

Access all of your medical information from anywhere.

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Amber Martinez \* Alex Kostyn \* Alex Baker \* Steven Vardaro \* Josh Smith\* Daniel Kent \* Mark Collins

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## Our Team



Amber Martinez



Alex Kostyn
Technical Lead



Alex Baker
Project Manager



Josh Smith



Steven Vardaro



Daniel Kent Developer



Mark Collins
Developer

#### **Problem Statement**

Healthcare patients do not have a central mobile environment to promptly access, organize, and share their medical information with various providers.

### The Customer

Our target customer for this application is anyone that uses a mobile smartphone and needs to access all of their medical records from one place. The Patient Advocate application would greatly benefit those in need of medical care outside the scope of their primary care provider's network, those with chronic conditions, and those who take care of dependents and the elderly.

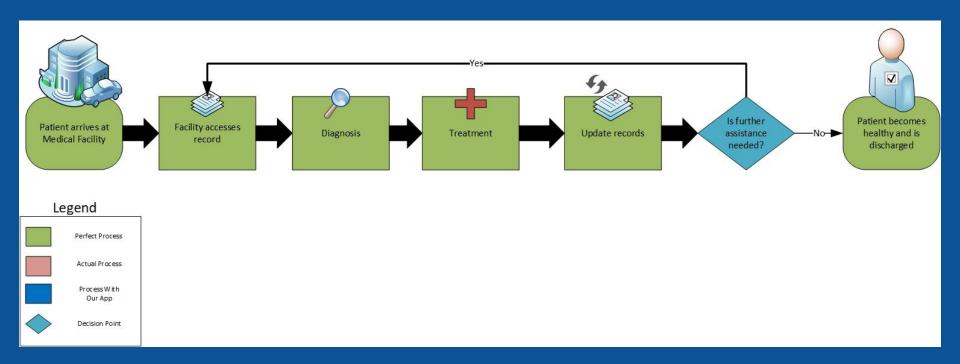
#### **Problem Characteristics**

- Patients' records are scattered throughout different electronic health record (EHR) systems, impacting record completeness
- Patients do not have a way to update their daily regimen for their physicians, impacting emergency care
- Patients do not have a way to access medical records outside of their provider office, impacting patient convenience

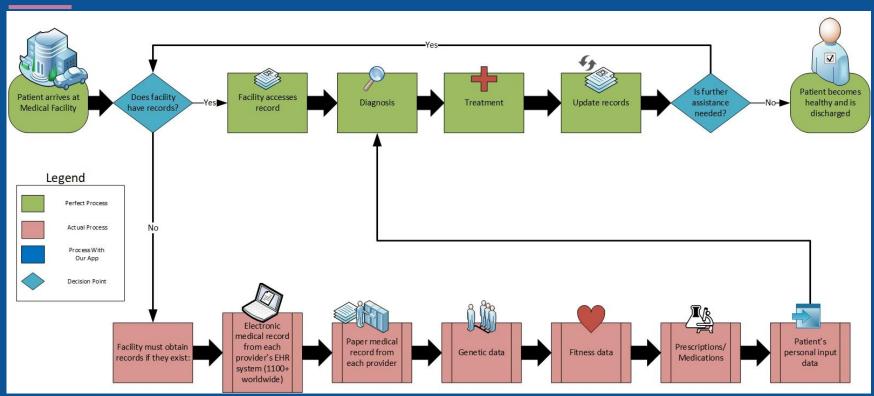
#### **Problem Statistics**

- "Currently, there are roughly 1100 vendors that offer an EHR."[10]
- "In March 2017, 67% of all providers reported using an EHR."[11]
- "67% of providers reported not liking the functionality of their EHR systems."[11]
- "Only 40% of hospitals and 14% of doctors share data outside their organization."[12]
- Roughly three million adults over the age of 65 and 1.5 million children under the age of 18 visited physicians' offices in 2015. [14]
- 6.7% of noninstitutionalized adults over the age of 65 reported needing help with personal care in 2017. [15]

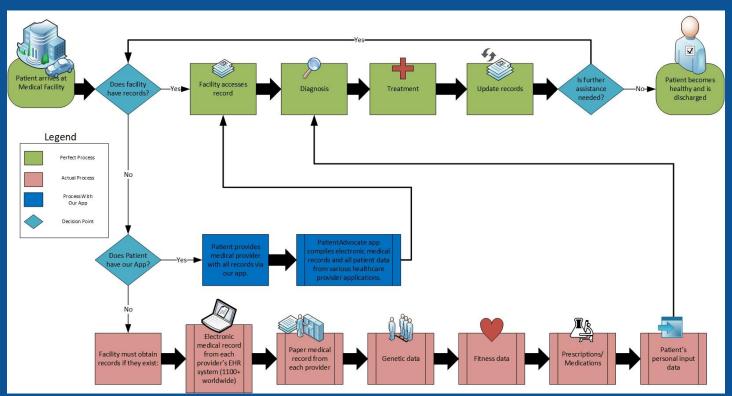
## **Perfect Process Flow**



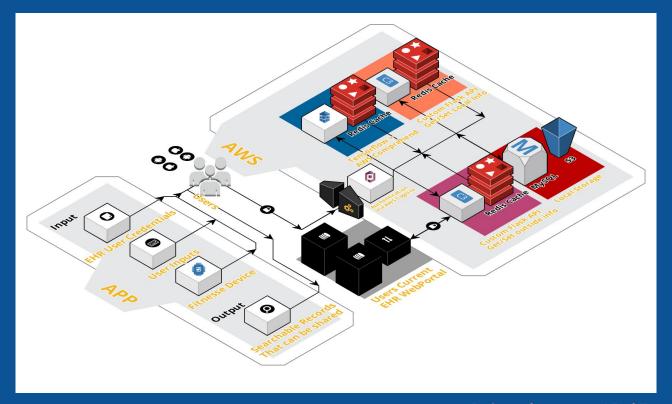
## **Actual Process Flow**



# Patient Advocate App



# Major Functional Component Diagram



## Goals & Objectives

- Provide an easy-to-use mobile application for the user
- Allow the user to pull all of their medical information into one application
- Aid healthcare providers in obtaining patient's healthcare records
- Ensure that all patient data is secure
- Reduce diagnosis time
- Digitize patients' non-electronic records

#### **Solution Characteristics**

- Intuitive mobile application
- Allow users to log into existing patient portals and gather available medical record information
- Allow access to dependent records
- Allow the patient to detail their daily regimen to share with providers
- Allow linking with genetic data and fitness trackers

## **Application Features**

- Calendar containing appointments and notifications
- Patient log/notes section
- Data encryption
- Comprehensive medication information

# Competition

	Patient Advocate	Seqster	Picnic Health
Share Records	X		
Patient Data Entry Section	X		X
Medical Data	X	x	х
Genetic Data	X	x	х
Fitness Data	X	x	
Auto Update	X		
Communication w/ Provider	X		х
Medication Data Advocate	Х		

## What Our App Will and Will Not Do

#### Our app will...

- Allow end users to log into their existing patient portals
- Allow access to dependent records
- Gather available record information from existing patient portals
- Allow users to specify their daily regimen to share with providers

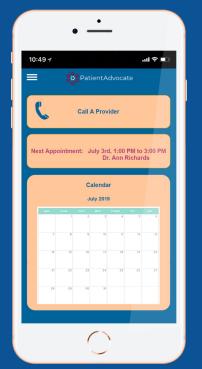
#### Our app will not...

- Allow patients to change physician provided medical records
- Allow unauthorized access to patient records
- Modify providers' existing EHR systems
- Conflict with HIPAA laws

## **Application Interface Example**

Home Screen





Contact a Provider Screen

#### Conclusion

The Patient Advocate application seeks to enhance the healthcare industry by expediting the gathering and sharing of patient healthcare data.

#### References

- Apple lets veterans track their health records on the iPhone
   https://www.usatoday.com/story/tech/talkingtech/2019/02/11/apple-b
   enefit-for-veterans/2837657002/
- 2. What is an electronic health record (EHR)?

  <a href="https://www.healthit.gov/fag/what-electronic-health-record-ehr">https://www.healthit.gov/fag/what-electronic-health-record-ehr</a>
- 3. PRIVACY, SECURITY, AND ELECTRONIC HEALTH RECORDS

  <a href="https://www.hhs.gov/sites/default/files/ocr/privacy/hipaa/understanding/consumers/privacy-security-electronic-records.pdf">https://www.hhs.gov/sites/default/files/ocr/privacy/hipaa/understanding/consumers/privacy-security-electronic-records.pdf</a>
- 4. MyChart

  https://www.novantmychart.org/mychart/default.asp?mode=stdfile&
  option=faq
- 5. FollowMyHealth
  <a href="http://support.followmyhealth.com/customer/portal/articles/1523612-what-is-a-universal-health-record-">http://support.followmyhealth.com/customer/portal/articles/1523612-what-is-a-universal-health-record-</a>
- 6. PicnicHealth
  <a href="https://picnichealth.com">https://picnichealth.com</a>

- 7. Seqster https://seqster.com
- 8. Evidence of Cost Benefits of Electronic Medical Records
  <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5596299">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5596299</a>
- 9. Benefits of switching to an electronic health record

  https://www.practicefusion.com/health-informatics-practical-guide

  page-1/
- 10. Why Are There So Many EHR Systems?

  http://cliniciantoday.com/why-are-there-so-many-ehr-systems-ana-vzing-a-bloated-market/
- 11. EHR adoption rates: 20 must-see stats
  https://www.practicefusion.com/blog/ehr-adoption-rates/
- 2. Making electronic health records talk to each other

  https://news.aetna.com/2016/03/making-electronic-health-records-talk/
- https://i.ytimg.com/vi/Ael5IRwSF3A/maxresdefault.ipg

Title Slide Background Image

13.

#### References

- 14. Visits to physician offices, hospital outpatient departments, and hospital emergency departments, by age, sex, and race: United States, selected years 2000–2015

  https://www.ede.gov/pebs/date/bus/2007/056.pdf
- other persons in the U.S. from 1997 to 2017

  https://www.statista.com/statistics/244628/share-of-us-adults-who-who-need-help-with-personal-care/