

iKure's Novel Approaches to Tackling Healthcare Disparities During COVID-19 Pandemic in India



Snehal Bindra^{1,3}, Dhruv Bindra², Tirumala Santra³, Sujay Santra³

¹Vanderbilt University School of Medicine, ²Duke University, ³iKure TechSoft



Background

iKure TechSoft



- A **population health management company**
- Delivers primary healthcare services through digital technologies, a network of hub & spoke clinics and trained frontline healthcare workers
- Focus spans preventive, promotive, and curative aspects of healthcare across rural, semi-urban, urban areas.

COVID-19 in India

- The subsequent lockdowns in India highlighted the stark dichotomy of healthcare access
- The most economically vulnerable suffered as inadequate medical facilities, scarce resources, and asymmetric information gripped the nation.
- Statistics as of 5/5/21:
 - Total Cases: 20,665,148
 - Death (1%): 226,188

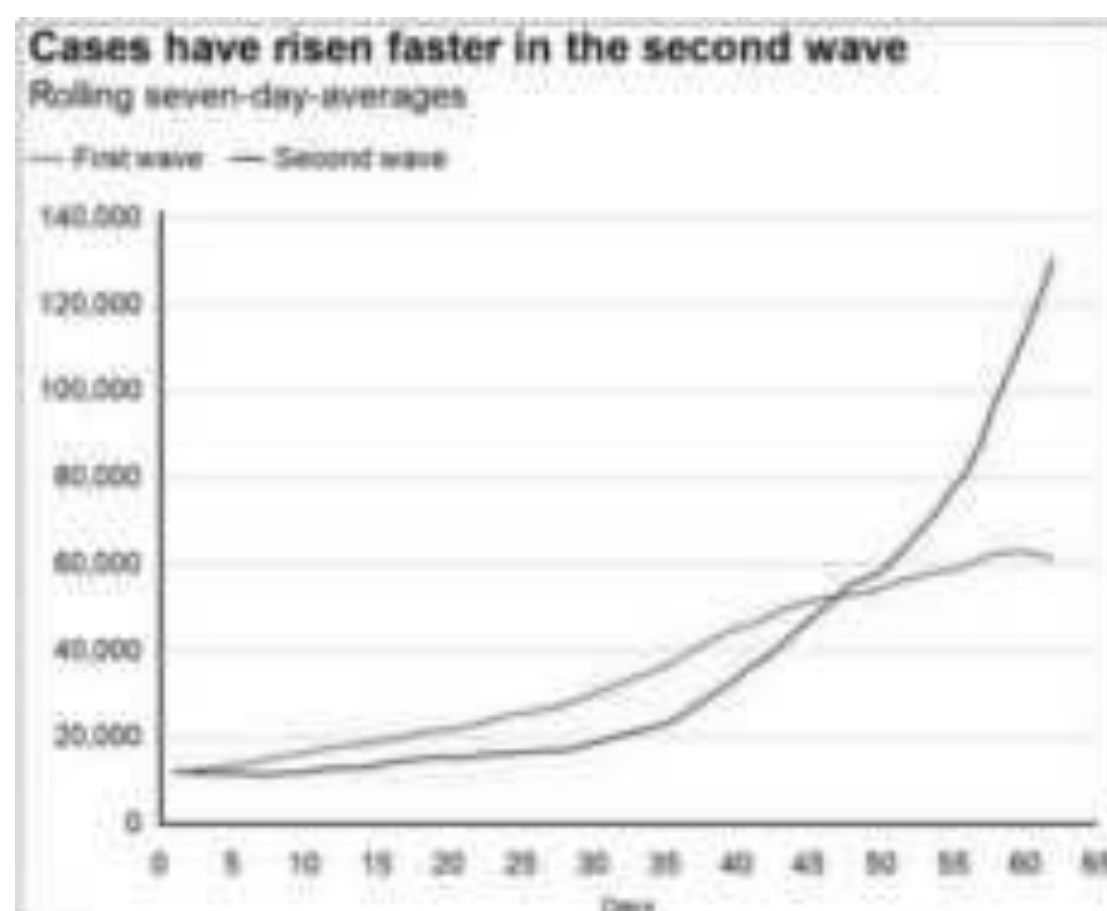


Fig1. Statistics of the second wave of COVID-19 taking a toll on the Indian healthcare system



Fig2: iKure's several initiatives in fighting the COVID-19 pandemic in India

Solution 1: Remote Health Monitoring of COVID patients via Mobile Application

- A mobile application (in collaboration with Nestle and Essilor) was designed to remotely monitor COVID-19 patients
- It helped to **onboard patients** and monitored them for **15 days**.



Fig3. Entire workflow for Solution1. It was designed as per the guidelines of AIIMS hospital in New Delhi

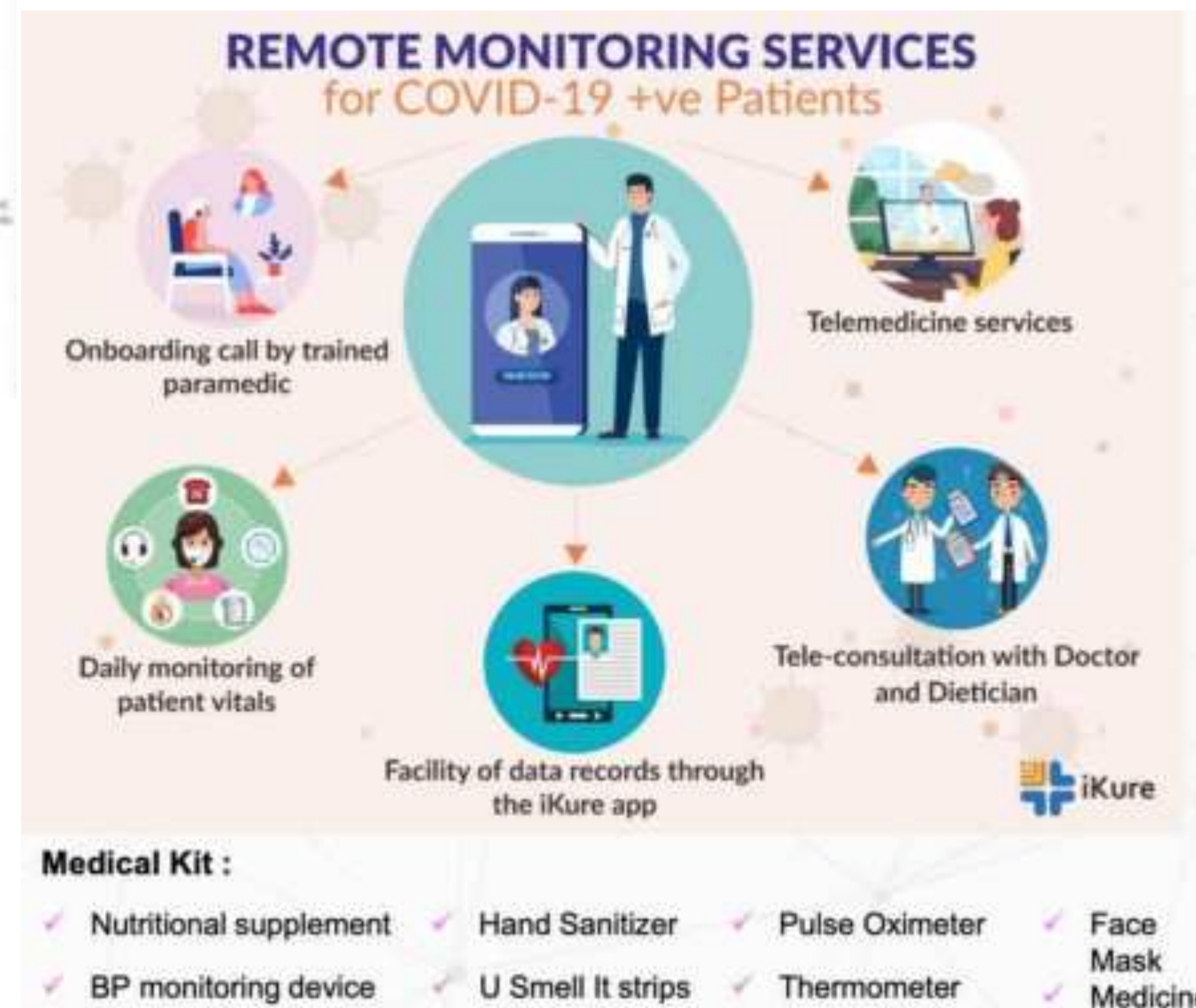


Fig4. Features available on the Mobile App and contents of the medical kit

This led to:

- **Timely care and improved prognosis**
- **Disease containment**
- **Elimination for the need for hospitalization**
- **Less overburdening of hospital**

Solution 2: COVID-19 Self Screening of Olfactory Functioning

- The **scratch and sniff "U-Smell-It" test** helped in identifying **olfactory dysfunction**, a frequent and early symptom of COVID-19
- This symptom has been reported in **68%** of patients with active disease.
- It was designed in conjunction with a **mobile app** where individuals could **input their test results**.



Fig5. "U-Smell-It" test along with the mobile app

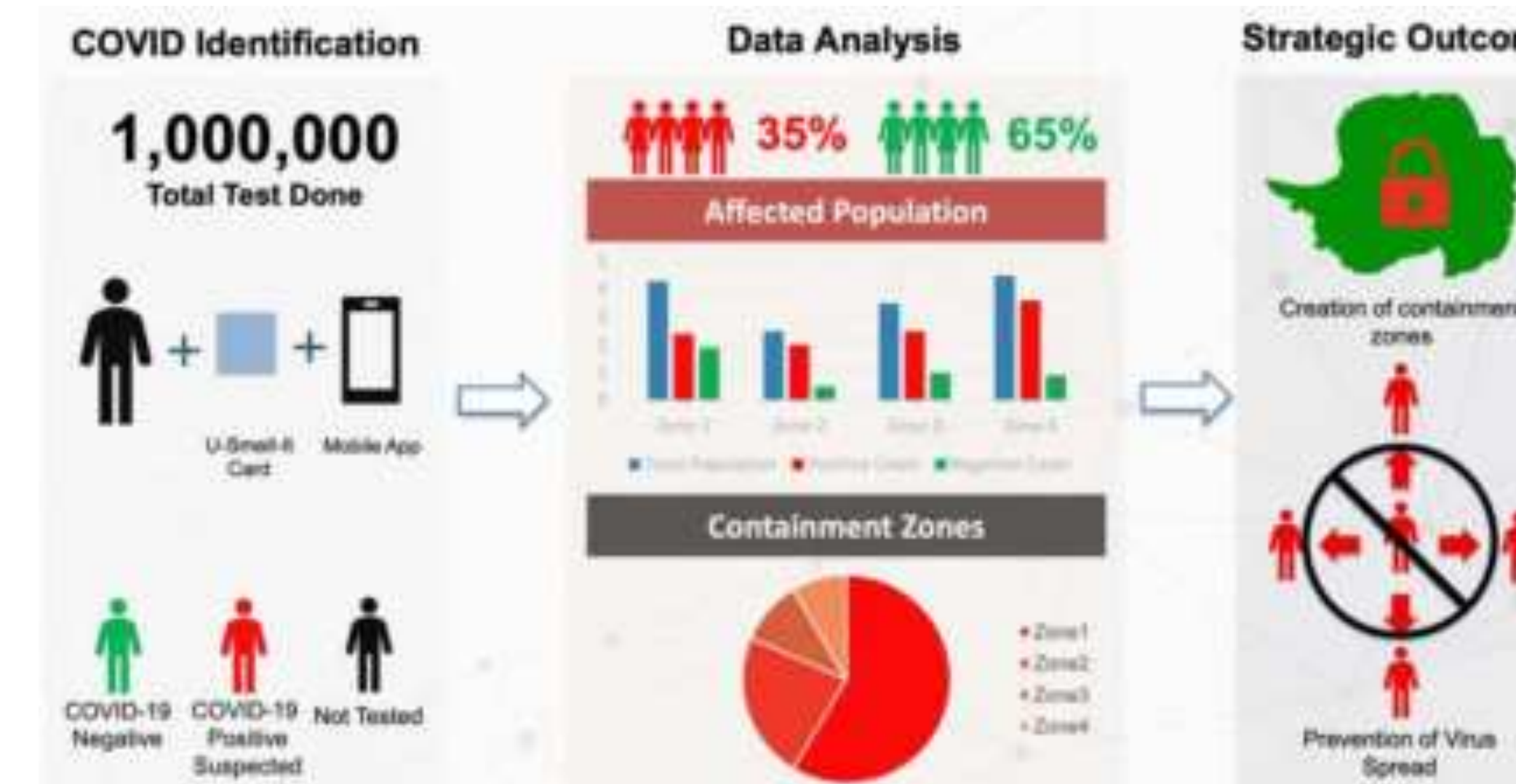


Fig6. Workflow of Solution 2: from data acquisition via test results to development of containment zones

This led to:

- **Early identification** of contagious zones and **determining severity**
- **Creation of concentration zones**
- **Prevention of further spread**

Differential Factors	U-Smell-It	RT-PCR	Rapid Antigen
Turn Around Time	2mins	2-3 days	5-6 hours
Cost	\$0.5-\$0.7	\$15-\$20	\$10-\$15
Usage	Easy	Complicated	Complicated
New Variant	Don't miss	May Miss	May Miss
Community Reach	High	Low	Low
Trained Manpower	Not Required(Self test)	Required	Required
Laboratory Requirement	No	Yes	No
Early Screening	Yes	No	May Be
Availability	High	Low	Low
Distribution & Scaling	Faster	Slow	Slow
Setup Cost	0	High	Medium

Table1. Comparison between different COVID-19 tests

High-level takeaways:

- **80% efficacy rate (COVID-19)**
- **90% specificity**
- **4x more efficacious** than self-surveys
- **FDA registered**
- App compatible with iOS/Android

Summary

Budget

- **Affordable** medical kits were designed and provided to large corporations (**B2B**) to care for their employees using a **rental model**. **\$40** were charged for each medical kit.
- However, on a **B2C** basis, free of cost services and kits were provided to iKure patients directly.
- Similarly the U-Smell-It test became an **easy tool** for early detection that was disseminated in the larger underserved communities for **free**.
- Funds were raised to distribute **500,000 olfactory screening kits and 2,500 remote monitoring kits** in rural and semi-urban regions primarily in Jharkhand and Bihar in India

Conclusion

- While the pandemic accentuated existing structural barriers, it also catalyzed an unprecedented wave of innovations to combat them.
- iKure's story is a testament to the same and a valuable lesson in effective interventions to contemporary global health problems.

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Contact Info

Please feel free to reach out to **Snehal Bindra** for any questions or if you are looking to collaborate on any future projects

Email: snehal.bindra@vanderbilt.edu
Phone: 813-240-3939