SyncCare

end to end solution for seamless medical record management

Team Morpheus

Sanjita Masih
Team leader

Sarmishta Biswas
Member

Tanisha Chanda
Member

Sai Kumar Mukthevi
Mentor

Introduction

Current Scenario

Health care has often faced the pressure to design, or redesign, its workflows to be more efficient and effective. In many cases, the trigger for examining workflow is in response to changes in how things are done. Today, the need to think about workflow design is more pressing due to COVID-19. Deficiency of diagnosis specific patient tracking list is amplified during a pandemic.

The healthcare system requires a professional competency in maintaining medical records which influences planning and decision-making of healthcare services.

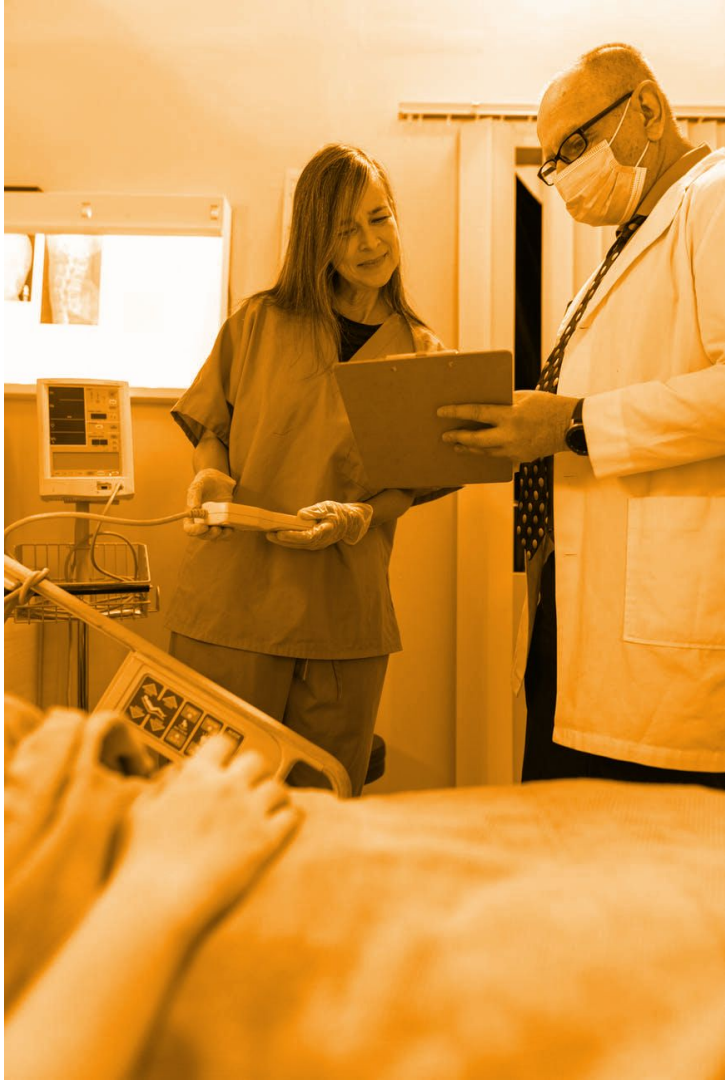
Problem Identification

Problem

There is an increased load on doctors and nurses due to the lack of digitized patient information and medical records.

Problem Description

- **Degraded coordination** between nurses and physicians causes them to deviate from routine sequences.
- A lot of **time and energy** is consumed in appointments and maintaining records in the existing healthcare system.
- **Patient information** cannot be securely shared.



Urgency & Importance

Why is this Important?

- In this ongoing pandemic, **information transfer** is complicated because caring for one patient involves many providers and information sources. Thus, many errors occur at handoff or transition points.
- Accessing information through one interface will address the **communication needs** of the care team.
- Physical records cause **contact** with the medical staff and the patients.

Dr. Shirsha Ray

MBBS, MS- General Surgery
General surgeon, Laparoscopic Surgeon

Age: 41
Status: Married
Location: Kolkata, WB
Income: Rs 6L/month

"I want to upgrade the way I manage my appointments with my patients."

Bio

Dr. Ray has been practicing for many years now and is highly respected in his field. He runs his own clinic along with attending two hospitals where he helps patients in diagnosing with routine checkups and examinations. With his busy schedule, he hopes to digitize his practice and monitor his patients during treatment and after.

Goals

-Attend to all patients in professional, timely manner
-Take advantage of advancement in technology
- Save time searching for patient information

Frustrations

- Poor communication with nurses
- Duplicated or outdated information
- Unavailability of vital information while handling critical cases

Motivation

-Conversion of paper form to digital form
-Provide treatment efficiently

Technology

Bhakti Mahajan

Msc. Nursing in Medical-Surgical Nursing (Special Critical Care Nursing)

Age: 36
Status: Married
Location: Pune, Maharashtra
Income: Rs 36,000/month

"I can't be dawdling with things when helping patients."

Bio

Bhakti has an extensive experience of over 15 years working under several surgeons at the critical care unit.
The pace of technology changes sometimes overwhelm her, but she likes the sense of order that comes with having a system, which evades the clutter of stacked papers from her desk.

Goals

-Decrease manual workload
-Better way to relay information between doctors and nurses
- Make drug administration process easy

Frustrations

- Constant interruptions making it difficult to accomplish tasks
- Finding a certain piece of information becomes time consuming
- Difficulty in coordinating with doctors

Motivation

-Track and manage patient status efficiently.
- Make as few errors as possible

Technology

Smartphone
Wearables
Social Media

Aim

To provide a comprehensive digital product which is driven by the need to facilitate remote health services in the current COVID-19 pandemic scenario.

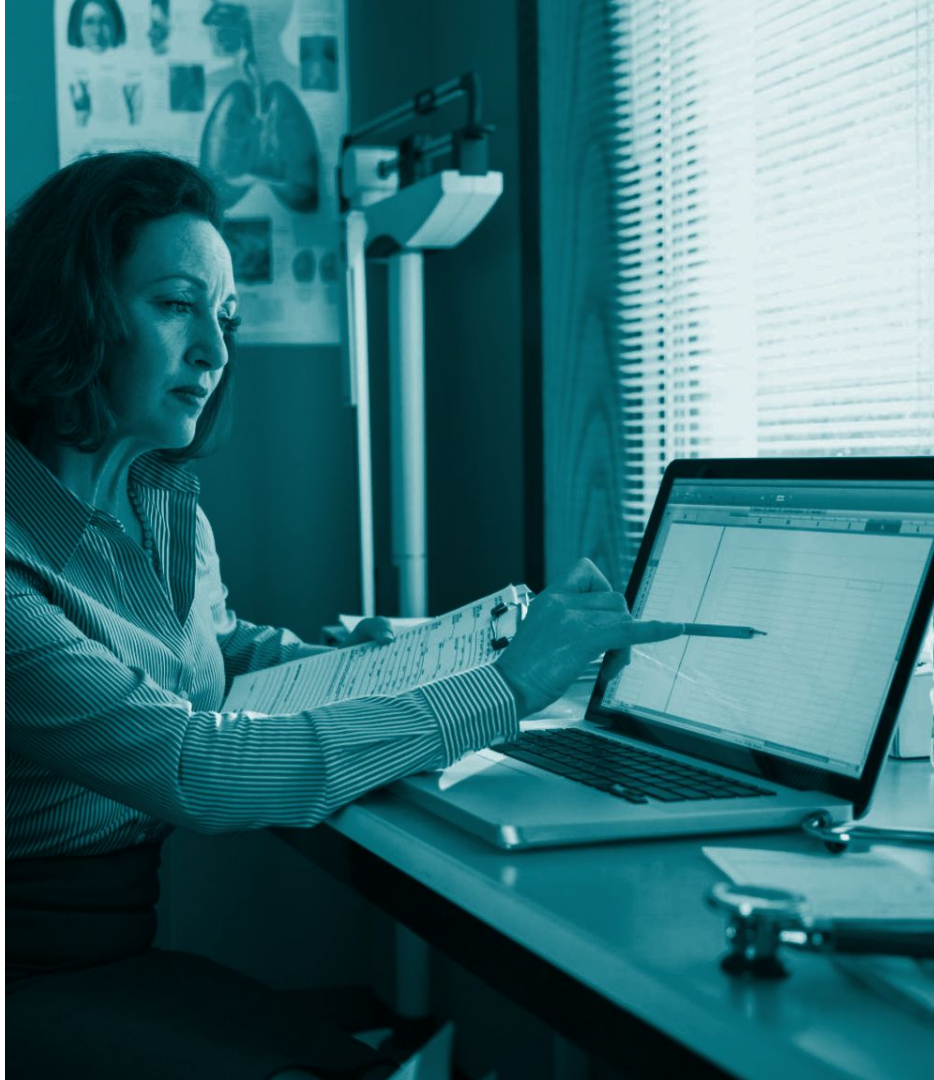
Our main objective is to **reduce the workload** of doctors, nurses and other medical staff who have witnessed an overwhelming inflow of patients ever since the pandemic started last year.

Explorations

SOLUTIONS & IDEAS

Solution 1: **Personal Medical Records App** through which patients can maintain and manage their health information.

Solution 2: **Healthcare App for Lifestyle Diseases** allow users to monitor their health at regular intervals and also offer a list of medical experts for a specialized disease.
Moreover, you can unite with the local service providers such as clinics and doctors and build a database. By this, the patient will be able to take instant action.



Final Solution & Innovation

Solution

- Through **SyncCare** hospitals can **document the entire journey** of the patient from entering the hospital to exiting it.
- It makes all the **medical records** in the app such that it is available to all hospitals, not just the one in which the patient is currently being treated.
- **Physical contact** can be **avoided** as well

How is it innovative?

When paper charts were the norm, doctors often created their own personalized written shortcuts for frequently-performed tasks and diagnoses.
Now, **SyncCare** will **give providers the ability to electronically record patient health information the way they choose.**

Design Process

EMPATHISE

- Understood the effect of COVID-19 on healthcare providers.
- Spoke to doctors and nurses to understand their experiences.

DEFINE THE PROBLEM

- Realised that there is an increased workload on medical professionals.
- The doctor to patient ratio in India is 1:1456.

IDEATE

- Decided on a problem statement and solution.
- Brainstormed possible features of the application.

DESIGN

- Sketched ideas for wireframes.
- Created the prototype of onboarding, home and menu screens.

TEST & IMPLEMENT

- Asked some medical professionals for their feedback on the solution and app screens.

Competition

Softwares	Cost	Ease of Use	Interfacing capabilities	Drawbacks
EPIC	low as $1,200 and can top $500,000	most complete, easy to- use functionality	Can be implemented in an EHR that can be effectively shared by an entire health care community	Bugged updates, Cumbersome UI, Billing issues
CareCloud	$349/provider/month	Ver user friendly	Good patient demographic interface	Slow and breaks down
AthenaHealth	at $140 per provider/month + 4% to 7%	easy for office staff, nurses and doctors to use.	user-friendly interface that makes navigating the software relatively intuitive	concerns with the robustness of billing system
AdvancedMD	$429 per provider per month.	one of the most comprehensive EMR systems	a flexible user **interface** and powerful features that can be customize to suit the practice's workflows.	Very expensive

User Scenario

Doctor

A new patient comes in, they are from a different city

The doctor wants to know about the patient's medical history, so he asks the nurse assigned to the case to go look through them

The nurse opens their medical records on SyncCare and finds that the patient is allergic to amoxicillin

This helps them avoid any fatalities caused due to presence of amoxicillin in antibiotics

User Scenario

Nurse

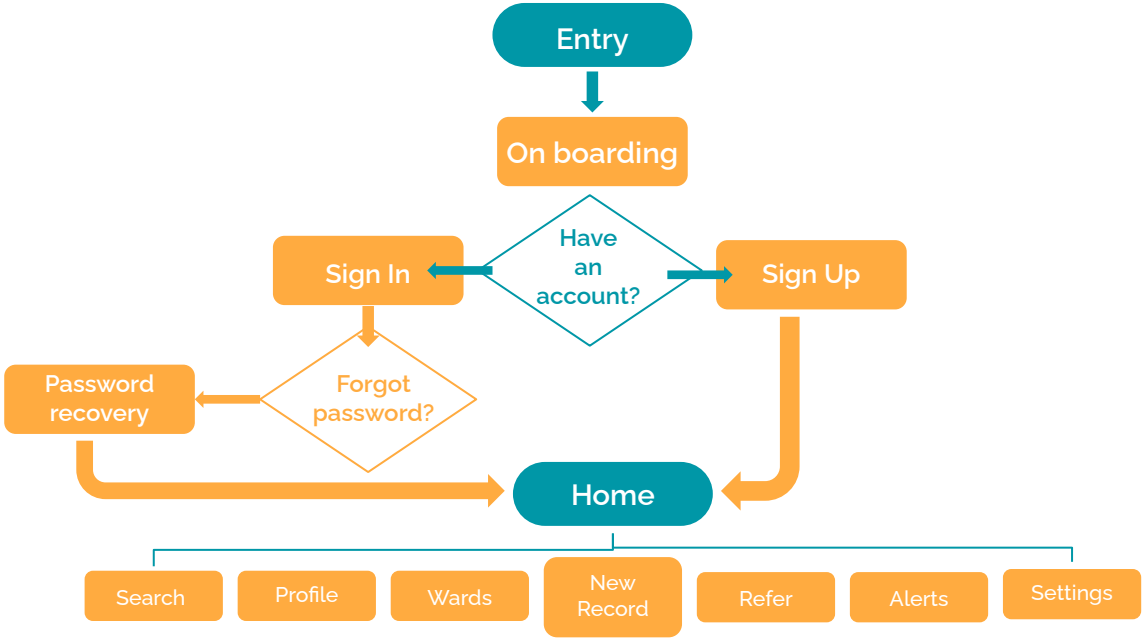
The nurse goes on her daily rounds to check on the patients

She gives them the necessary medications and waits until they have been consumed by the patients

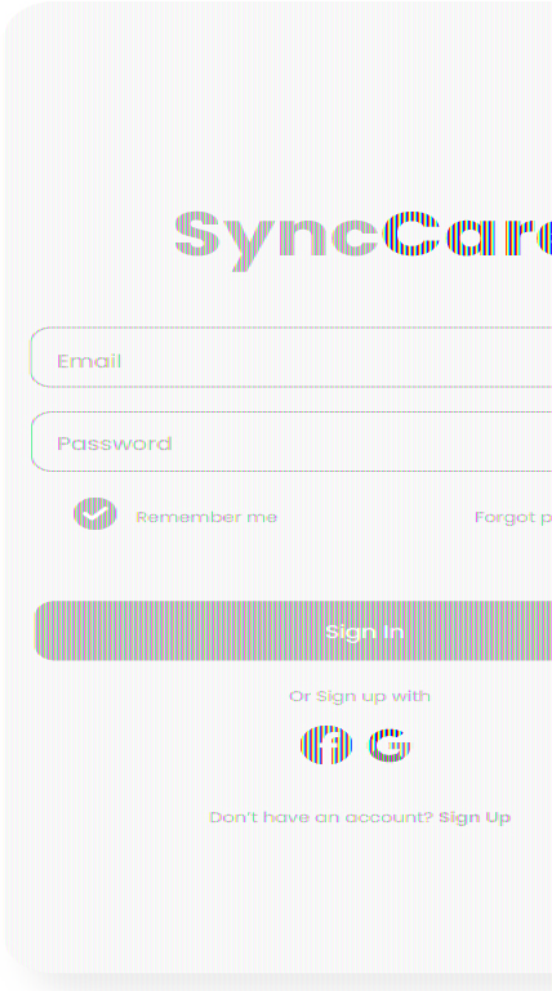
She notes their vitals and any additional information that may be required

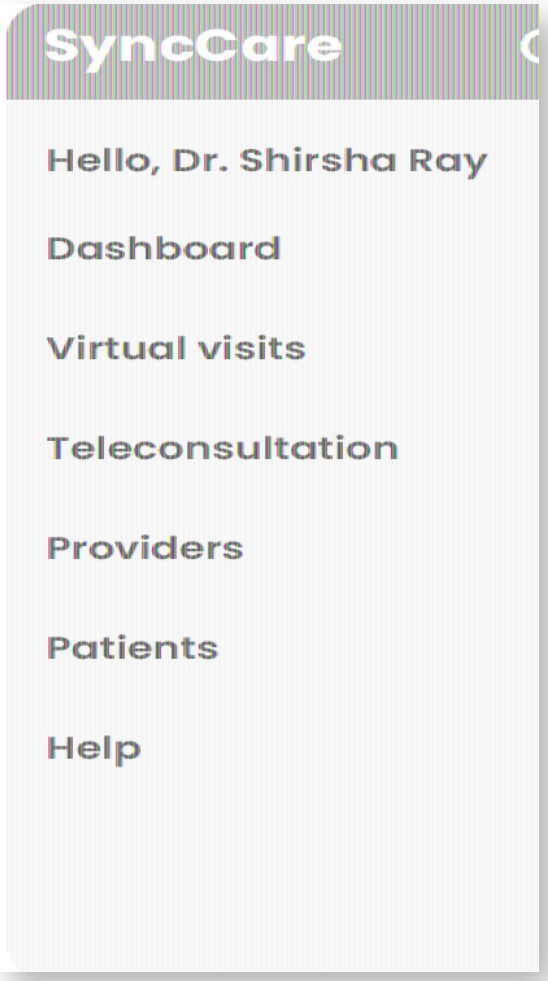
She logs them into the system keeping a record of the patient's progress

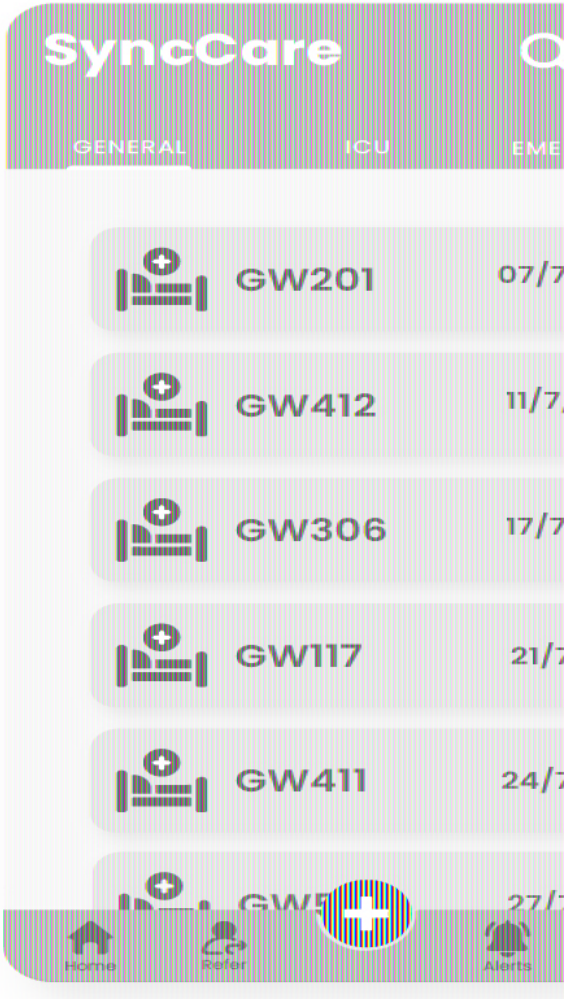
User Flow

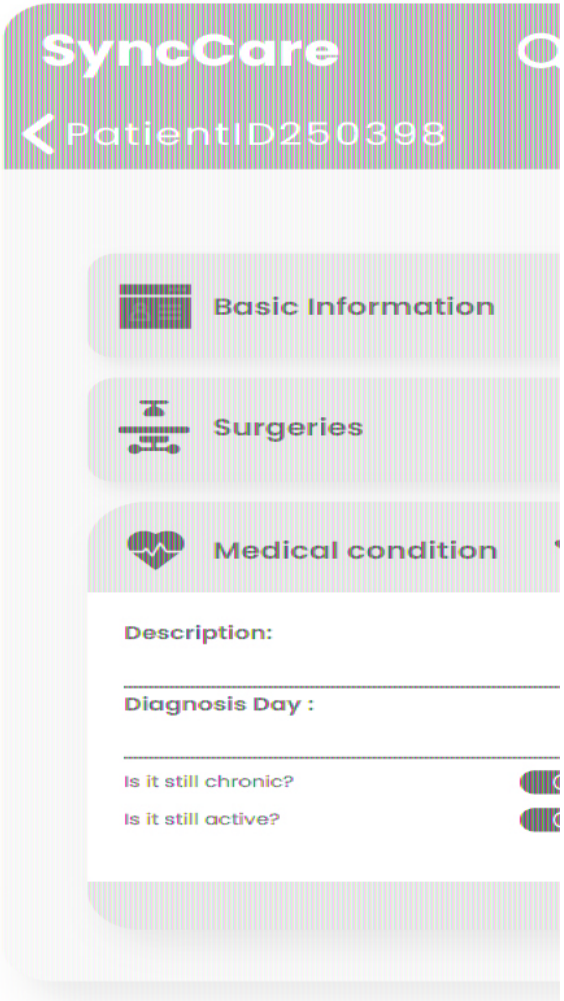

Entry
On boarding
Have an account?
Sign In
Sign Up
Forgot password?
Password recovery
Home
Search
Profile
Wards
New Record
Refer
Alerts
Settings

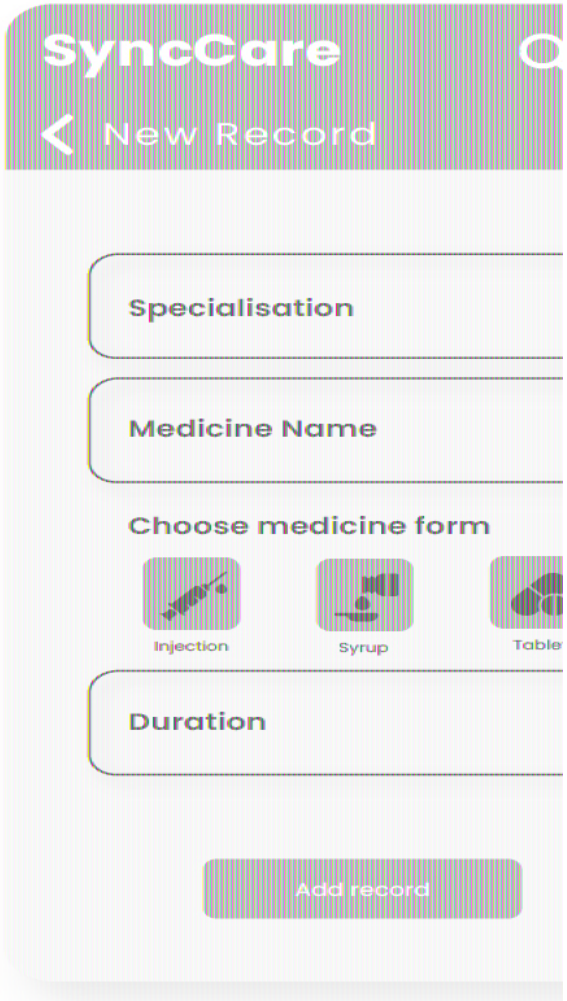
User Experience




SyncCare
Hello, Dr. Shirsha Ray
Dashboard
Virtual visits
Teleconsultation
Providers
Patients
Help


SyncCare
GENERAL
ICU
GW201
GW412
GW306
GW117
GW411
Home
Refer
Alerts


SyncCare
PatientID250398
Basic Information
Surgeries
Medical condition
Description:
Diagnosis Day :
Is it still chronic?
Is it still active?


SyncCare
New Record
Specialisation
Medicine Name
Choose medicine form
Injection
Syrup
Duration
Add record

Impact on the Society

Doctors

- **Routine check-ups** can be documented in the application.
- The application will help them store **detailed notes** of the patient.
- The **care plan** of the patient can be created and stored on the application.
- Orders **lab tests** through this application and receives the results on this application.
- Collect, record, and maintain **sensitive patient information** such as examination results, medical history, and reports.

Nurses

- They will be able to **communicate** more effectively with the medical team through the application.
- Monitor and record **patient's condition** and document provided care services.
- The application will notify them of **medical emergencies** so it can be taken care of efficiently.
- Results of **routine diagnostic checks** (monitor pulse, blood pressure and temperature, provide drugs and injections etc) can be entered into the application.
- The Registered Nurse can access the progress of the **tasks assigned** to the respective medical personnel via this application.

Sustainability

HOW IS YOUR PRODUCT SUSTAINABLE?

Efficient: Communication between nurses and doctors is streamlined.

Less physical exertion: The fatigue of writing notes, carrying case files and running around to deliver case files is eliminated.

Saves time: All the departments are in different buildings so there is actual distance between the staff. This application would save time taken to deliver case files from one department to another.

Less physical contact: The nurses and doctors can access patient information through the application so they may not come into contact with the COVID-19 affected patient as often. This reduces the risk of the medical professionals getting infected.

Eco-Friendly: Paper is saved since the records and communications are stored digitally.

Space Saving: Space is saved since there is no need for rooms filled with filing cabinets.

Durable: The information is long-lasting and indestructible.

Secure: Patient information is password protected for privacy.

Execution & Business Viability

HOW CAN THIS SOLUTION BE IMPLEMENTED?

This mobile application can be released on **Android** and **iOS**. It is available only to medical professionals and requires verification through hospital identity cards to sign in.

HOW CAN THIS SOLUTION BE SUCCESSFUL?

- This application can be used even after the COVID-19 pandemic.
- This application ensures updates for in-patients, out-patients and those in critical care.
- Physical contact is reduced since there is no handing over of papers thus reducing the risk of COVID-19 infection.

Resources:

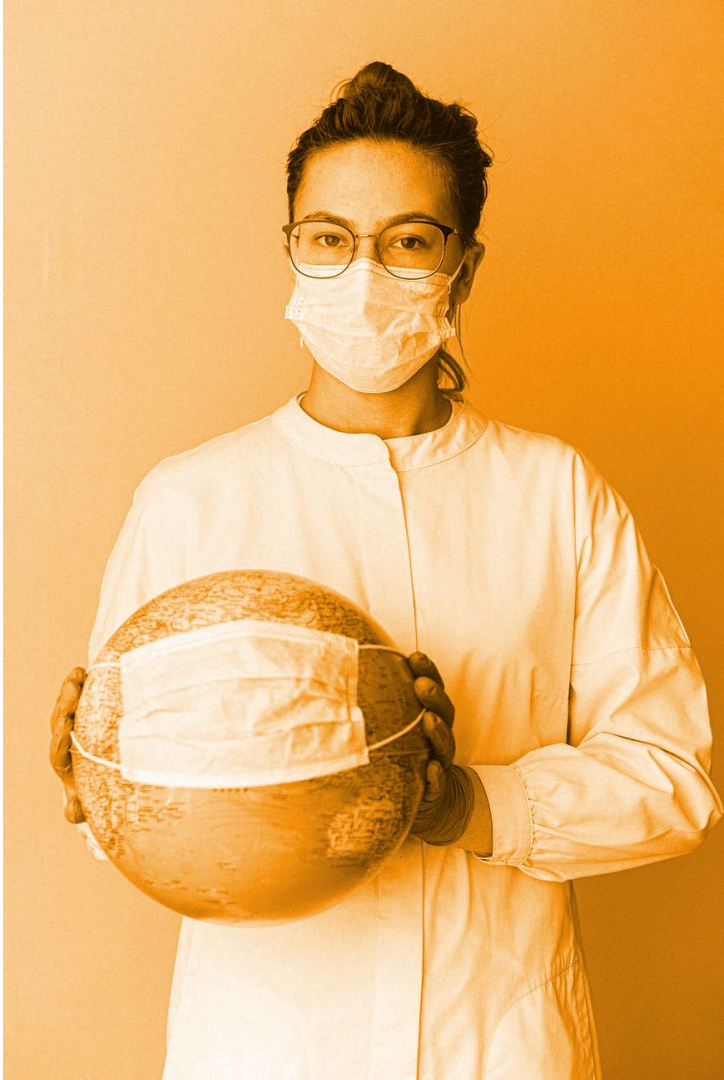
Health.economictimes.indiatimes.com
Wheel.com
practicefusion.com
Mocdoc.in
Businessnewsdaily.com
Medicalrecords.com
SpaceSave,com
Betterteam.com
NursingWorld.org
Thebalancesmb.com
ncbi.nlm.nih.gov

Project Summary

Our application, SyncCare, is comprehensive digital product which will help facilitates remote health services in the current COVID-19 pandemic scenario.

It will reduce the workload from doctors, nurses and other medical staff who are witnessing an overwhelming inflow of patients ever since the pandemic started last year.

It keeps all patient's records in one place so they're available whenever and wherever.



Thank You