

What our project focus is:

Waste in medical

<https://www.medicalrecovery.com/resources/six-wasteful-practices-united-states-healthcare-are-spending/>

<http://www.cnn.com/2017/01/12/shocking-truth-20-of-health-care-expenditures-wasted-in-us-and-other-nations.html>

Business Case:

Define each component of the value chain in the healthcare industry

1. **Patient**
2. **Provider (Jeremy)**
3. **Payer**
4. **manufacturers**
5. **Distributors**

Possible swimlane interaction between and the patients as well

- **Defining how our project would benefit/ affect each one of the entities in the value chain**

What are we trying to solve:

The patient is the only common entity but is least involved in the interactions of data between healthcare entities in the value chain=constant stream of data

Patients (GEORGE): can be unsatisfied with treatment, ineffective treatments and not treated quickly enough-->unnecessary tests, procedures, medications.

Patients can clearly define if their medications are working/treatment is working

Patients can check if their information is correct

Possible **best practice(based on reviews)**/geographical pinpointing/ (possibly ` insurance) of referring hospitals or doctors

Integrated scheduling based on severity/needs of patient-->leads into the referral of hospitals.

Flexibility to move throughout healthcare system between providers with accurate information(records).

Reducing unnecessary procedures, test and documentation will save hospitals, insurance providers money.

*Different figures different sources: Inefficient Communication cost 2014 \$11B year-Hospitals.

Lost documentation=lost information-->inaccurate information and studies

Financial Implications

<https://www.mdsave.com/procedures/primary-care-new-patient-office-visit/d487fe>

New patient visit without insurance is \$334

<http://www.jhsph.edu/news/news-releases/2015/primary-care-visits-available-to-most-uninsured-but-at-a-high-price.html>:

\$200 for uninsured visit vs Of those visits, the average out of pocket cost for privately insured patients was \$49.

Boston Globe cites 2015:

<https://www.bostonglobe.com/metro/2015/10/05/study-puts-dollar-value-time-spent-waiting-for-doctor/1f7KB4aU9mkY5qK8CqDYUO/story.html>

Opportunity cost for patients in 2010= \$52 billion

AVG total visit time for a patient **121 minutes**= 37 minutes travel, 64 minutes waiting or filling out forms, and 20 minutes face to face with the physician.

Based on average sum of income in the united states \$43 in lost time for each medical visit — more than the average out-of-pocket cost for the care itself, which is about \$32

JAMA Internal Medicine- Blacks, Hispanics, and unemployed people spend 25 percent to 28 percent longer seeking health care, mostly because of longer waiting times in the clinic.

Provider:(JEREMY)-

Financial Implications:

¹ Bipartisan Policy Center, September 2012. “What is Driving U.S. Health Care Spending?”

² PricewaterhouseCoopers Health Research Institute, April 2008. “The price of excess: Identifying waste in healthcare spending.”

more than \$2.6 trillion each year.¹ According to numerous studies, more than half of that money spent is wasteful.² -->this spending doesn't correlate to actual benefits

Healthcare spending= 20% of America's GDP

<http://www.bmj.com.libproxy.temple.edu/content/356/bmj.j570> one fifth of healthcare spending across OECD countries is wasted. 1.2 trillion dollars across the world in 2010 unnecessary critical visits

<https://www.oecd.org/els/health-systems/Tackling-Wasteful-Spending-on-Health-Highlights-revised.pdf>

Unnecessary critical care patients put into the system- 1/5 of emergency rooms visits weren't deemed as emergencies

20% of hospital spending is pharmaceutical spending-->redundant medicines account for that waste

CDC: Most frequent principal illness-related reason for visit: cough

(hospitals) carry the burden of security but are the least capable to handle it.-->different architecture may

Hospitals would need to update records to our platform (we would need the updates to be monitored (either **case managers**/ having administrators in hospitals working on updates)-->making sure people actually updating their information

For people without smartphones a texting system will be provided to answer questions.

Payer (ALAN): (provider)

Health insurances

Hospitals gain the knowledge of patient treatment, by data sent to them to confirm that treatment is required.

-Know what the patient is getting and know if hospitals are actually doing treatments that patient requires

-After implementation insurances can make studies to help determine, which patient care is the best

-know if the patient information is correct and no repeated treatment/tests

-redundancy

-patient treatment do no work

-not pay for mistakes

-What types of diseases and issues are prevalent in particular areas

Issues that our project faces (ALAN)

Patient Confidential information= regulatory laws for documentation

Multiple point to point encryption will require a lot of computing time (especially under single repository)

How do we keep all the information safe and secure

Who would we have paying for it/ implementation

Who will manage the databases

Who owns the databases

Other companies may have their own information sharing platform in their network

How will we get customers to interact with the application

IT infrastructure (JOHN) (ERD for example)

Patient scans an IR Point to point interactions between each organizations that patient is involved in

Multiple organizations in each entity create multiple blockchain databases-->documents and data pulled from individual databases and requires only a single simple interaction with a smaller database

-Patient information

-No redundancy and conflicting data between hospitals

-Easy to bring up and show patient information to patient care and health insurances

Patient care facilities

- Document redundancy reduction
- Hospitals are able to share their patient data with others because the data is on one shared platform

Health insurances

- Know what the patient is getting and know if hospitals are actually doing treatments that patient requires
- insurance studies to help determine, which patient care is the best

- *Find the encryption issue to be compliant with the law
- *patient owns the data
- *multi network database (blockchain)

Possible storyboard:

Start with the patient-doctor-->patient having issues at home so they

Problem:

- 1. Documentation Redundancy and Accuracy**
- 2. Sharing and updating of documents**
- 3. Patient Engagement**

Solution:

- 1. Create a block chain to connect hospitals, patients, and insurance companies**
- 2. Allow patients to view their medical history**
- 3. Databases will be able to sync with each other to eliminate redundant documents**
- 4. Create access points where hospitals, patient, and insurances can access the data**
- 5.**

Key Metrics:

- 1. Cost of current process**
- 2. Savings for insurance and patients**
- 3. Amount of storage saved**
- 4. Efficiency of Information transfer**

Cost Structure:

- 1. Implementation of block chains**
- 2. Addition of data managers/case managers**

Revenue stream:

1. Elimination of repeated procedures
2. Reduce cost of storing/securing/managing data

Unfair advantage:

1. Hospitals can implement their own systems within their own network

Cost customer segment:

1. People medical facilities
2. Hospitals
3. Health insurance providers