Covid360
A central platform for treatment, containment, management of Coronavirus patients and quarantined persons
As India’s Corona Virus cases rise, many tactical and strategic decisions will need to be made keeping the needs and challenges of the healthcare system in mind.

1. As number of Corona cases rise...
   - Jan 30th: India’s first case of COVID detected
   - March 24th: Nearly 1.9 lakh people under surveillance; more than 700 confirmed COVID cases
   - April 15th: India’s make or break situation...

2. Health systems will likely face many challenges:
   - Difficulty in contact tracing, identifying and prioritizing care to potentially infected people
   - Enforcing uniformity of the treatment protocol and capacity building of staff
   - Synchronization of action with clear articulation of available resources and designated health infrastructure
   - Lack of transparency with patients and citizens
   - Shortage of medical and other professionals

3. Covid360 platform is the solution to tackle these challenges:
   - Identifies potential high-risk patients and focusing their treatment efforts
   - Defines COVID-19 care plans by unified protocol and automatically distribute to millions of patients
   - Decreases infections between patients and care teams
   - Real time Contact Tracing for self-quarantined patients
   - Increases utilization and redeployment of medical staff (including quarantined staff)
   - Is a secure and scalable solution that is deployable in days
   - One stop information on testing and treating infrastructure & logistics

.. various needs will arise in the healthcare systems

A need for mass quarantine in homes, hotels or other designated settings

Identifying and prioritizing care for potentially infected people

Identifying and enabling access to all critical health infrastructure (testing, isolation, treatment) for patients at risk

Managing and prioritizing multiple patients remotely

A need for mass quarantine in homes, hotels or other designated settings

Identifying and quarantining citizens and medical professionals meant for treating the virus
The proposed solution: The Covid360 Platform

A central platform for treatment, containment, & management of Coronavirus suspects & patients, & quarantined persons

- Leveraging Deloitte’s vast knowledge and experience with thousands of health organizations
- Based on Salesforce Health Cloud – the leading health platform in the world
- Using AI based triage technologies and clinical predictions from Diagnostic Robotics
- Leverages IIT Bombay’s in-house real time contact tracing application
COVID360 Overview

**WHAT IS COVID360?**
A central platform for treatment, containment, and management of Coronavirus suspects and patients, and quarantined persons

**CAPABILITIES INCLUDED IN THE COVID360 MVP (V 1.0)**

- Digital AI based triaging and symptom collection
- Covid19 risk stratification
- Email/SMS campaign assignment
- Care team definitions (Health providers, National and State)
- Unified care protocol and updates
- Mobile read both for patients and staff
- Tracking, Tracing and Alerting through Corontine Application
- Monitoring and compliance of quarantined patients
- Detailed event timeline
- Patient symptoms and treatment self update
- Epidemiological timeline
- Support communities
- Dedicated knowledge articles
- Dashboards and reporting
- Telemedicine
- EMR linkage
- Volunteering
- Facility management

**COVID360 UNDERLYING TECH**

- Salesforce Health Cloud
- Diagnostic Robotics AI Triage Solution
- Salesforce Customer Community
- Salesforce Shield
- Salesforce Einstein Analytics
- Salesforce Digital Engagement
- IIT Bombay Contact Tracing
DEMO PACK

Modules

- COVID360 Patient Flow
- CORONTINE APPLICATION
- Facility Management flow
### COVID360 Platform stakeholder’s roles

<table>
<thead>
<tr>
<th>Suspect/Patient</th>
<th>Call Center Agent</th>
<th>Care Coordinator</th>
<th>Doctor</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Patient is expected to self-register on the application and follow notification pushed from the app or as advised by the call center agent, care coordinator and doctors</td>
<td>• First responders from the COVID360 application</td>
<td>• Act as the key case handlers for patients tagged for quarantine and monitoring</td>
<td>• Medical graduate (internal medicine, pulmonologist, resident doctor)</td>
</tr>
<tr>
<td>• Fills up self-assessment questionnaire for case registration/risk stratification</td>
<td>• Are basic graduates trained to carry out call-center function and basic tasks on the COVID360 app</td>
<td>• Handle all monitoring of quarantined patients</td>
<td>• Works in coordination with care coordinator to manage positive tested cases and symptomatic untested cases marked moderate to high risk</td>
</tr>
<tr>
<td>• Does self quarantine and follows contact and droplet precautions</td>
<td>• Coordinates between the patient and the care coordinator</td>
<td>• Responsible for tasks such as initiating testing of mild-risk patients, Initiating events such as pushing home treatment plans, advising on contact and droplet precautions, tagging at risk cases to nearest testing and care facility and other events based on a patient’s disease journey</td>
<td>• Responsible for tasks such as monitoring the event timeline and creating tasks for patients (Testing and Treatment), Evaluation of cases at home which turn positive on testing, advising for hospitalization care and final discharge</td>
</tr>
<tr>
<td>• Monitors and reports daily symptoms</td>
<td>• Registers the patient on the COVID360</td>
<td>• Directs the patient for any basic information</td>
<td></td>
</tr>
</tbody>
</table>
COVID360: Process Flow

Suspect/Patient

Visit Web page
- Register on Portal
- Authenticate via OTP
- Enter Address details
- Answer Triage Questions
- Review your Covid severity Rating

Take ownership of the Suspect Cases
- Assign a Care Coordinator
- Confirm rest to Patient (Moderate to high risk)
- Contact the Suspect: Push notifications/advice to low risk

Doctor added based on case severity by the care coordinator

Complete the Care Plan tasks assigned
- Apply a Care Plan
- Enter Consumption Details (If any)
- Add Members to Case team
- Initiate ‘Corontine’
- Tag Facility to quarantine
- Update Quarantine
- Update Case Status

Update

Call Center Agent
- Upon confirmation, the system creates a Case & a Quarantine file for the Patient

Care Coordinator

A system generated email notification is sent to the Patient upon confirmation

Patient

Login into Patient Portal
- View Care Plan
- View Pending Task
- Complete Pending Tasks
CORONTINE App | Real time Geo-fenced contact Tracking, Tracing and Alerting

Tracking asymptomatic carriers to prevent the spread of the disease

Features of Corontine application

01 Cross platform application
- Available on Android and IOS

02 Tracking ability
- Tracks coordinates of asymptomatic carriers
- Users geo-fenced (marked in confinement in a region)
- Tracks regions and units

03 Alert generation
- Alerts generation on movement outside geo-fenced areas
- Alerts for all types of users tracked on the system

04 Contact tracing
- Contact trace individuals who have been in close proximity of the quarantined person
- Monitoring of individuals on home quarantine
- Open access for non-asymptomatic users

05 Access controlled
- Secure operations with access controlled user registration in one of 5 different roles

06 Easy deployment
- Easy to deploy making solution scalable in less time
- Multi-lingual support is integrated
- User friendly application

Easy Deployment

Access controlled
Real time contact tracking, tracing and alerting through Corontine application

Tracking asymptomatic carriers to prevent the spread of the disease

**Corontine application**

The app (both Android and iOS) collects GPS coordinates of the mobiles of Asymptomatic carriers.

- Users can be geo-fenced - marked for confinement in a region
- Tracking of regions and units
- Alert generation on movement outside region
- Controlled access to user information with only authorized admin who can access and track user movement
- Contact tracing: Ability of the solution contact trace individuals who have been in close proximity of the quarantined person
- Access controlled user registration in one of 5 different roles
- Easy deployment to track quarantined users
- Alerts generation for other users and do contact tracing based on GPS information
Facility Management

Features

- Maintaining the list of all the identified facilities who are enrolled
- Different type of facilities can be incorporate like Hospitals, Hotels, Testing Centers etc.
- Inventory Management to track the inventory of essentials along with consumption status
- Key contacts like Administrators, doctors, staff can also be maintained against each of the facility
- Patients association against each facility
- Dashboards
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Epidemic Command Center

- Broadcasting
- Communities Management
- Patient management
- Insights / Analytics
- Document Management
- Budgeting & Resource Management
- Integration & API Management
- Patient Journey and contact tracing
- Telemedicine
- Mobility
- AI & Dashboards
- EMR linkage

Covid360 Architecture

Salesforce Health Cloud
AI Triage Solution
Salesforce Customer Community
Salesforce Shield
Salesforce Einstein Analytics
Salesforce Digital Engagement
Various immediate and long term benefits of the system for India

**Potential tool for any future outbreaks and disease response in India: Creating a future ready capacity**

- Prioritization of received cases according to severity and risk stratification will ensure resources are efficiently utilized
- Automation with fixed protocol for decision making based on predetermined criteria, and automation of execution leading to reduced errors

**Provides synchronization between central, state and private resources. Will lead to uniformity of collection, identification and next best action of affected cases**

- One source of truth with synchronization and transparency of data between the teams ensuring best care coordination
- Data will be unified, reliable and secure with infrastructure for analysis and insights

**Real Time updates regarding suspects, patients & quarantined persons and contact tracing will provide quick response ability**

- Easy knowledge sharing and distribution of relevant content and guidelines across the country
- National level data will be available for analytics, risk predictions and other modelling enabling better public policy decisions
Following list of services are delivered by the volunteers on the platform:

- Delivery services (grocery, veggies and fruits, medicines and milk/dairy)
- Transport services (patients, essential or other personal emergency)
- Donations (food, medicine, mask, sanitizer, pet food)
- Government support (Help to local police, Help local vendor, Help PHC/CHC, Help in awareness etc.)

Due to the lockdown and imposed restrictions to maintain social distancing, certain people are finding it hard to meet the bare essentials to survive.

People who are looking for assistance with food, medicines or other basic services.
MILAN Volunteer App

Features

- Provides information on volunteers available, services available, contribution page and impact stories for volunteers and requestors to post
- Easy registrations using personal information, mobile OTP and status as quarantined or not quarantined, beneficiary or volunteer
- Beneficiaries can request for help for both in person and virtual assistance (Groceries, Vegies and fruits, Medicine, Milk/Dairy, Patient transport, Donations etc)
- Volunteers will be assigned by the system based on distance and availability of the volunteer and services
- Requests for services can be tracked live
MILAN | Application Process Flow

Home quarantined or general beneficiaries register on the app using basic personal and contact information.

Beneficiaries request for help for themselves or for someone else.

Beneficiaries search for the services they require from a list of available options and provide the location and the time of service.

Volunteers see a list of live requests based on distance and opted service categories, and pick up requests.

Volunteers such as doctors register on the app using their personal and contact information, services they can deliver, time slots available etc.

Beneficiaries and volunteers can post feedback on the served request and share the impact story.

Service delivery happens at the designated time and status is marked as completed (either by volunteer or beneficiary).

Service delivery is tracked through a unique ID and volunteer details and phone number.

Milan

All volunteers on the application are registered using government ID. For doctors, once admin reviews profession qualification, they are registered on the app.