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Extend the Hospital Ward

A simple yet integrated partnership in the fight against COVID-19

As the second wave of the pandemic peaked at lightspeed, Karnal, a district in Haryana, with its population of ~1.6 million people, averaged a positivity rate of 26 percent, which meant an approximate of over 32,000 positive cases. While fatality rates continued to rise, the state's health care resources found themselves scrambling to contain the spread as their capacities stretched beyond their threshold. The problem with Karnal, like most rural areas of the country, was two-fold: The fight against the virus was compounded with a lack of awareness on not just containing it but also effectively treating the symptoms—fuelling the upsurge in the state. Without timely access to medical resources, fatality rates continued to escalate.

The only way to thwart the growing number of fatalities was through a holistic system that would not only manage the rapidly evolving situation, but also map resources with those seeking them. The Government of Haryana needed a bring order into the chaos by strategically allocating medical resources and ease the burden on hospitals.

Punit Renjen, Deloitte Global CEO and a native of the state, was keen on bridging the gap through superlative health care to make an impact that matters.

Deloitte, in collaboration with the Public Health Foundation of India (PHFI) and the Post Graduate Institute of Medical Sciences (PGIMS-Haryana), built an integrated, "fit-for-purpose" module with a quick-access medical set up for those in need, preserving the capacity of intensive care units and hospitals for emergencies.

> We have designed, I believe, a very innovative, simple, fit-for-purpose programme that is integrated. This is the first time in the country that we have done this. It will allow us to address the current Covid wave. It will allow us to address the third wave if that comes about. But if this programme sticks, it can be an opportunity for us to provide primary healthcare in rural communities.
> **-Punit Renjen, Deloitte Global CEO**

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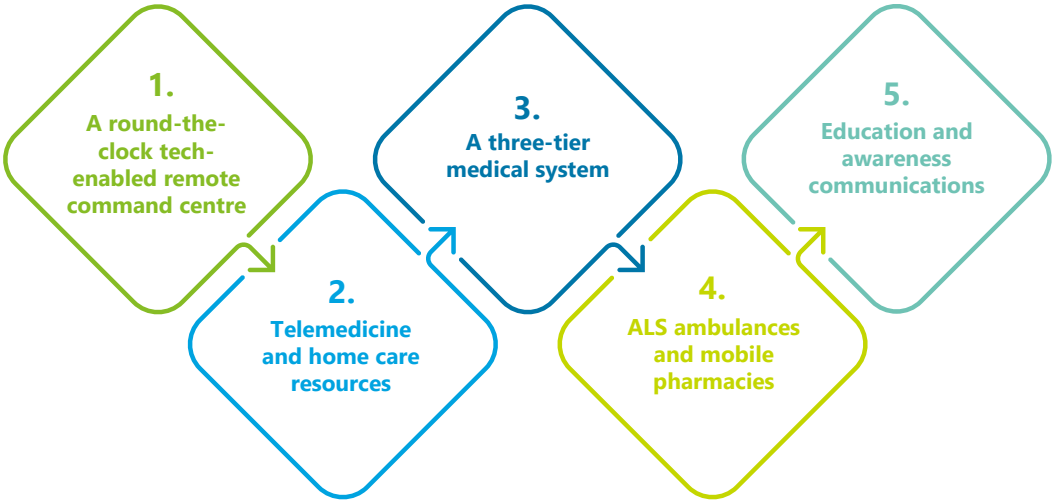
Breaking down the problem

Sanjeevani Priyojana (the life project), a supervised, virtual home care initiative, is built around open-source technology and augments the state's existing health care and tech infrastructure. During the initial assessment, we came to realise that almost 94 percent of the people afflicted with the virus could be treated at home, and only five and one percent of them required hospitalisation and critical care, respectively. This meant, that with the right amount of intervention in treating mild to moderate cases, the rush for hospital beds and emergency care could be alleviated. With this at the cynosure, we designed Sanjeevani Pariyojana to operate through five key pillars:



Breathing life into the line

To effectively bring down fatality numbers while also strategically map resources, we had to break down the problem and solve each in an individual, yet integrated capacity. This would mean that each level of the solution would trigger the next to kick into action, while resolving a specific aspect of the problem.

The first step in designing the module was creating a system of strategic resource allocation. This was done by introducing a tech-powered command centre, which would not only allow for a bird's eye view of the evolving scenario but also provide discretionary direction to those calling in for support. The command centre could expertly manage emergency resources including hospital beds, oxygen, and ambulances.

Tech was at the centre of this solution, and Sanjeevani Pariyoajana saw to the mobilisation and leverage of 200 supervised medical students who offered consultations and health services virtually to those with mild-to-moderate symptoms. Patients' health updates were constantly monitored, and treatments suggested by doctors on call, twice a day. This went a long way in curbing possibilities of mild to moderate symptoms snowballing into critical cases. Further, auxiliary nurses and grassroot workers (ASHA workers) also extended door-to-door support by distributing home-care kits comprising masks, oximeters, thermometers, and medicines, especially in areas where awareness on how to treat the virus was low.

With awareness and access in check, it was now onto easing the burden on the state's medical infrastructure. We did this by splitting the medical system into three tiers: **Village-level isolation wards; Zila or sub-district level community health centres (field hospitals); and main hospitals.**

Isolation wards, at the village, sub-centre, and some primary health care centres, were introduced for patients with mild symptoms, who could not isolate at home. We staffed these centres with doctors (including Ayush doctors), nurses, and volunteers. The rush for oxygen also had to be taken into account, and hence, field hospitals at the zila or sub-district level were equipped with oxygen concentrators, while advanved medical centres at government, civil, or private hospitals were set up with Intesnive Care Unit (ICU) facilities for emergencies. Additionally, eight Advanced Life Support (ALS) ambulances and multiple mobile pharmacies were mapped for better reach and faster outcomes.

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The outcome

Period: 24 May 2021 to 8 June 2021

Testing and monitoring

- 781 samples collected through mobile lab chains
- Around 130 patients kept under observation or referred to the hospital
- Over a period of time sample sizes reduced as sever cases fell

Telemedicine and awareness drives

- Consultations by 195 medical students
- More than 7,000 home-isolated patients consulted (over 40,000 calls)
- Over 90 percent patients treated at home with the home isolation kit
- ASHA workers are conducting door to door visits to build home care awareness

Resource mapping

- Oxygen concentrators at field hospitals (reducing the strain on the district hospital)
- Occupancy at field hospitals on 31 May: 50% (from 0%), averting the need to go to the district hospital
- Eight ALS (advanced life support) transported 72 moderate to critical patients to the hospital in time

Over a short period of two weeks, Sanjeevani Pariyojana had successfully brought down the fatality rate by 50 percent and went on to break down a multifaceted problem. By building on India's inherent strengths—medical students, ASHA workers, and volunteers—we were able to reach patients quicker, nipping escalations and emergencies in the bud. With timely medical intervention, hospitals and intensive care units were able to effectively focus on emergencies, brought on by the second wave.

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This was a much-needed effort for quality care for home-isolated patients, in the middle of the deadly second wave of COVID infections. The project was successful in early detection of high-risk home-isolated patients, who would have landed in serious conditions at a later stage otherwise. Also, it efficiently reduced the load of tertiary health care centres by creating field hospitals. The medical college students were key in recognising such cases through tele-consultation and getting the baseline investigations done at the earliest. This could save many potential fatalities by timely shifting patients by ALS ambulances. **The impact of the project was felt within few days as fatalities decreased significantly**.

–Dr Yogesh Sharma M.S., Chief Medical Officer, Karnal.

Deloitte's pro-bono support towards the pilot at Karnal is set to yield newer models of public and private collaborations in health engagement and infrastructure. Sanjeevani Pariyoajana was found to enable broader health equity and timely access to resources. When elaborated and developed on further, it can generate better and more efficient ways to deliver critical care and make a humane impact that truly matters.

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