

Product5x Case Study with solution Healthcare Product Development



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Healthcare Product Development

Context: United States spends the most on health care, about 15–20% of its GDP – largely attributed to higher costs for treatment and procedures

Level: Advanced

Category: Healthcare

Goal: Product Development

Problem Statement: Despite the huge expenditure on healthcare, medical error-related deaths are in the range of 250,000 every year – making it the third leading cause of death.

You are asked to come up with product solutions to reduce the medical errors which are causing thousands of deaths every year

Things to do: Identify and develop a product to reduce medical errors. Focus on the largest contributor to medical errors which is – mixups with doses/types of medications provided to patients.

* Product Ideation, v1

* Product SWOT

* Wireframes

* Target Market

* Monetisation strategy, if any

* Go-to-market plan



Truly Safe

Healthcare Tracking System

Product5x

About

United States spends the most on health care, about 15–20% of it's GDP – largely attributed to higher costs for treatment and procedures

Problem Stmt

Despite the huge expenditure on healthcare, medical error related deaths are in the range of 250,000 every year – making it the third leading cause of death.

Objective

The goal is to identify and develop a product to reduce medical errors. The key focus area will be on the largest contributor to medical errors which is – mix up with doses / types of medications provided to patients.

Market Research

Focus Area

- Mix up with doses / types of medications provided to patients.
- Misdiagnosis

Why it happens?

- Poor communication between doctors and drug administrators.
- Misinterpretation of prescription/instructions by pharmacists and/or medical administrators.
- Inadequate training, drug knowledge, experience, knowledge of patient health history and/or perception of risk on the medical administrators part.
- Over worked or fatigued health care professionals
- Poor communication between health care professionals and patients

WHO report on Medication Errors



User Persona and Target Group

Working Population between 30–55 who care for their loved ones



45 year old Peter living in NYC as a full stack developer. He values the health of his family

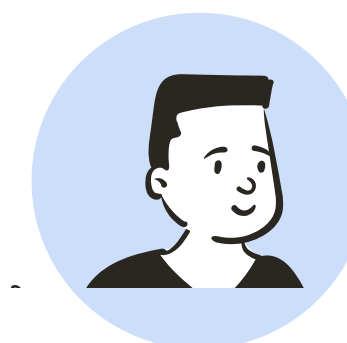


30 year old Jules working in Google recently got married. She values the health of her husband

Private and Government run hospitals and their staff



34 year old Olivia is the admin-in charge of a hospital. She values the reputation of her hospital



28 year old Mike is a doctor in a local community hospital. He wants to be protected from any potential law suits.

Product Ideation

What to improve?



- Reduce human errors. Ex: Miscommunication between drug and drug administrator
- Communication between patients and health care professionals

How?

- Digitalise patient health history, diagnosis, prescriptions and medical administration to reduce risk of human errors.
- Empower the patient by making the process transparent.





Potential Solutions

- Medication Review - Systematic assessment of a patient's medication management
- Medication reconciliation - Process of documenting an accurate list of a patient's current medications on admission and comparing this list to the admission, transfer, and discharge medication orders to identify and resolve discrepancies
- Use of automated decision support system to reduce misdiagnosis; Strengthening electronic prescribing and alert systems.
- Educating health care providers and patients

Highest risk reduction:

Multifaceted intervention which involves 2 / more solutions

HEALTHCARE TRACKING SYSTEM

Product v1.0

STAGE 1

Every new patient is registered into the system and registered patients' history is stored digitally



STAGE 2

Doctors or physicians record prognosis, diagnosis, test recommendations, instructions and prescriptions are recorded digitally. Alerting for risky combinations.



STAGE 3

Recommendations and instructions can be accessed by the labs or/and nurse stations. Nurses/Administrators have access to patient history



STAGE 4

Every drug/medication will have a bar/QR code which needs to be scanned into the system. The system matches the scanned drug against the prescription recommended for the patient in case.



STAGE 5

Alerts when drugs or doses are overridden or combinations pose risks



STAGE 6

Doctors and Patients are notified [via email or app] whenever an update happens to the records. Diagnosis, prescription vs administered summary, lab reports are sent timely to the patients via email or app



STAGE 7

Re-direct reporting from Healthcare tracking system to an app



STAGE 8

Users can request for a medical consultant to review reports online.



STAGE 9

Users can request for medical consultant to review the reports and consult on site



Hypothesis



I believe private and government run hospitals in USA will buy healthcare tracking system in order to contain risk of misadministration and human errors because medical errors can lead to damage to their reputation and potential law suites.



I believe working population between the ages of 30-55 in USA will use med app with conjunction with healthcare tracking system in order to be aware and get second opinion of diagnosis and medical administration because their health or that of their loved ones is important to them.

Assumptions

Describe	Status
There is poor communication between doctors and nurses/administrators.	Validated
Many hospitals have not digitalised patient information, diagnosis and prescriptions.	Validated
Medical errors lead to expensive law suits in USA and hospitals would want to avoid.	Validated
Health professionals are willing to acknowledge the problem and go through training on how to use the software.	To be validated
Hospitals would be willing to be transparent.	To be validated
Hospitals are okay with added over-head in the process	To be validated
Patients are aware of this problem and will use the reports to double check the diagnosis and medical administration	To be validated

Assumption Testing

- Concierge Strategy for hospitals and insurance providers
- Email Strategy for product hospitals and insurance providers
- Landing/Coming soon marketing for consumer app

Marketing Strategy

Build Awareness

- Foundations and Non-Profit Orgs are already aware of this issue and are running campaigns to bring in change via policy or laws. Make them aware that you can contain this problem using technology. Ask them to be advocates to this product in their campaigns and rallies.
- Mentions in existing news articles.
- Press coverage in newspaper and news channels.

Target Stakeholders

- Corporate health insurance providers - Incentive of real time accurate data for claims and reimbursements.
- Govt Hospitals

Branding Strategy

- For Hospitals: Reduce risk, Automate, Save time and cost, Diagnose better, Ease Doctors
- For Patients: Health safety, Family, Senior Citizens

Pricing

- Will do a competitive analysis and price it to be at par.
- Will recommend a 2 tier pricing model on subscription basis

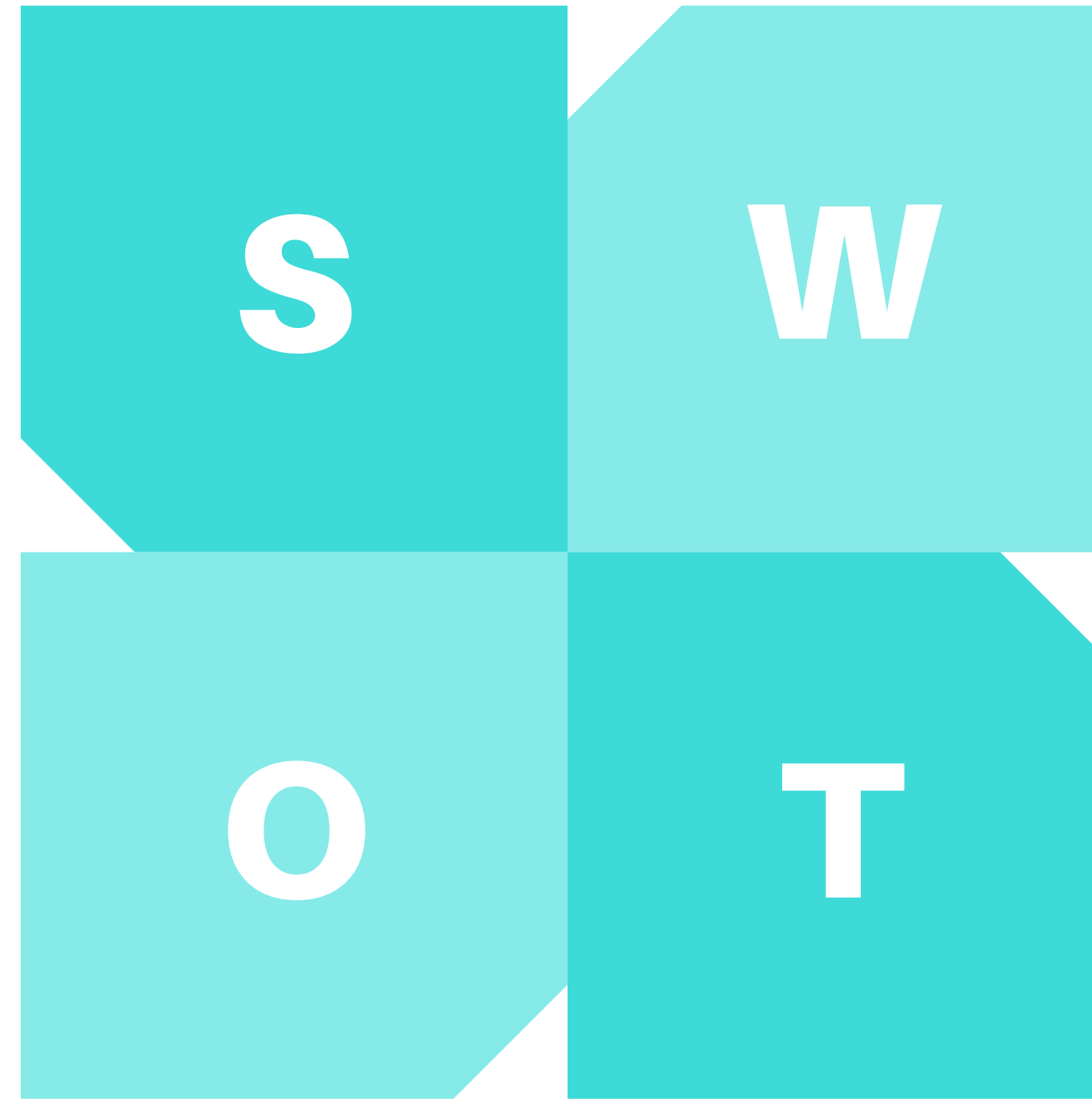
SWOT

STRENGTHS

We have additional checks and balances to validate what has been administered against what was prescribed. Existing hospital management software do not offer this.

OPPORTUNITIES

We can work towards building intelligent systems which can dispense vials of correct combination and dosage.

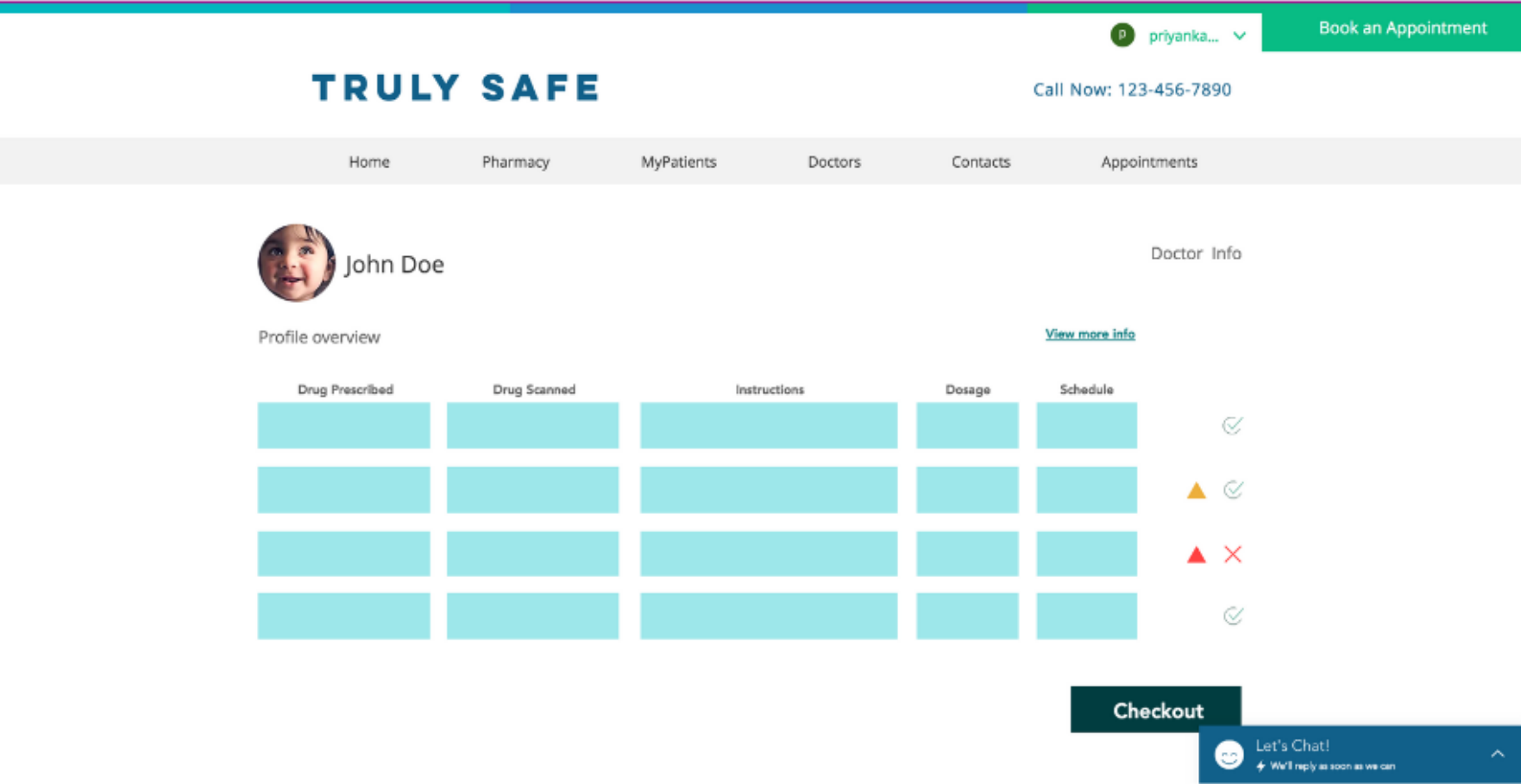
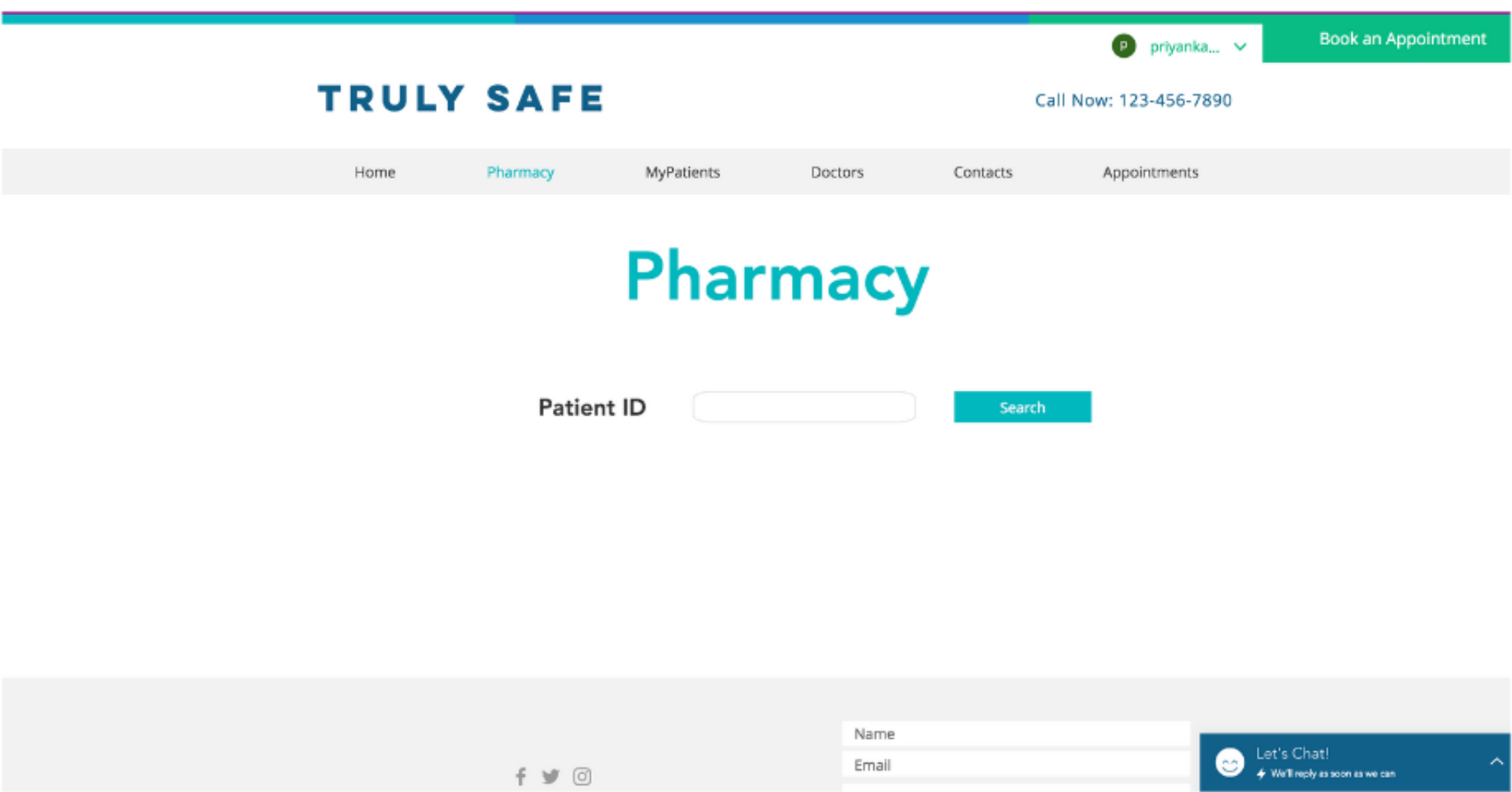
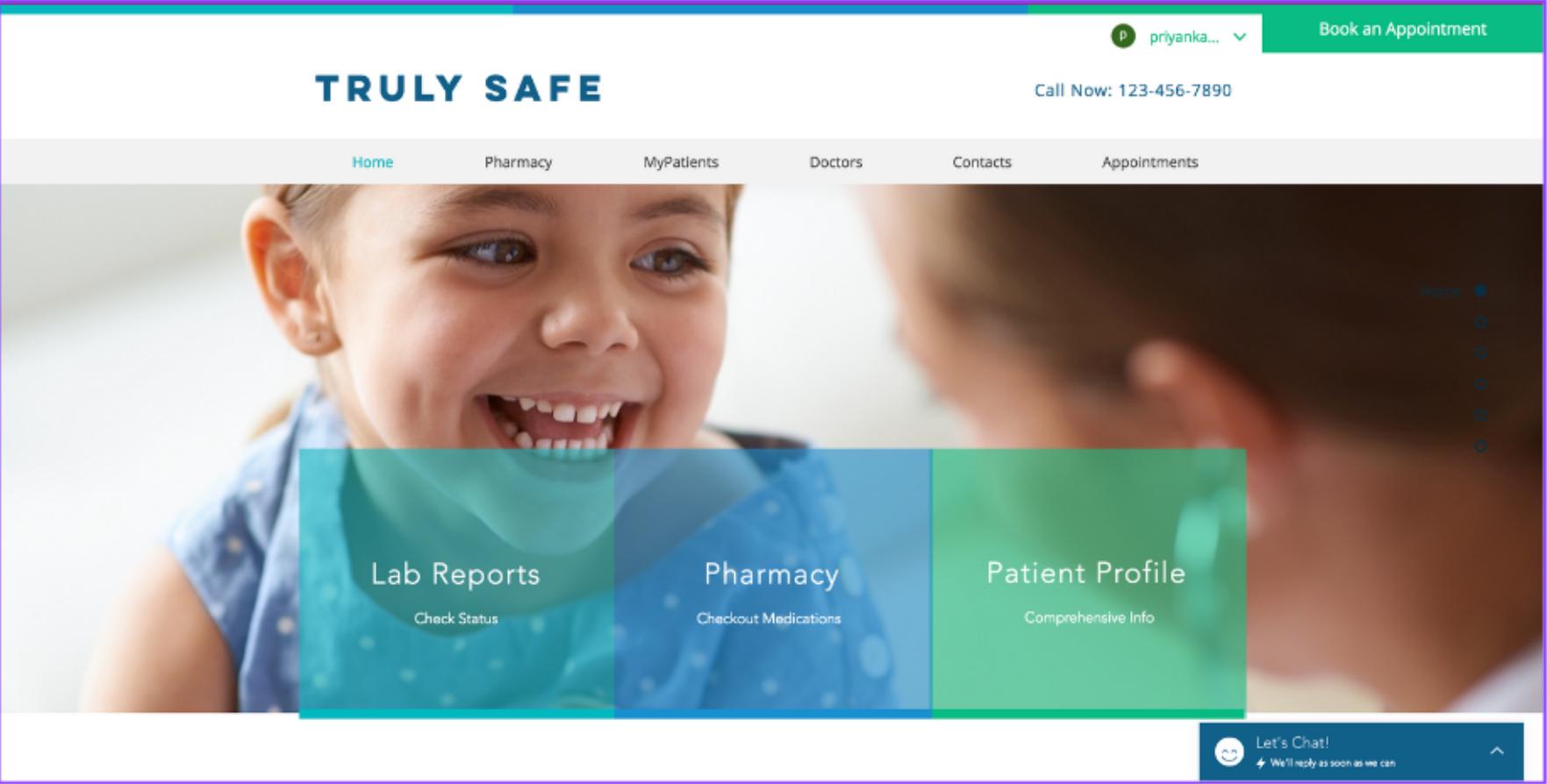


WEAKNESSES

Doctors can pose as point of failures in this system. Additionally we may not be able to prevent delay in medical administration.

THREATS

Hospitals may not want to be transparent



Wireframes

AARRR – Track Product Metrics

	Metrics
Acquisition	# of hospitals onboarded, # of patient registrations
Activation	# of patient registrations
Retention	Average session time (hospital), Average use time (patient)
Referral	Positive reviews
Revenue	Average revenue per hospital

THANK YOU



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