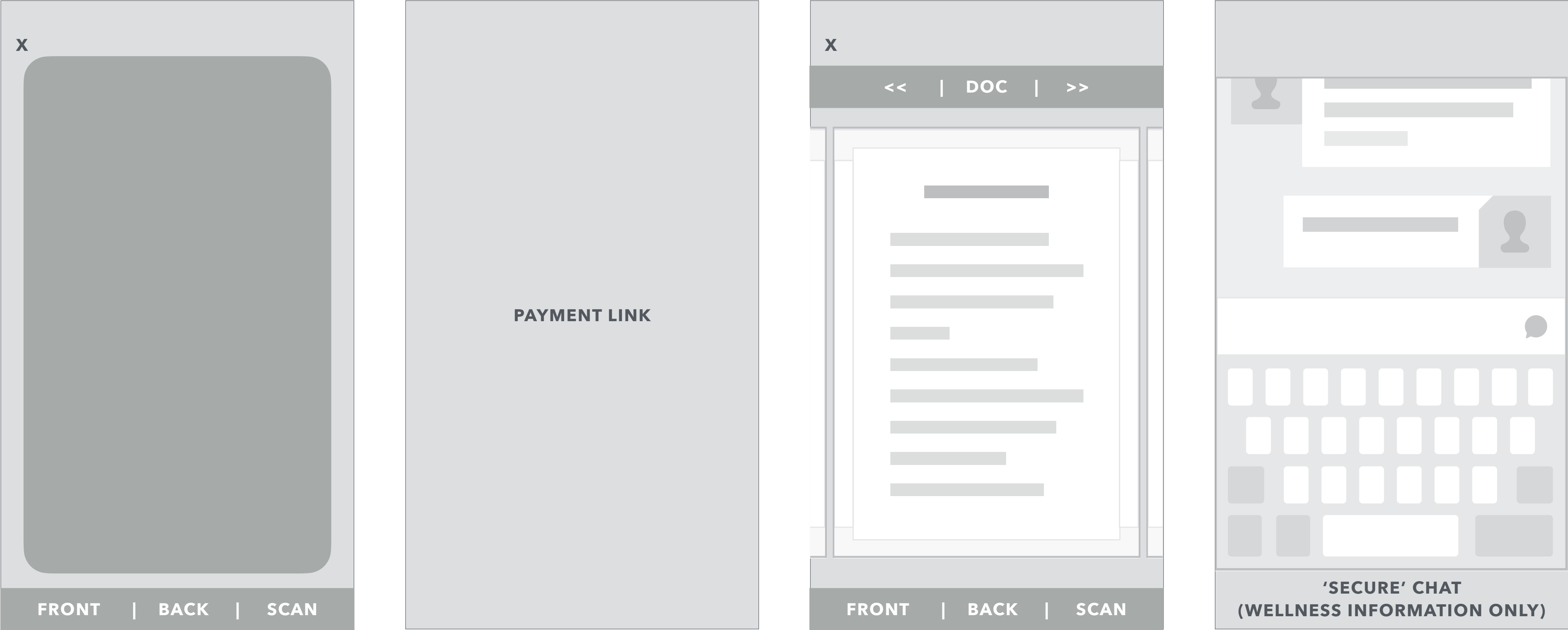
UPMC







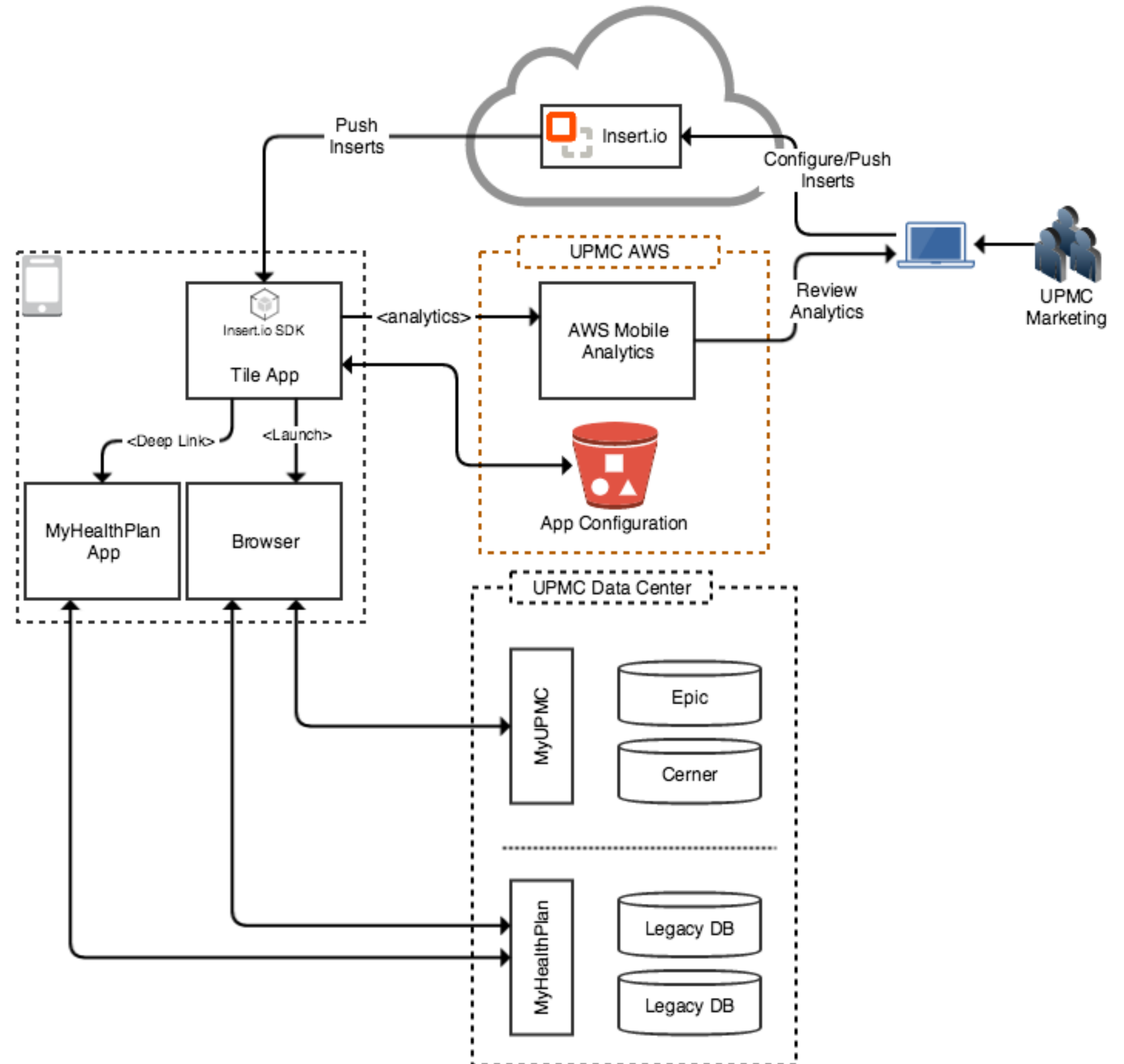
QUICK EXPERIENCE PARTS



OTHER TOOLS POSSIBLE ???

Conceptual Architecture

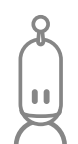
- Hybrid or Native Mobile Application with optimized user interface for launching into existing applications/properties
- Integration w/ Insert.io to enable marketing content delivery post deployment
- Reuse of existing UPMC AWS infrastructure for Analytics Data collection and Configuration file management
- Marketing Users access AWS Mobile Analytics dashboards for review
- Marketing Users push content through Insert.io console to deliver targeted marketing data
- Foundational application delivery through App Store and Play Store allows future "upgrade in place" without user downloading a "new" app




Thought Starters

1 U P M C


Wireframe Components




ALL




DOCTORS




FACILITIES




INFORMATION




APPOINTMENTS




OPTIONS




ARCHIVE




SUGGESTION




HEALTH & WELLNESS




SYMPTOM




ORDER & DELIVERY




SCHEDULE PICKUP




SCHEDULE OPTIONS




READ MORE







MESSAGE




SCHEDULE




PHARMACY




VIEW RESULTS





PREPARATIONS



PLAN YOUR TRIP









CREDIT/DEBIT


HSA
HEALTH SAVINGS ACCOUNT




APPLE PAY




PAY COPAY





PRE-REGISTER




NOTIFICATIONS











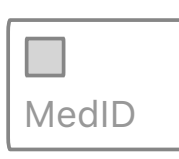
ANDROID PAY




PAYPAL



SPEAK WITH A REPRESENTATIVE



MedID




TREND

76_{mg/dL}
BG 8:10am


76_{mg/dL}
CGM 8:00am


Wireframe Components



How can I help?

RATE YOUR VISIT





General Checkup w/ PCP

Let's schedule your yearly physical.


up w/ PCP
n appointment.

○○○


OPTIONS



SCHEDULE VISIT




ALL




DOCTORS


▼




FACILITIES




READINGS




APPOINTMENTS




FOR YOU



LOCATION




RATINGS



ALL

▼

BASED ON MEDICAL HISTORY




Dr. Charlize Ayodele

Orthopaedic Surgeon

6.2mi from your location

CLOSEST TO YOU




Dr. William Abraham

Orthopaedic Surgeon

3.4mi from your location

FOLLOW-UP




Primary Care

ADVANCE CONSULTANTS, INC.

JUN 6TH


TEST RESULTS



X-Ray

JUN 6TH

PROCEDURE




Surgery on ACL

DIAGNOSIS: ACL

JUN 6TH

FACILITY




ER Visit

SYMPTOM: KNEE PAIN

MAY 16TH


MEDICATION REFILL



Lipitor

FEB 2ND

TEST RESULTS




Lab Test

1 TEST OUT OF RANGE

JAN 18TH

APPOINTMENT



Primary Care

ADVANCE CONSULTANTS, INC.

JAN 17TH

MOST RECENT

▼

BY CONDITION

HEALTH & WELLNESS

DIAGNOSIS

SEARCH RESULT

ACTIVITY

TYPE

COMMUNITY

JUL

JUN

MAY

APR

FEB

JAN

DEC

NOV

OCT

SEP


AUG

JUL

JUN


MAY


APR



RECENT

▼






A Message from Dr. Jones

6/12/17


>



Appointment Scheduled

6/12/17


>



Prescription Feedback

6/12/17


>



Insurance Information Update Request

6/12/17


>



Doctor Visit Questionnaire

6/12/17


>



Prescription Refill

6/12/17


>



Customer Service Request

6/12/17

>



Test Results

6/12/17

>

Wireframe Components

Choose a Payment Method

STEP 1

STEP 2

STEP 3

Please select a payment method listed below.

CREDIT/DEBIT

HSA

HEALTH SAVINGS ACCOUNT

Apple Pay

APPLE PAY

pay

ANDROID PAY

P

PAYPAL

SPEAK WITH A REPRESENTATIVE


NEXT: ACCOUNT INFORMATION

AMOUNT BILLED
\$7,850.00
DISCOUNTS, REDUCTIONS & PAYMENTS
-\$6,149.00
YOU MAY HAVE TO PAY YOUR PROVIDER
\$1,701.00


AMOUNT BILLED	
\$7,850.00	
DISCOUNTS, REDUCTIONS & PAYMENTS	
-\$6,149.00	
YOU OWE	1 OF 2 PAYERS RECEIVED
\$1,701.00	

		PLAN PROVISIONS		YOUR RESPONSIBILITY		
SERVICE DESCRIPTION	AMOUNT BILLED	DISCOUNTS & REDUCTIONS	AMOUNT COVERED (ALLOWED)*	DEDUCTIBLE & COPAY AMOUNT	COINSURANCE	AMOUNT NOT COVERED
Item	\$00.00	\$00.00	\$00.00	\$00.00	\$00.00	\$00.00
Item	\$00.00	\$00.00	\$00.00	\$00.00	\$00.00	\$00.00
Item	\$00.00	\$00.00	\$00.00	\$00.00	\$00.00	\$00.00


Wireframe Components




Follow-up Appointment
TOMORROW




Let's get ready for your appointment.



PRE-REGISTER



PAY COPAY




PLAN YOUR TRIP

STEP 1


STEP 2

STEP 3


DISMISS




Follow-up Appointment
IN 2 DAYS




Let's get ready for your appointment.



RESCHEDULE




PAY COPAY



PLAN YOUR TRIP

DISMISS



Feeling Alright?


VIEW

You recently searched for the following:


- Fever (2 days ago)
- Tick

Individuals have also found the following topics of interest:


- Lyme disease



SCHEDULE AN APPOINTMENT




READ MORE




Appointment Scheduling

There's an opportunity to move these upcoming appointments to the same day.



JUNE 26TH




JULY 29TH

Would you like to move your upcoming appointment?

YES

NO

Wireframe Components





Appointment Summary
JUNE 12TH


Doctor Summary

Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur.


Next Steps



VIEW RESULTS



SCHEDULE APPOINTMENT


VIEW BILLING

RATE YOUR VISIT









Follow-up Appointment
Let's schedule your next appointment while you're here.

Follow-up Appointment
Let's schedule your next appointment while you're here.


SCHEDULE VISIT



Appointment Summary
JUNE 12TH



A Message from Dr. Jones
Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur.


Send a Response

SEND

Next Steps


VIEW RESULTS



SCHEDULE APPOINTMENT


VIEW BILLING

RATE YOUR EXPERIENCE











Appointment Scheduling

SELECT A DAY TO CONSOLIDATE YOUR VISITS

 CURRENT APPOINTMENTS


 AVAILABLE DAYS


JUNE 2017





				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	


Update Your Appointment


 QUESTIONS & OBSERVATIONS >


 ALLERGIES >

 RECENT MEDICAL CONDITIONS >

 ACTIVE MEDICATIONS >

 MEDICAL HISTORY >


 SPECIALISTS VISITED >



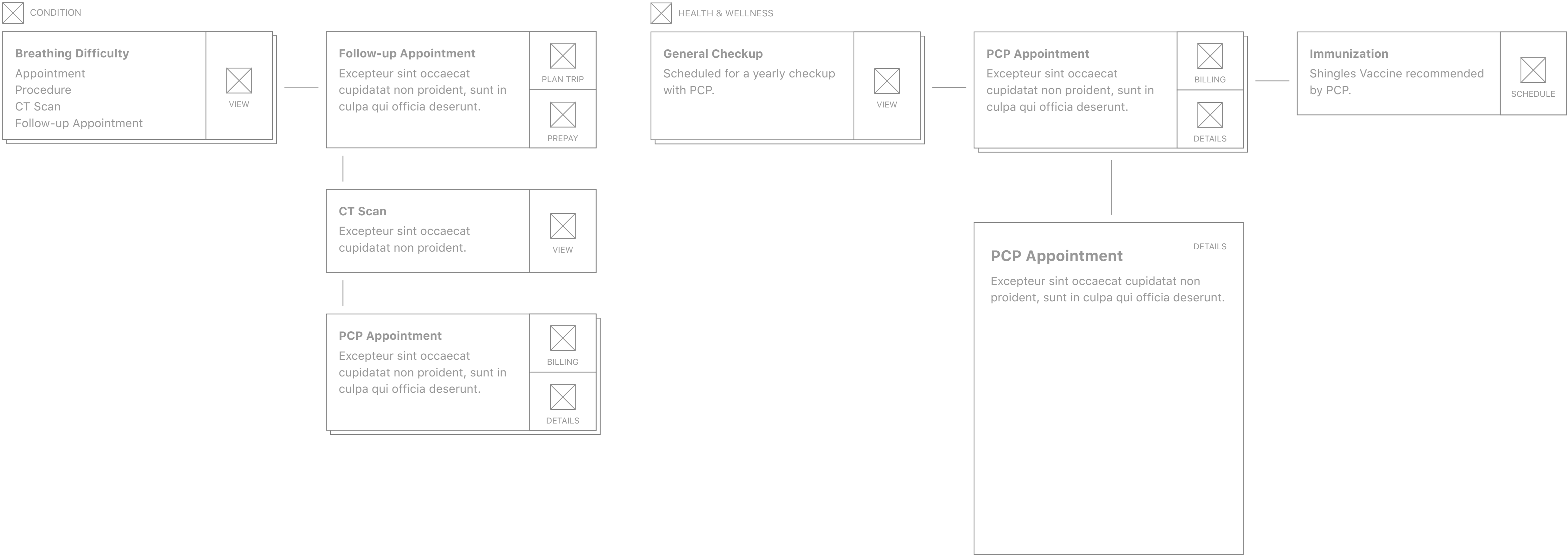
Diabetes Screen
JUNE 12TH

78 mg/dL
BG 8:10am

72 mg/dL
CGM


TREND

Wireframe Components



UPMC Mobile & Digital Strategy Discussion

IMPROVING THE PATIENT EXPERIENCE

Agenda

- Digital Health Trends
- Digital strategy Vision and Direction
- Opportunities around the Patient Experience
- Discussion

Why Should UPMC Have A Digital Strategy?

Changing dynamics in Healthcare are creating both pressure and opportunity to innovate with mobile / digital

Pressure to Innovate with Digital

HC reform
and
Increasing
emphasis on
outcomes

Traditional
competitors
moving in to
digital

Non-
traditional
competitors
creating
digital
solutions

High
consumer
engagement
with smart
devices

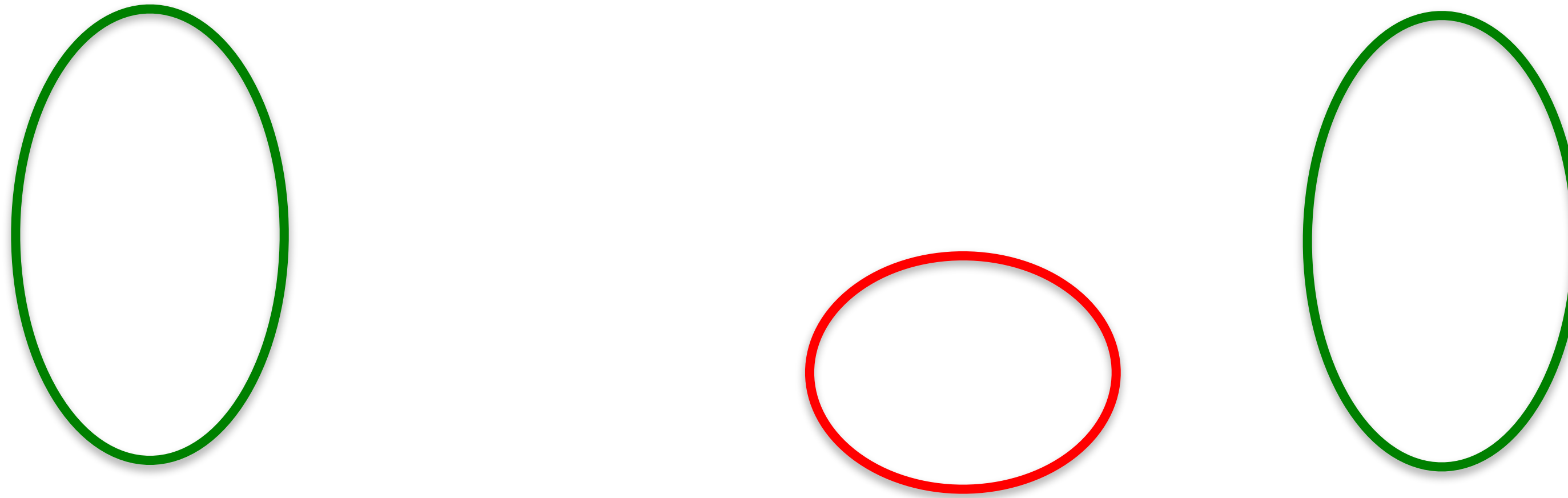
Increasing
affordability
and
accessibility
of wearables
& sensors

Increasing
emphasis on
“health”care
vs. “sick”
care

Self-
management
tools are
more viable

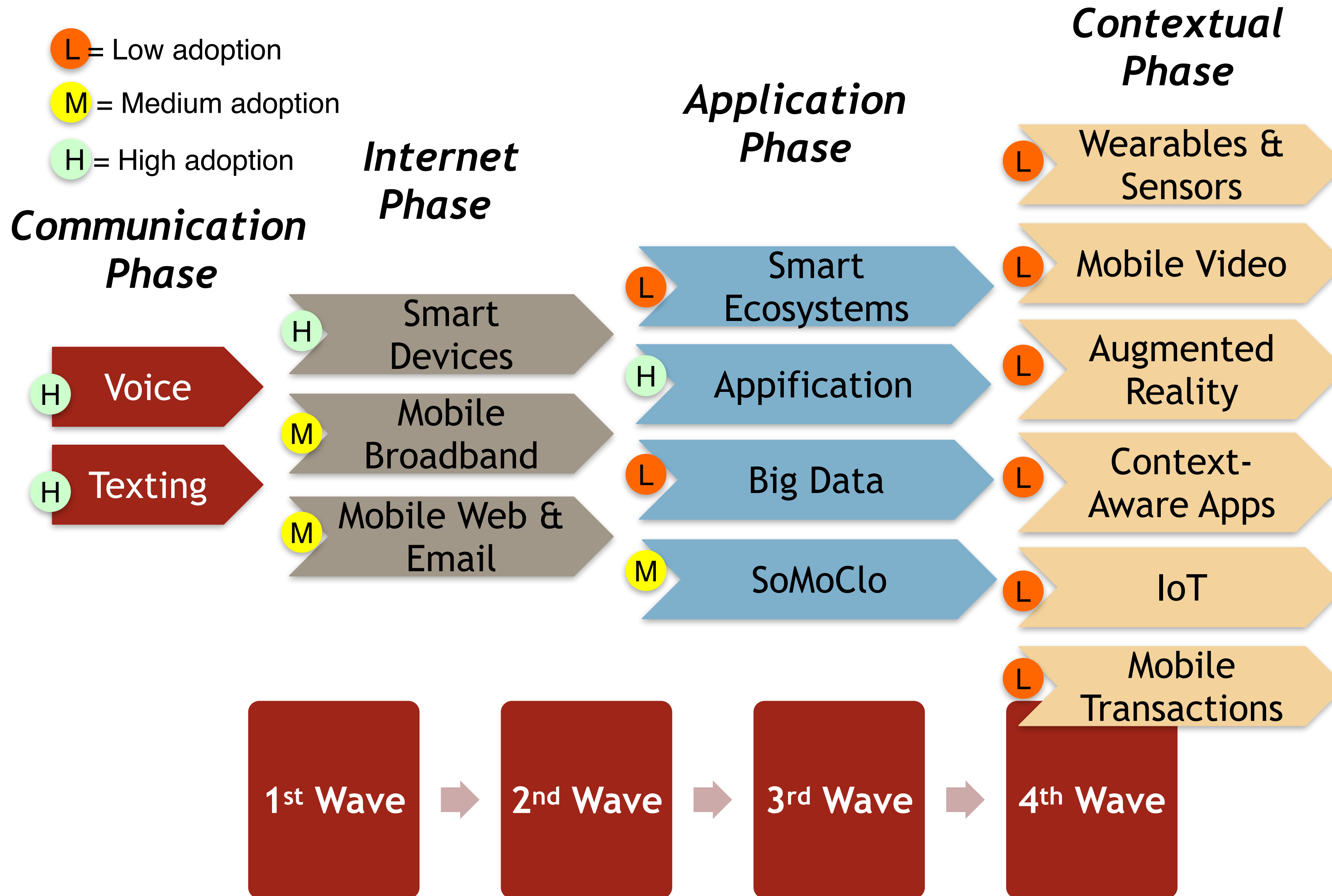
Decline in
inpatient
volumes to
most acute
patients

Optimal care sites are changing



- Telehealth & Digital Health enable communications and relationship development with patients outside of the hospital
- Opportunity to improve the experience of inpatient and acute care so patients choose UPMC over other options

Digital Trends and HCP Adoption



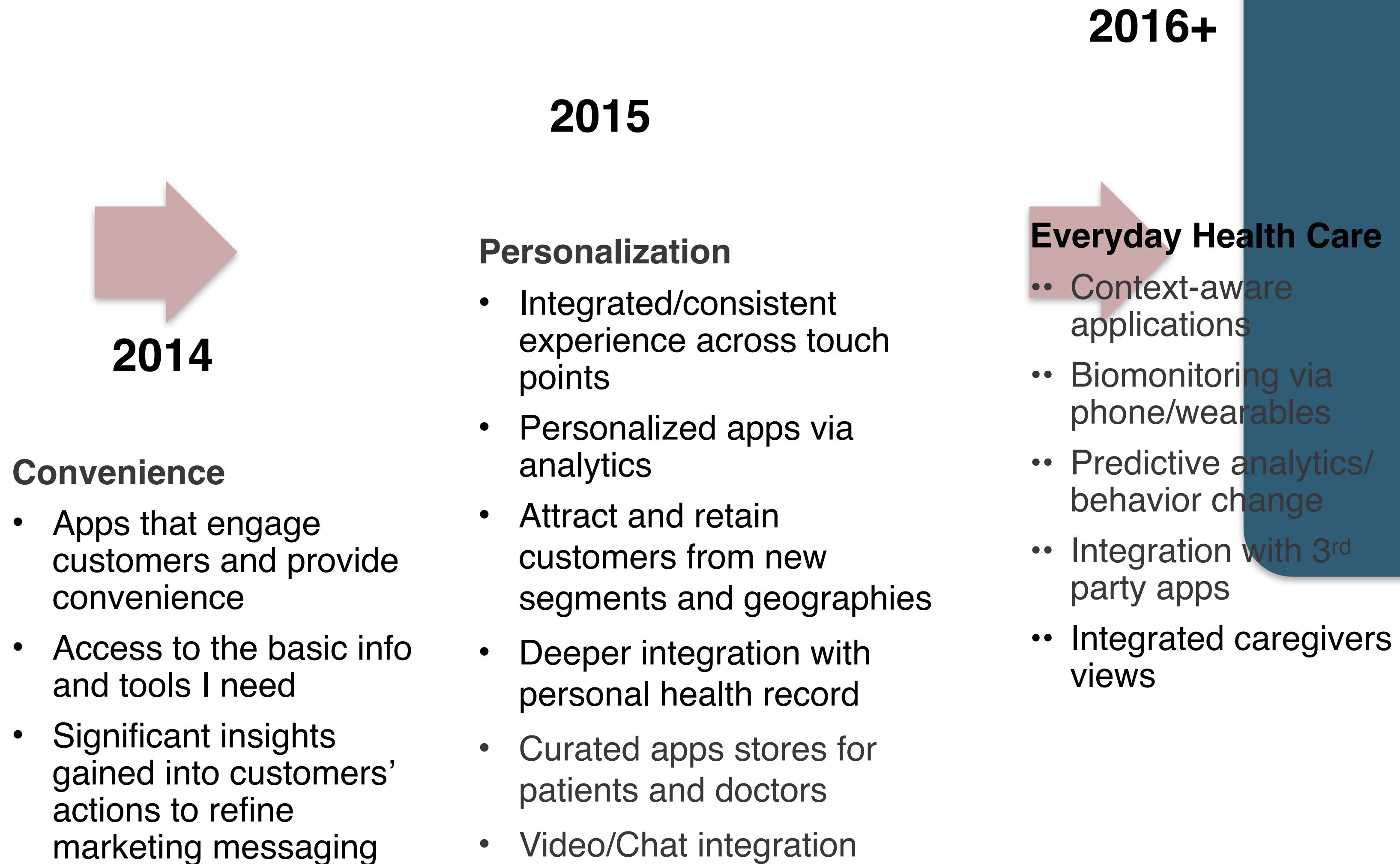
Digital Vision in support of the Mission

UPMC's Mission is to serve our community by providing outstanding patient care and to shape tomorrow's health system through clinical and technological innovation, research, and education.



Digital Vision	UPMC will leverage the power of mobile and digital technologies to accelerate growth into new patient segments, and transform the healthcare experience to empower patients and their caregivers to achieve better outcomes.
Vision Benefits	<ul style="list-style-type: none">• Develop powerful experiences and stronger relationships with prospective and existing patients at various stages of their care journey• Help shift the corporate image to “patient-centric” by empowering patients and their families to get more out of their healthcare services• Differentiate nationally & globally from the digital strategies of other health systems to acquire and retain patients• Develop partnerships and investment opportunities in digital health areas that accelerate UPMC's digital strategy and reach

UPMC's Future Digital/Mobility Path



Top 5 Mobile / Digital Opportunities Value

	Care Genius	Care Concierge	Medical Boarding Pass
Summary	Convenient triage and access to care services	Simplify making appointments, and getting information about and to the care site	Simplify check-in at facilities and sharing of relevant health information
Digital Value Proposition	Empowering anywhere care “UPMC makes it convenient for me”	Empowering preparation for on-site care “UPMC makes it easy for me”	Empowering experience of on-site care “UPMC knows me”
Benefits for Patients	<ul style="list-style-type: none"> • Avoid hospital visits • Convenience (esp. for those in rural areas) • Manage costs 	<ul style="list-style-type: none"> • Get appropriate care (self, virtual, on-site) • Lower stress of making and keeping appointments 	<ul style="list-style-type: none"> • Don't have to re-provide health info over and over • Feel like UPMC knows you
Benefits for UPMC	<ul style="list-style-type: none"> • Attract new patients • Reduce costs • Improves wait times 	<ul style="list-style-type: none"> • Ongoing relationship • Improve experience of care • Optimizing care sites for patients • Patient retention / keep appointments 	<ul style="list-style-type: none"> • Augment brand with digital innovation • Enhance patient experience • Increase MyUPMC utilization

Top 5 Mobile / Digital Opportunities Value cont...

	UPMC Community	Curated App Store
Summary	Connect patients and families around similar conditions/symptoms, and have clinicians hold virtual office hours with community.	A UPMC branded app store that provides the latest and most relevant apps for patients and healthcare providers
Digital Value Proposition	Empowering patient care and connections “UPMC connects me to those like me”	Empowering patients with the right apps “ I trust UPMC to evaluate and select the best apps for me”
Benefits for Patients	<ul style="list-style-type: none"> • Provides sense of community for UPMC patients • Connect with physicians/specialists 	<ul style="list-style-type: none"> • Provides highly qualified health information to patients
Benefits for UPMC	<ul style="list-style-type: none"> • Attract new patients and retains existing patients • Showcase content • See trends in diseases/symptoms 	<ul style="list-style-type: none"> • Enhances patient experience and creates stickiness to UPMC resources • Increases brand credibility • Potential to attract new patients

Medical Boarding Pass- Opportunity Detail

Description - Ability to store all pertinent information in the boarding pass, like medical record info, emergency contacts, allergies, etc. to have this data readily at hand to be able to share and download as needed.

Features/functionality:

- Allows users to store their medical information on their iOS Passbook or Android Passbook app.
- The user has access to their medical records via MyUPMC, as well as quick access to data like allergies, emergency contacts etc.
- Allows user to share their information with their doctor's office or medical personnel quickly and easily.

Implementation Considerations:

- Integration into Passbook functionality on iOS and Android
- Integration into EMR (long term)
- Ability to create a QR code that can be easily shared
- Needs to have a simple and easy to use interface

MVP (Minimal Viable Product) Considerations:

- User-entered data for first release
- QR code scan data from API's not deep integration

Possible Partners:

- MyUPMC
- Tie ins to retail or medical-related products may provide advertising opportunity

Care Genius - Opportunity Detail

Description - An application to promote convenient care services via a web landing page or app which drives users through a clinical symptom decision tree to the appropriate care site (self-care, virtual visit, urgent care, or ER). Usage reduces wait times and costs of trips to ER or urgent care.

Features/functionality:

- Users enter their symptoms and are guided through a selection process to narrow down their possible conditions.
- Live tele-consult portion available 9am to 9pm and can be billed as an office visit.
- Results of symptom analysis would lead to direction to appropriate level of care
- Symptoms can be added to PHR
- Provides wait times at urgent care clinics

Implementation Considerations:

- Limited to in-state at this time due to regulations.
- Offers easy integration with 3rd party devices like sensors

MVP Considerations:

- Utilize current existing decision tree technology
- Trial in a small subset of the market where access to wait times is available
- User may need to enter PHR data

Possible Partners:

- Sensor companies
- My UPMC
- Apps the user already has on their phone (makes date avail. During consult)

Care Concierge - Opportunity Detail

Description – Provides all the necessary information for patients who are coming to UPMC before their appointment begins to create a personalized service. Information on parking, hotels, traffic, are provided to patient and can be shared with the caregiver. Providing this information informs and helps ease the experience of learning about and preparing for the care process.

Features/functionality:

- An interactive application that allows users to ask about symptoms, and get directed to a physician or specialist who can help them.
- Once an appointment is made at a UPMC facility, the patient receives a curated list of directions and information based on their needs.
- User will identify needs such as transportation to the location, housing needs, dietary needs, caregiver/spouse needs.
- The application will select those attributes that best match the user.

Implementation Considerations:

- Needs to use 3rd party data (restaurants, hotels, etc.) to provide personalized recommendations
- Future Integration with CMS
- Simple easy to use interface for multiple users

MVP Considerations:

- Some curation of content may be needed on the part of the user initially
- User may need to enter some of their own personal data
- Utilize as much existing content from UPMC.com (locations, videos, etc.)

Possible Partners:

- MyUPMC and medical record/billing data
- Hotel, travel, restaurants and aggregator companies
- Mapping data (Google maps)
- Coupon or rewards companies

Critical Success Factors

Short Term

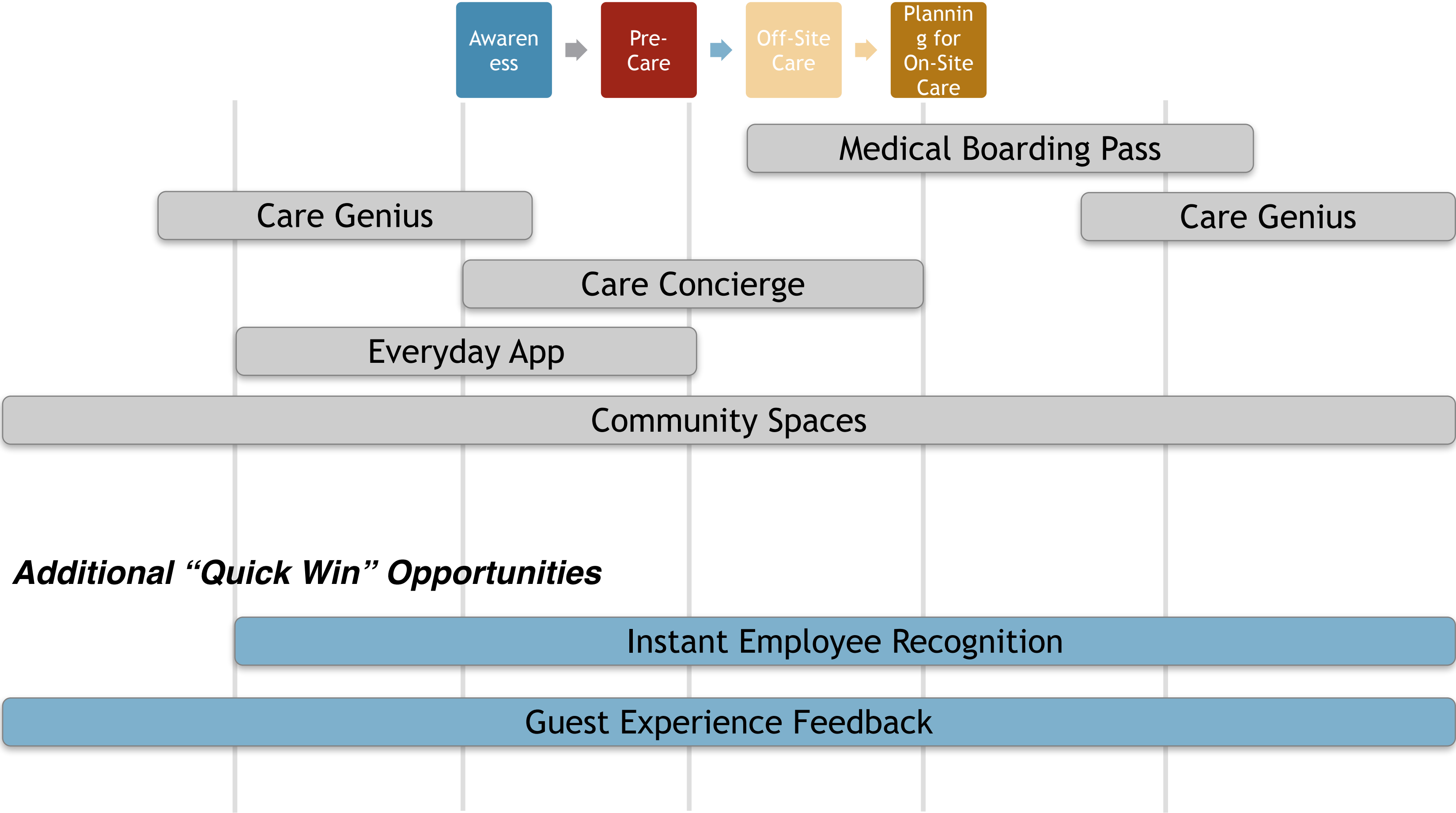
- Begin MVP initiatives in a light integration way to serve as momentum builders, then ramp up to larger integrated systems later
- Ability to test and learn quickly on small populations
- Adoption of a mobile mind set and a mobile first approach to support a patient-centric experience

Long Term

- Integrated and measurable analytics (web/social/mobile, patient EHR)
- Promotion of the Tools/Initiatives across UPMC
- Sponsorship and support from Executives and Leaders
- Need a team of Community Managers, Subject Matter Experts
- Partnerships for both innovation and access

Improving the Overall Customer Experience

Leveraging Digital to Empower Patients and their Families Along the Care Journey



Impacting the Patient Experience

Short Term

- Begin MVP initiatives in a light integration way to serve as momentum builders, then ramp up to larger integrated systems later
- Ability to test and learn quickly on small populations
- Adoption of a mobile mind set and a mobile first approach to support a patient-centric experience

Long Term

- Integrated and measurable analytics (web/social/mobile, patient EHR)
- Promotion of the Tools/Initiatives across UPMC
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Appendix

Everyday App - Opportunity Detail

Description - An application that assists the user in managing their health and life day to day by integrating across many points in the user's life. It can sync with health profiles, and fitness sensors to give tips and feedback on the user's health and their family member's health. Links to blogs, experts and relevant information/articles empowers users with information.

Features/functionality:

- Daily check-ins with users and family members for the purpose of managing themselves and their family members to track their health.
- Focus on predictive advice – ex: analyzing data of a person who reports they feel poorly 3 days in a row would prompt messaging about seeing a doctor
- Social integration would help manage detail and sharing increases personal accountability
- Based on data, create customized programs for each person
- Possible giveaway of wearables as an incentive for use and additional data collection

Implementation Criteria:

- Needs to use real-time analytics to provide personalized recommendations
- Simple easy to use interface for multiple users
- Offers easy integration with 3rd party devices like sensors
- UPMC will benefit from the data mined

Possible Partners:

- Sensor companies
- My UPMC
- Coupon or rewards companies
- Schools and community organizations

Community Spaces

Connect patients “like me” and “families like us”, and have clinicians hold virtual office hours with community.

Features/functionality:

- Users can interact with other members of the community.
- Patients can contact/interact with clinicians during their office hours
- The user has access to their medical records via MyUPMC, and can add/save interactions to their record
- Allows user to invite other's to the community to share relevant information

Implementation Considerations:

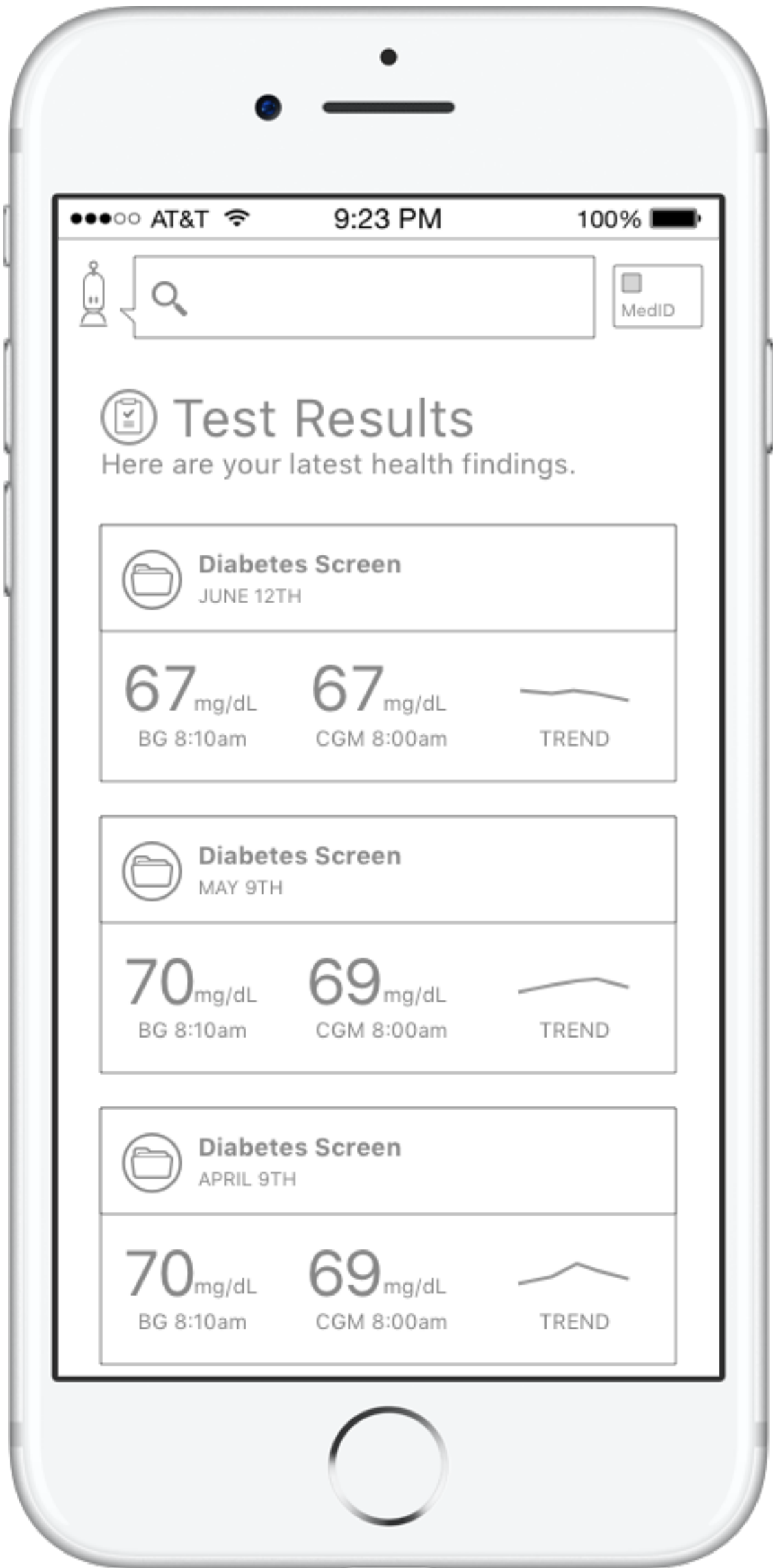
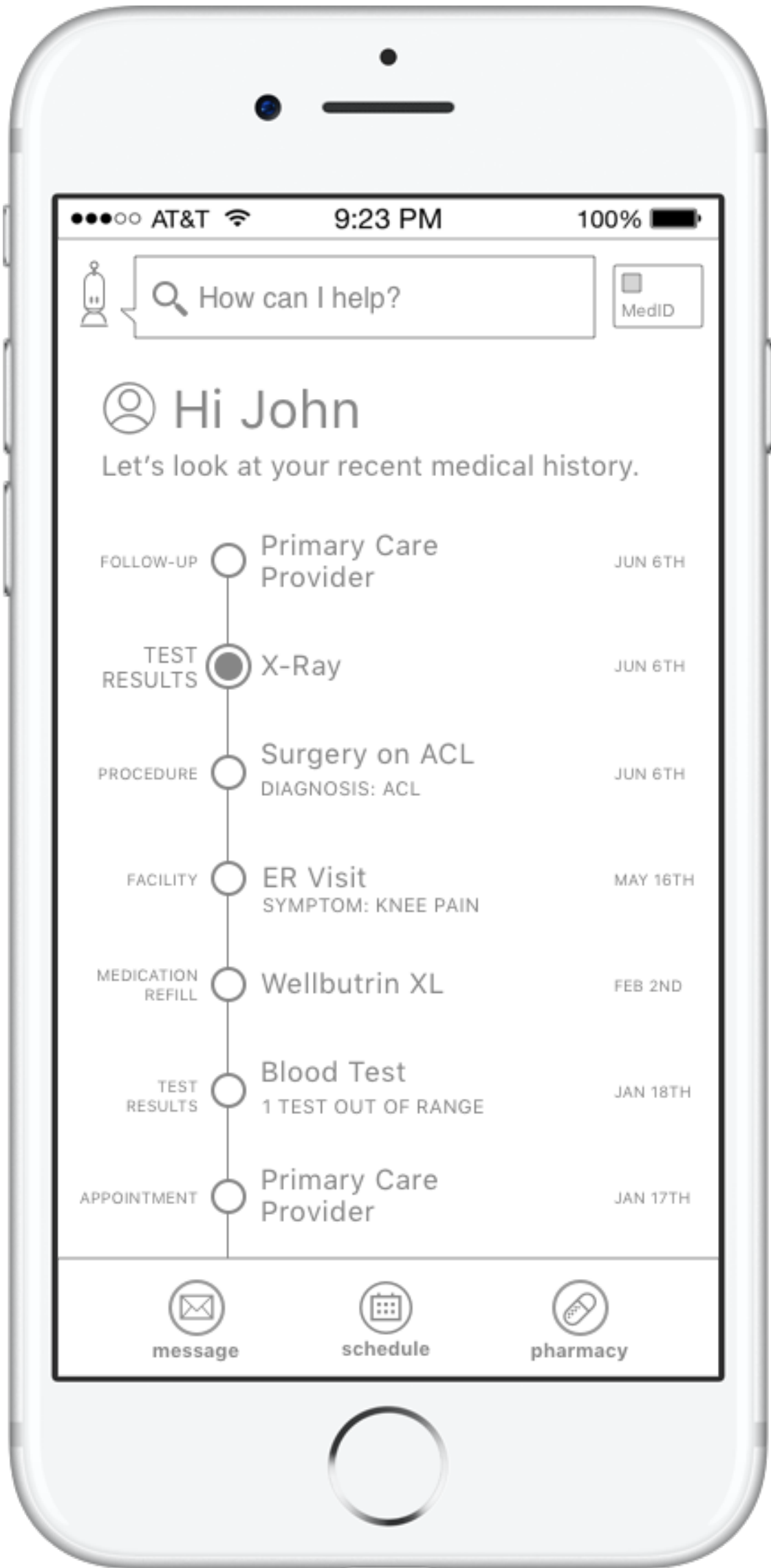
- Integration into EMR (long term)
- Ability to integrate with other social media sources
- Needs to have a simple and easy to use interface

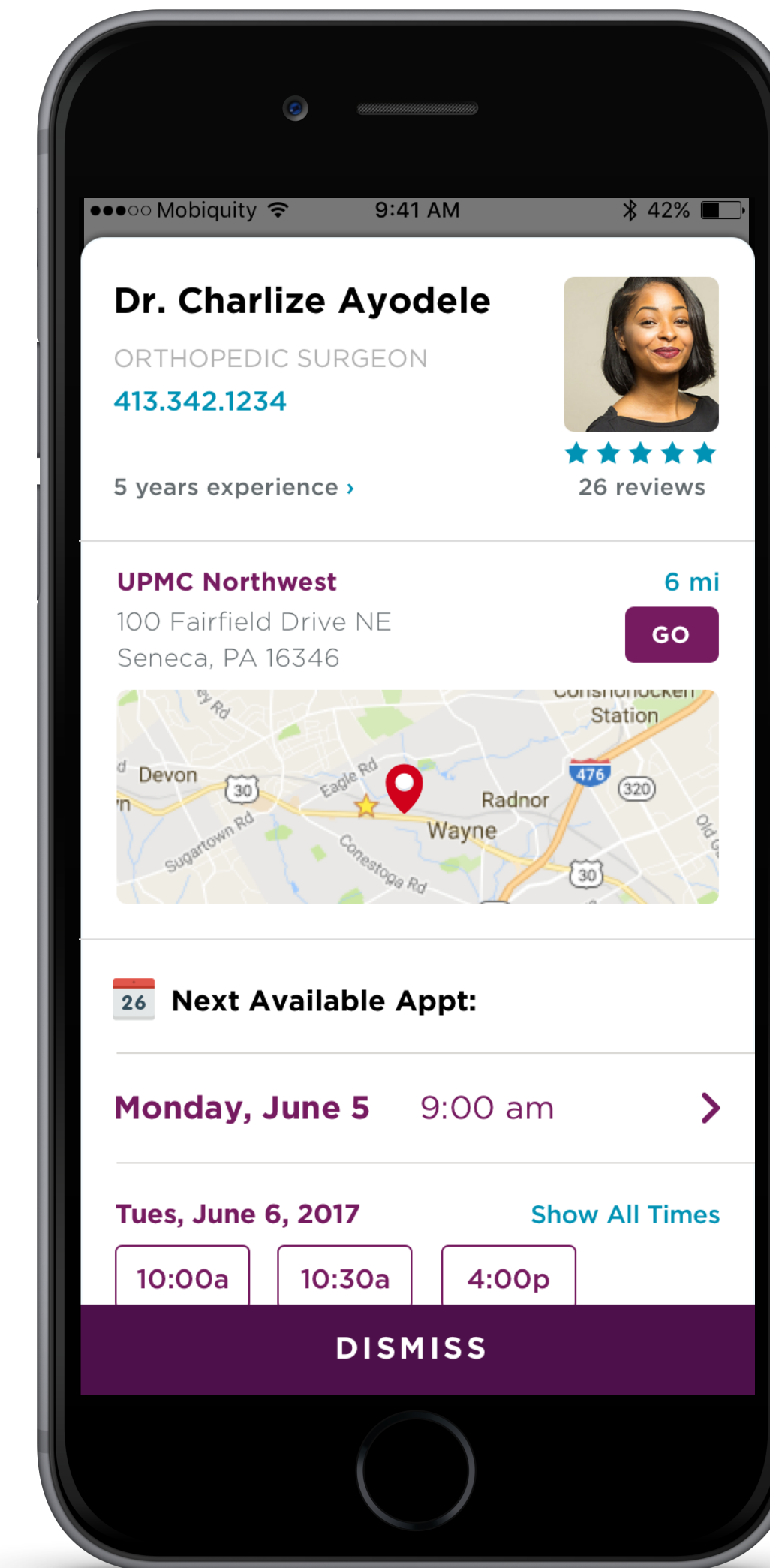
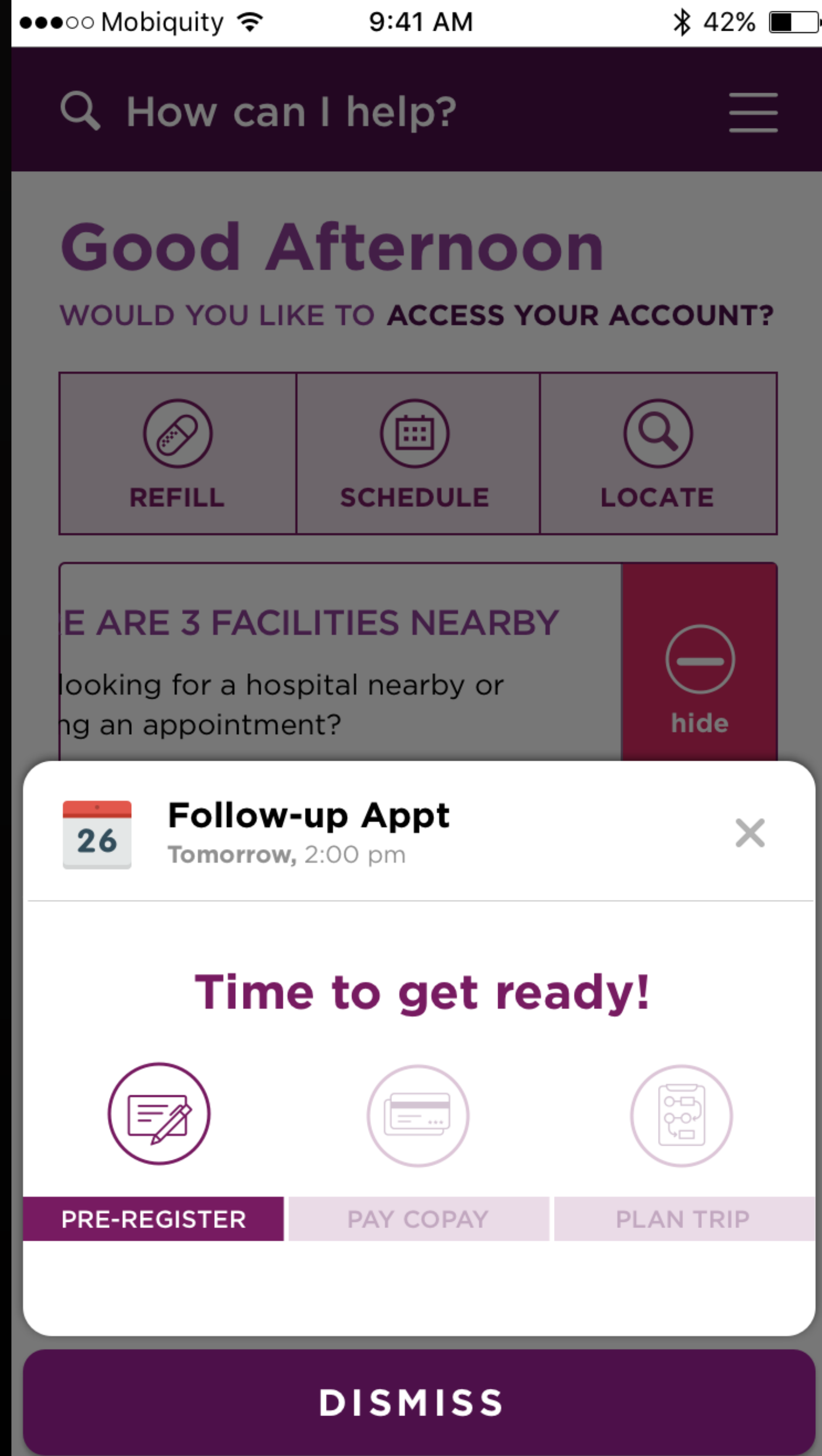
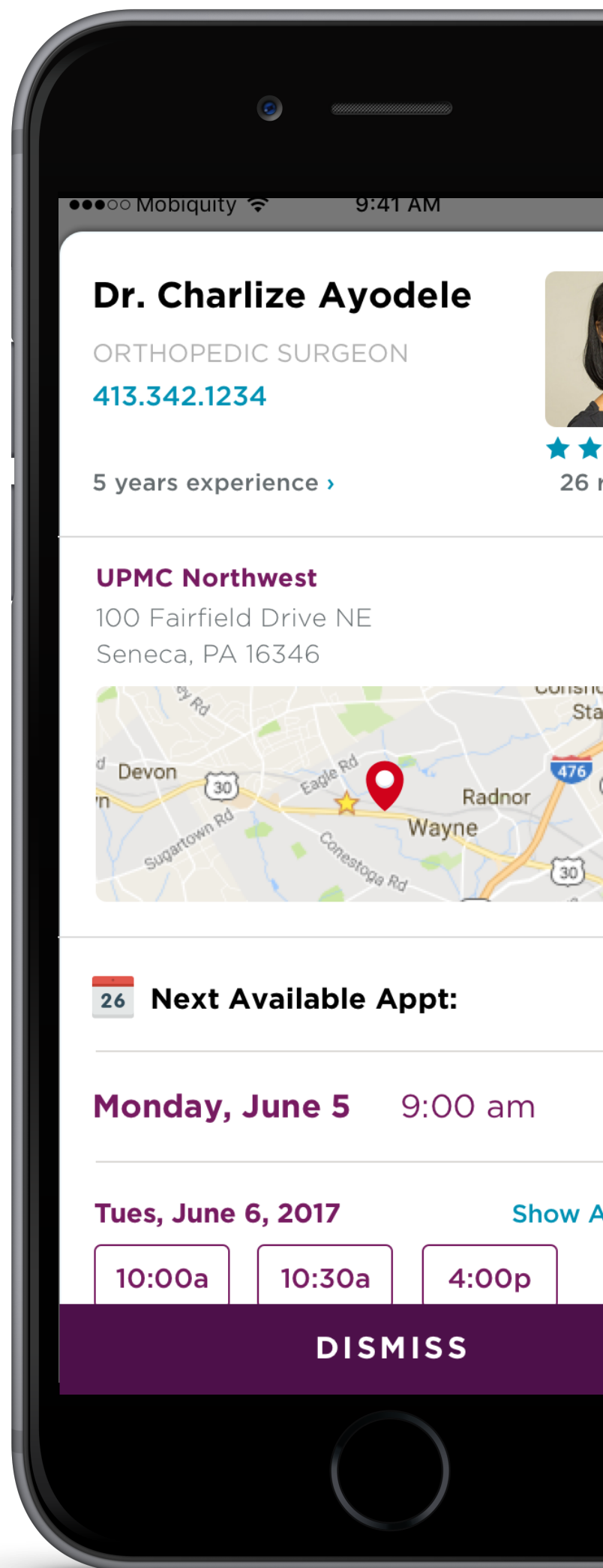
Possible Partners:

- MyUPMC
- Tie ins to health related products, or other UPMC services may provide advertising opportunity/revenue

Thought Starters

WAYFINDING

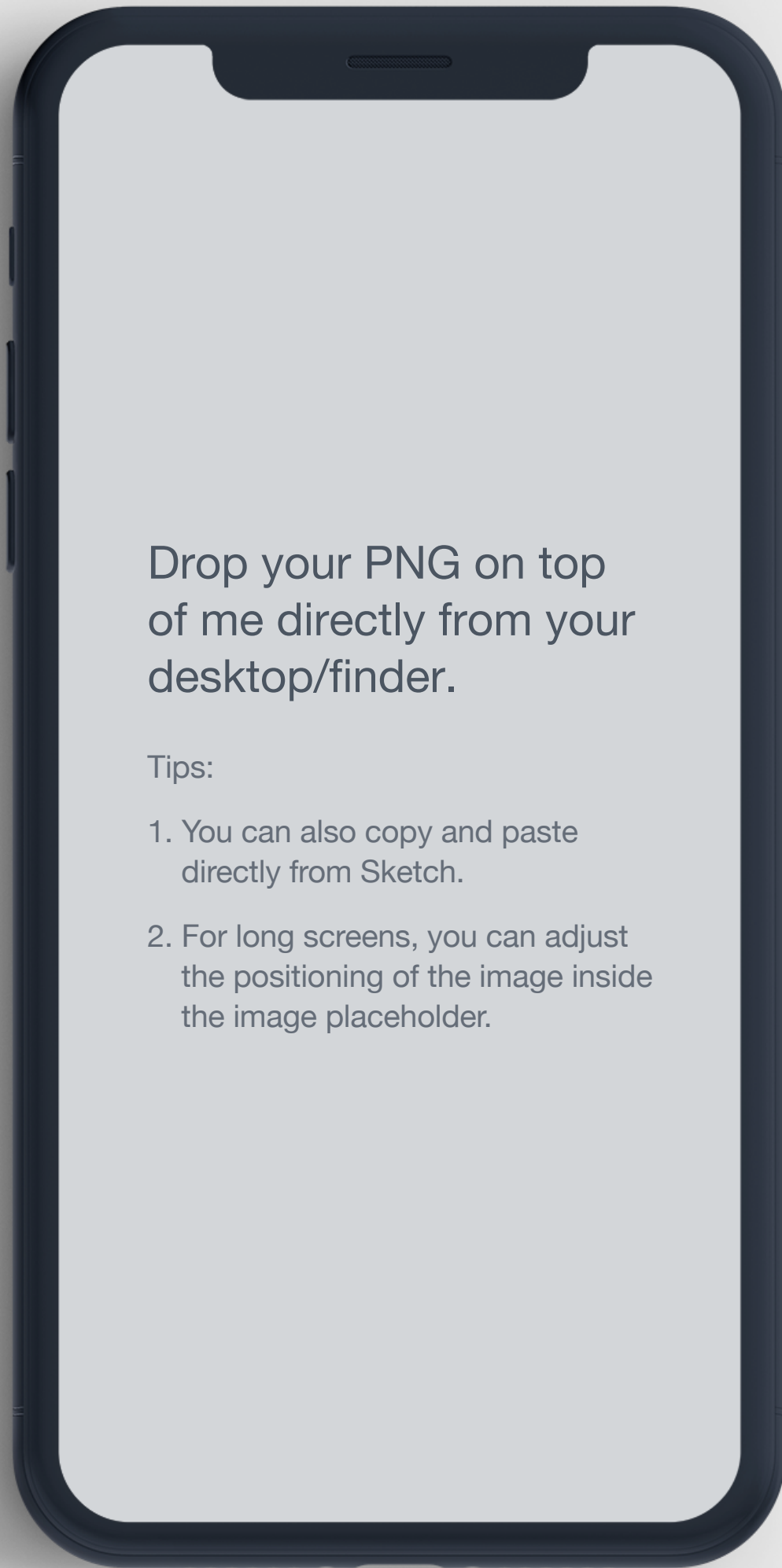
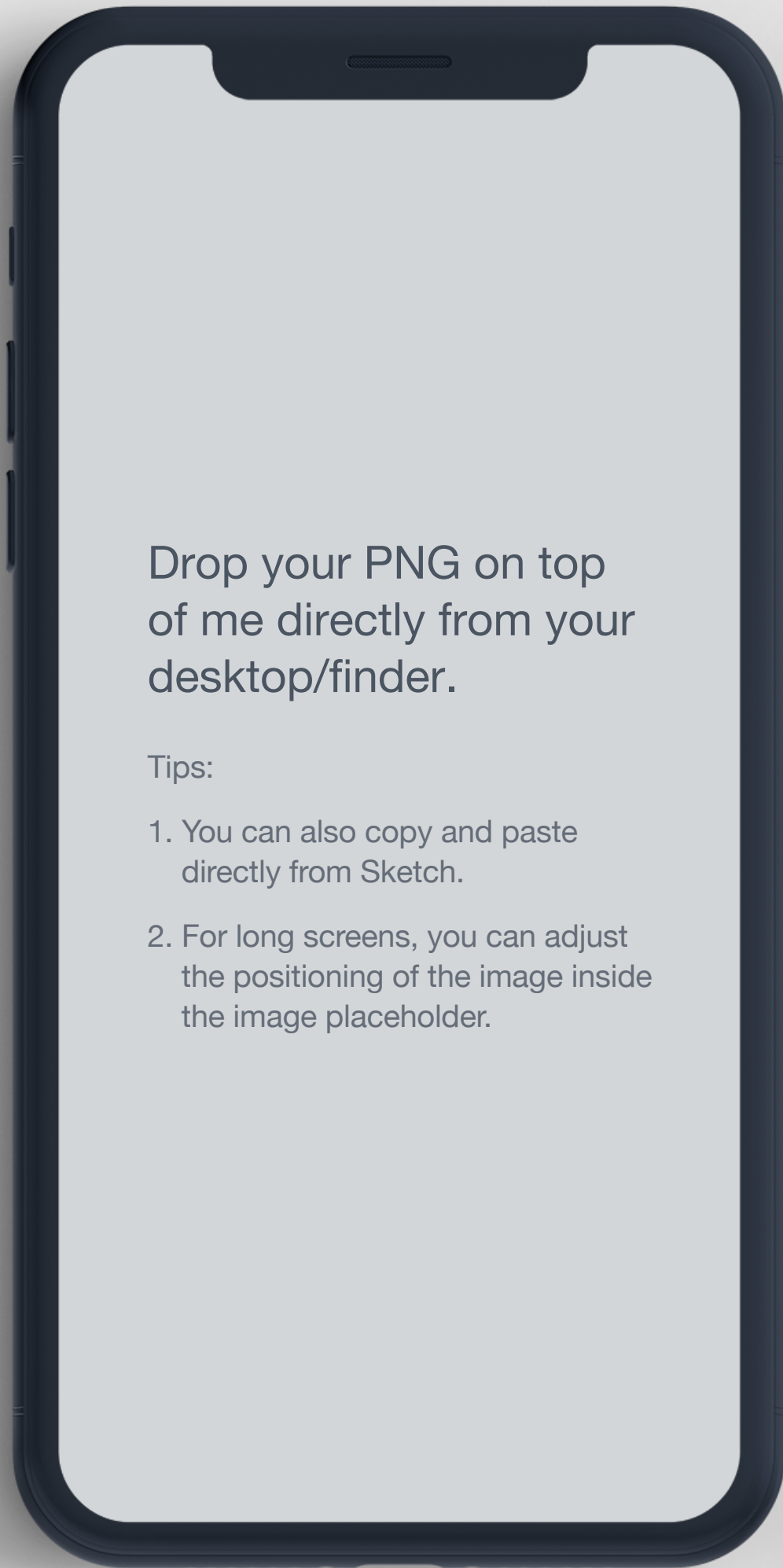
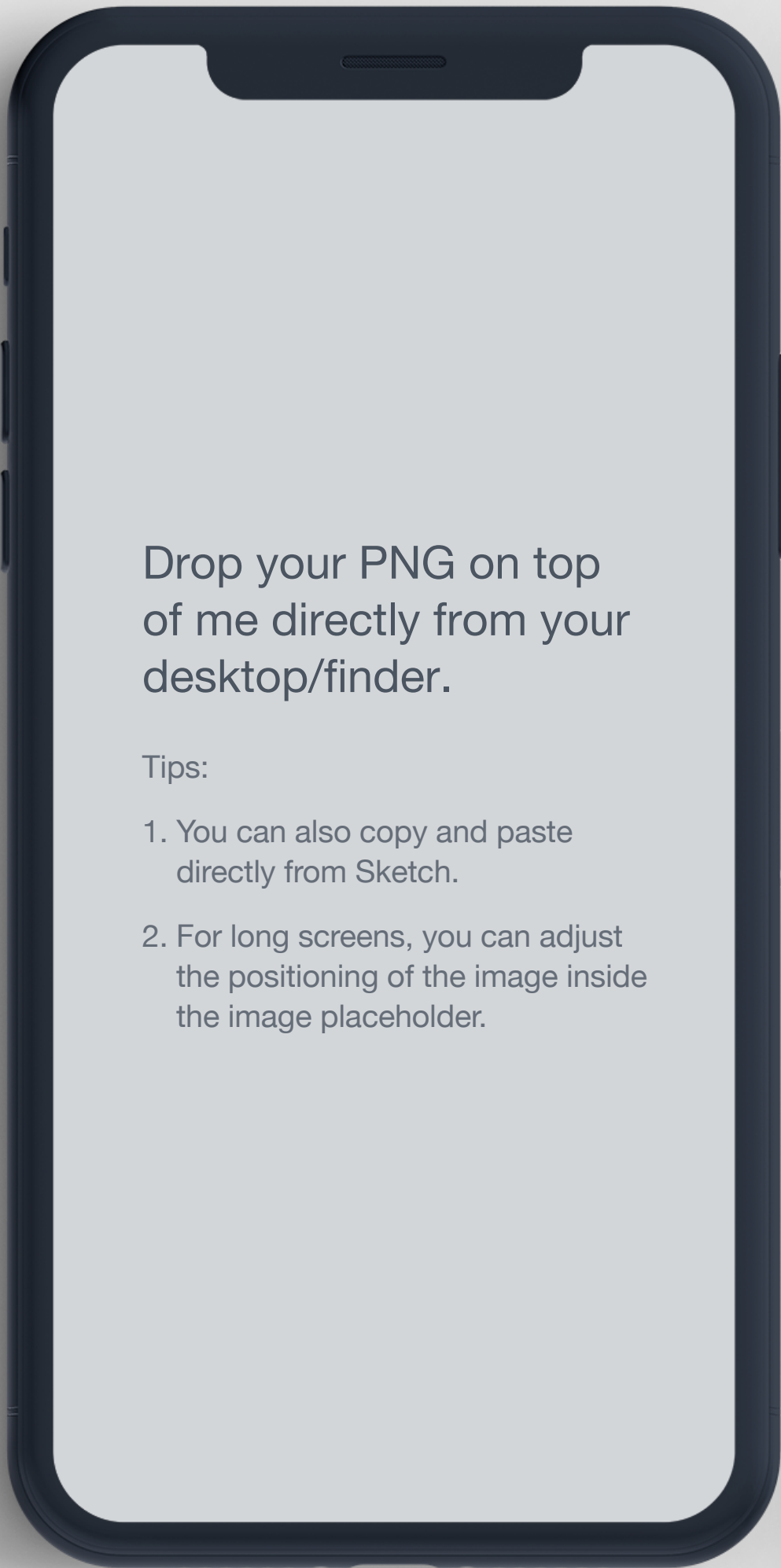




(DESIGN BATCH/SPRINT NAME).

Screen Name

Short description of any key information you need to convey. Keep this brief, but think about how this could have value to the viewer.



Wayfinding & Self-Guided Navigation



Confusion

Large campuses create additional hurdles for wayfinding.



Directions

Hospitals can open and close routes for temporary construction, indication of accessibility



Navigation

Relieves hospital staff of the burden of assisting patients.



Destinations

Easing user transitions improves satisfaction, and limits hospital overhead

EASING HOSPITAL FRICTION

EASING USER TRANSITIONS

Large spaces can be overwhelming. Especially to sick, scared or confused patients.

Directions, from the web or mobile device, can help ease this confusion.

BluDot navigation allows patients to navigate in a comfortable, familiar manner.

Driving directions, and parking garage info assist patient from home to office and back again.