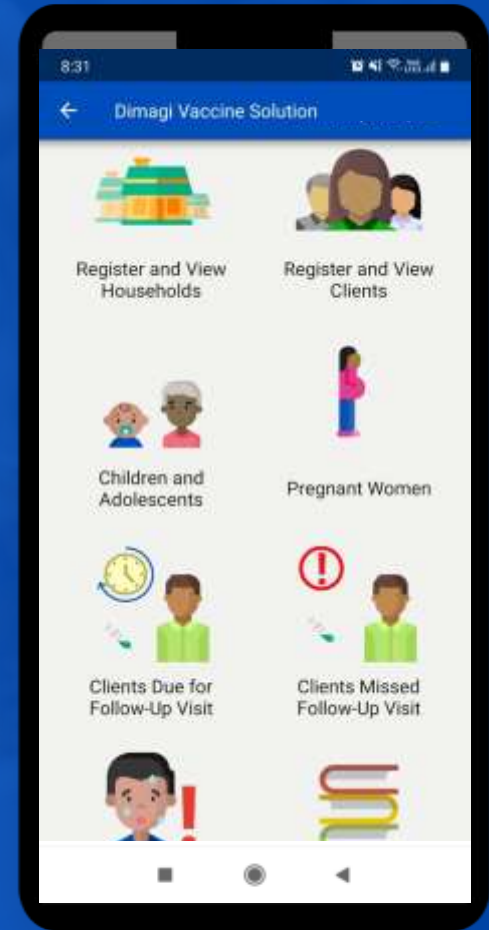# Dimagi Vaccine Solution

Routine and COVID-19 Vaccine Delivery

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Who We Are

dimagi

An award-winning social enterprise founded out of MIT and Harvard Medical School that supports frontline workers with innovative technology

On a mission to create sustainable impact for underserved populations through innovative technology solutions for frontline workforces

180+ Members

Dimagi's staff is based in offices in the United States (HQ), India, South Africa, and Ethiopia.

2,000+ Projects

We've supported thousands of projects in diverse sectors.

130+ Countries

Dimagi has supported projects in more than 130 countries across six continents.

Our Approach

Powerful Technology

Our flagship technology, CommCare, supports 700,000 active users – about 10% of frontline community health workers globally.

Expert Services

Our team has supported more than 2,000 digital programs.

Sustainable Impact

We prioritize our impact-first mission, while building a sustainable and scalable social enterprise.

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Introducing CommCare

The most widely-used offline data collection and service delivery platform— built for the last mile[1]

400 million
People Registered

700,000+
Users

130+
Countries

2000+
Projects

Global Digital Good[2]
An established global good that has already been deployed in multiple countries

Effective for COVID-19 Response[3]
Recognized for turn-key ready applications for COVID-19 and a history of proven success with large scale deployments

Evidence Based[4]
75+ peer-reviewed studies have been conducted exploring CommCare's impact on frontline programs globally

1 Johns Hopkins University, 2 Digital Square, 3 Johns Hopkins University, 4 Dimagi

CommCare & COVID-19 Vaccine Delivery

In 2020, Dimagi developed a solution for the **equitable distribution of COVID-19 vaccines** (read more here).

The solution is currently used at **national scale in multiple countries** with **over 1 million vaccine doses tracked** across deployments.

Somalia

- Launched in March 2021
- 1.5M+ doses recorded
- 500 users
- PowerBI dashboard

Jamaica

- Launched in May 2021
- 1.3M+ doses recorded
- 1,000 users
- Superset dashboard

The Challenge

Problem Statement

The COVID-19 pandemic has disrupted the delivery of routine immunizations, leaving communities vulnerable to the emergence of vaccine preventable diseases[5].

More children missed out on routine immunizations in 2020 than in 2009[1]

- Immunizations are **highly successful and cost-effective** public health tools[2]

- Vaccines are available for the **prevention of 25 diseases**, with 15 more in development[3]

- Globally, they are responsible for a **consistent decline in deaths** that can be wholly or partially prevented through vaccination[4]

Communities are vulnerable to vaccine preventable diseases[5]

- Disruptions in routine immunization due to COVID-19 can lead to **secondary health crises**[5]

- Unvaccinated individuals are **susceptible to vaccine preventable diseases** such as measles and rubella[5]

- The risks are particularly acute for children; **in 2020, 23 million children** missed out on basic vaccines[1]

1 UNICEF, 2 GAVI, The Vaccine Alliance, 3 World Health Organization, 4 Our World in Data, 5 World Health Organization
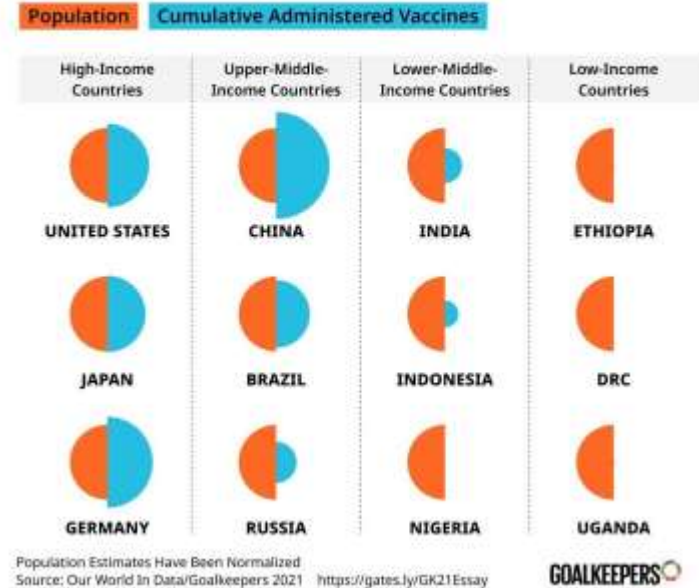
Disparities in COVID-19 Vaccination

While safe and effective COVID-19 vaccines are available, lower- and middle-income countries have limited access to vaccines[1]

- **Over 80% of all COVID-19 vaccines** have been administered in high- and upper-middle-income countries[1].

- **Less than 1% of doses** have been administered in low-income countries[1].

- **Digital tools can help with the equitable distribution of COVID-19 vaccines** once they become available in lower- and middle-income countries.

COVID Vaccine Inequity: Visualized
Where people live shouldn't determine their chances of getting vaccinated
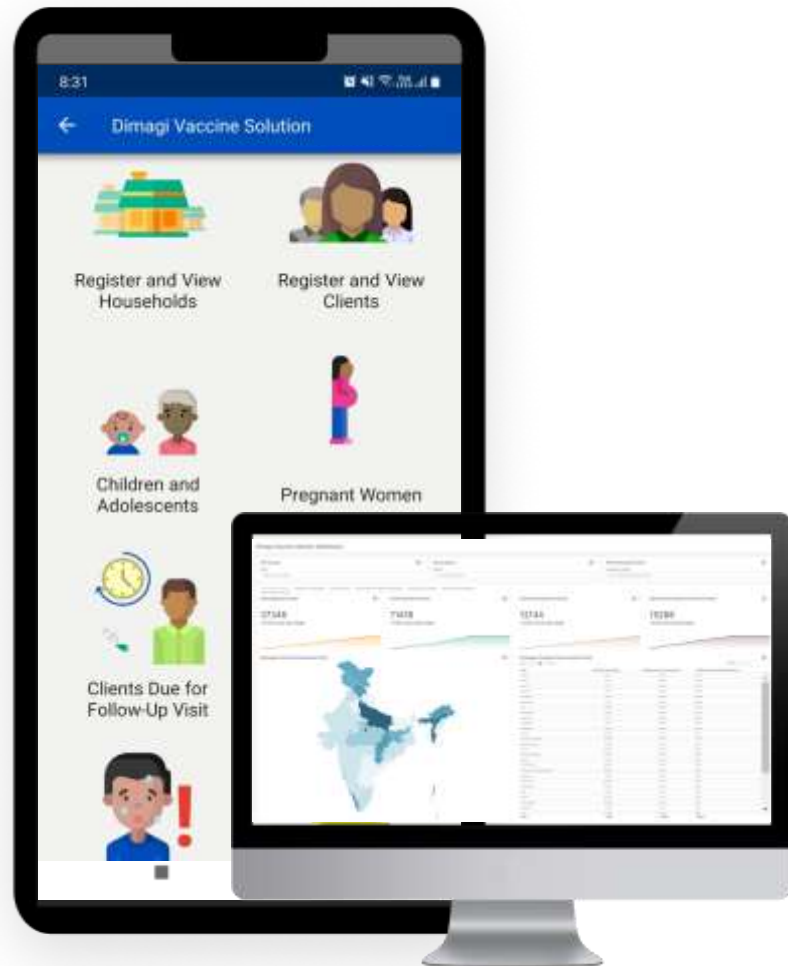
Population   Cumulative Administered Vaccines

High-Income Countries	Upper-Middle-Income Countries	Lower-Middle-Income Countries	Low-Income Countries
UNITED STATES	CHINA	INDIA	ETHIOPIA
JAPAN	BRAZIL	INDONESIA	DRC
GERMANY	RUSSIA	NIGERIA	UGANDA

Population Estimates Have Been Normalized
Source: Our World In Data/Goalkeepers 2021   https://gates.ly/GK21Essay

GOALKEEPERS

1 2021 Goalkeepers Report

The Solution

The Solution

There is a need to maintain our focus on the equitable delivery of COVID-19 vaccines while also restoring previous rates of routine immunization.

The Dimagi Vaccine Solution equips countries with tools to make progress on both COVID-19 and routine immunization in parallel, without one happening at the cost of the other.

Core Solution Components

Mobile and Web Application
Frontline Workers

Messaging
Direct to Clients

Analytics
Government Stakeholders

Modular Application Design

Six micro-applications—each designed for a different immunization challenge:

1
**Client
Registry**

2
**Vaccine
Delivery**

3
**Adverse
Events
Following
Immunization**

4
**Community
Mobilization
& Counseling**

5
**Healthcare
Worker
Training**

6
**Facility
& Stock
Management**

Partners can **select and configure** each micro-application based on local requirements.

Key Features

Works offline
Seamless workflows for end users without internet connectivity

Multilingual
Local language application translations and data capture

Open Source
Open source platform with free training tools and a community of CommCare users

Multimedia
Images, audio, and videos support low-literacy users with application navigation

Value-Add Features

Dimagi is developing CommCare apps to accompany the core solution

Wrap-around solutions include:

- Integration with **Digital Vaccine Certificates**
- Integration with **Payments**
- Integration with **DHIS2**
- **RapidPro**, **Turn.io** and **Whatsapp** Integrations for messaging
- **EngageSPARK** integration for interactive voice response (IVR) for automated direct-to-client calling
- **Biometric** scanning

Health worker registries, routine immunization registries, and health management information systems will support community-based engagement and turnkey integrations.
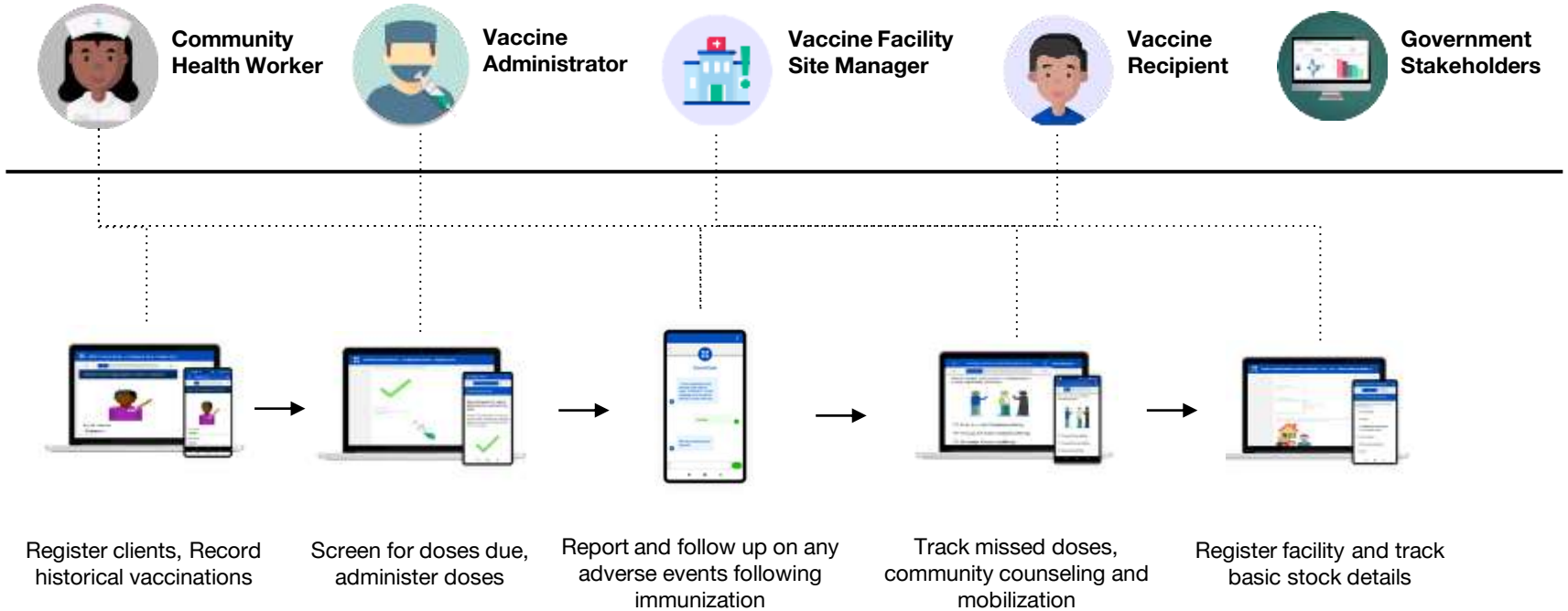
Demo of the live system

Micro-Application Users and Workflows

End User Workflows

Community Health Worker	Vaccine Administrator	Vaccine Facility Site Manager	Vaccine Recipient	Government Stakeholders
Register clients, Record historical vaccinations	Screen for doses due, administer doses	Report and follow up on any adverse events following immunization	Track missed doses, community counseling and mobilization	Register facility and track basic stock details

Client Registry

1   Register households/clients at a facility, with the option to capture touchless biometrics at the time of registration

2   Clients can register remotely using SMS or WhatsApp

3   Record historical vaccination data

DASHBOARD AND INTEGRATIONS

4   Integrate with national birth registries to ensure that children receive timely reminders for routine immunizations

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Vaccine Delivery

APPLICATION AND MESSAGING

1 Configure vaccine schedules according to global and local guidelines

2 Administer vaccine doses and send clients automated reminders for follow-up appointments

3 Integration with IVR service to make appointment reminder and follow up calls

DASHBOARD AND ANALYTICS

4 Analyze immunization completion and dropout rates

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Adverse Events Following Immunization

APPLICATION AND MESSAGING

1   Report adverse events at the facility or through client messaging channels

2   Workflow for health officials to investigate adverse events

3   Integration with IVR service to make appointment follow up calls and enable call-based AEFI reporting

DASHBOARD AND ANALYTICS

4   View reports of adverse events following immunization by vaccine type and client category
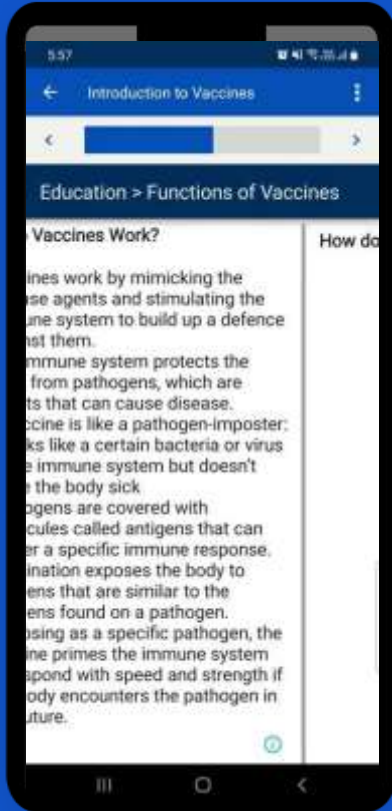
Community Mobilization & Counseling

APPLICATION AND MESSAGING

1   Vaccine confidence counseling to increase vaccine uptake

2   Course completion tracking and follow up

DASHBOARD AND ANALYTICS

3   View the number of community events organized and participant details

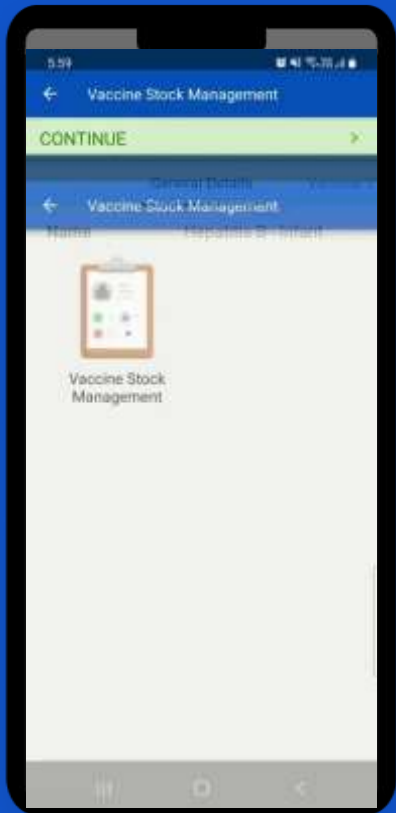4   Analyze vaccine hesitancy rates and reasons reported for vaccine hesitancy

Health Worker Training

APPLICATION AND MESSAGING

1   In-app and WhatsApp training on vaccine related topics for health care workers

2   Access to open source course content created by WHO

Facility Management & Stock Monitoring
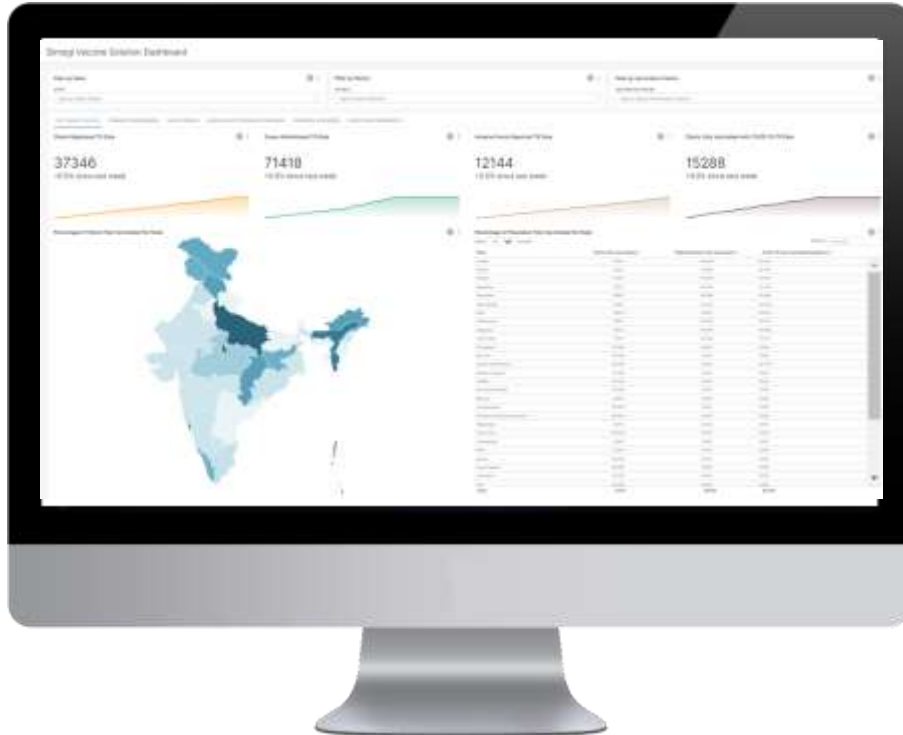
APPLICATION AND MESSAGING

1 Facility registration and preparedness assessments

2 Basic reporting on stock availability and logistics

DASHBOARD AND ANALYTICS

3 Wastage of vaccine doses

4 Stockouts of vaccines and other critical supplies

Analytics

Key Program Indicators

Visualizations provide a high-level overview of key program indicators for vaccination programs

- Registrations

- Doses administered

- Adverse events reported

- Clients fully vaccinated

Vaccine Delivery Analytics

Visualizations detailing vaccine service delivery and vaccination status

- Doses administered

- Immunization status (partial, fully)

- Clients due for follow up doses

- Vaccination drop off rates

Adverse Events Analytics

Visualizations detailing adverse events following immunization

- Adverse events reported
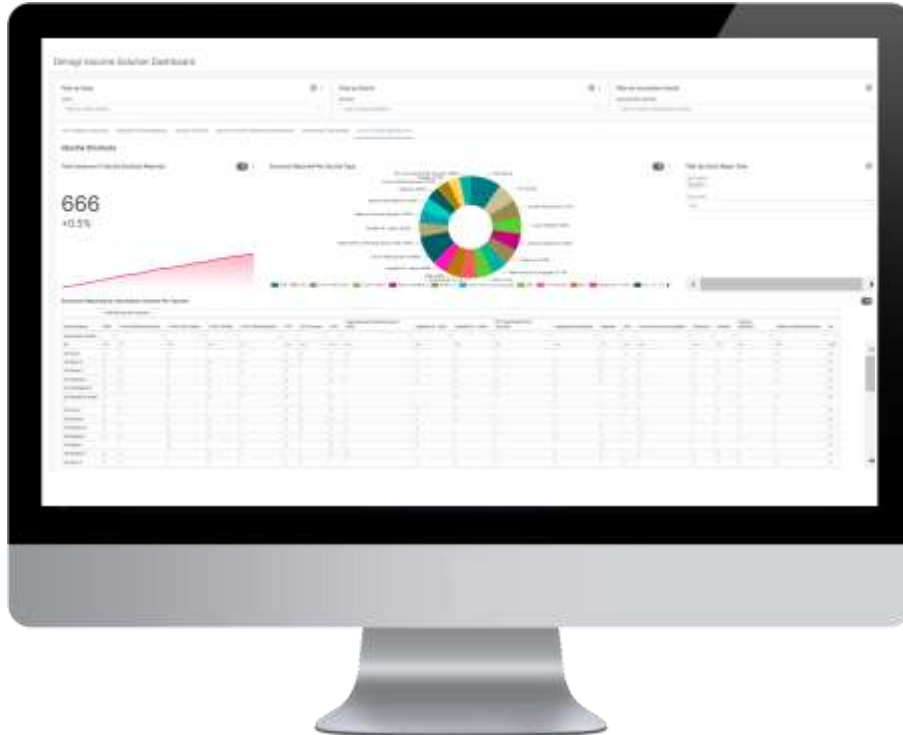
- Side effects reported

Community Engagement Analytics

Visualizations detailing community mobilization and counseling activities

- Events organized

- Participant types

- Presence of vaccine hesitancy

- Reported reasons for vaccine hesitancy

Stock Management Analytics

Visualizations detailing stockouts and oversupply of vaccines, with the ability to view data at the facility level

- Stockouts reported

- Oversupply reported

Thank you