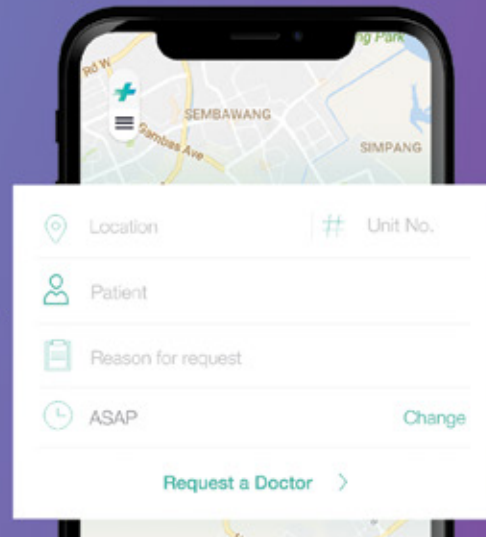


# MOBILE MEDICINE

## Delivering Healthcare to the Doorstep

Text by Dr Shravan Verma  
Photos by Speedoc



Having always been interested in using technology to impact medicine, I decided to pursue biomedical engineering, alongside electrical engineering, at Duke University for my undergraduate studies. At that time, I saw my studies as a gateway to working on the research and development of medical devices, which fascinated me endlessly. Upon graduation, however, I came to the realisation that it was very important to have the knowledge, understanding and skills as a clinician to get to the root of some of the problems before working to solve them. I then enrolled in Duke-NUS Medical School and made my way to Singapore, where I graduated with a Doctor of Medicine (MD).

While rotating through the restructured hospitals, I noticed how the hospitals' emergency waiting rooms were overcrowded, often with patients who were suffering from non-critical conditions that could have been easily treated in the community. Yet, due to the time of day, lack of proper triaging, or even cultural factors, these patients were in the emergency waiting room for hours before they got the medical attention they needed.

### The birth of Speedoc

It wasn't long before I started wondering if there was a way to distribute healthcare resources more efficiently. The idea of a mobile healthcare delivery platform came to me in a time of need. I had injured my shoulder during a game of soccer, and could not sleep due to the pain of bursitis and the need for prescription painkillers. I did not live near a 24-hour clinic and knew that it would be a long wait in the A&E if I chose to go. I ended up waiting until morning to visit the clinic downstairs, and in the long, painful hours of that night, I started putting together what was to become the platform we now have.

What if, I wondered, instead of having patients travel to hospitals and waiting there, we could use technology to enable skilled medical professionals to reach patients as soon as possible in a decentralised manner? What if this could in turn reduce the patients' need to go to the hospital and enable them to get the medical care they needed sooner? What if primary care providers took on a bigger role of triaging and, along with added professional medical advice, provided more value by allowing non-critical patients to be treated in the community?

I had a firm conviction that the answers to the aforementioned questions lay at least partially within the premise of mobile medicine.

Of course, there were challenges in setting up a new and loosely defined healthcare model in an industry which is heavily regulated. While there were house call providers in the market, most were stand-alone doctors or small companies. In 2016, the Ministry of Health announced that service-based licencing would be introduced under the upcoming Healthcare Services Act in 2020. They also launched a regulatory sandbox in 2018, allowing healthcare businesses and innovators to test new care models and services in a controlled environment. Among the services that were listed was mobile medicine. The time was ripe. I soon left the public healthcare system and started up Speedoc.

I envisioned an app where people could request medical attention in their own homes. People were already ordering food delivery through apps like Deliveroo, or transportation through Grab. People should be able to get medical care at the touch of a button. With the current trends of

technology and medical devices, it seemed a natural progression towards a decentralised, technology-enabled service with skilled providers carrying out medical care on par with that of a clinic.

### Ensuring appropriate patient care

With the public perception of mobile medicine bent towards urgent care, patient safety had to come to the forefront of all that we did. One of the first things we did was to establish a strong triage protocol to ensure that patients did not present with any time-sensitive critical conditions or suffer from conditions that were unsuitable for house calls. Before each visit, the attending doctor or nurse made calls to the patients to understand more about their conditions. Under the triage protocols, patients deemed unfit for house calls were advised to visit a hospital or call an ambulance, where appropriate.

There were patients who called in presenting with a sudden onset of full-body numbness and weakness, and some who called in having difficulty breathing. These were clear-cut cases that we quickly escalated.

There were also cases that weren't so clear-cut, such as elderly patients who were gravely ill, but who had decided not to return to the hospital, wanting to remain home for the rest of their days. There were cases

where the patient was deemed fit for a house call, but upon arrival of the doctor, was quickly found to require hospital-level care or treatment.

In each case, the doctor was able to establish an understanding with the patient and family about the different options of care, the risk levels of escalation or lack of escalation to the hospital and, when required, the ceiling of care for each patient. If the decision was to escalate, an ambulance and safe transfer of the patient was arranged to any of the suitable hospitals.

### Uprising of similar services

Our app is not alone. Similar solutions are found in countries such as the US, UK, Australia and Malaysia, and they are all still in the nascent stage. With the nature of healthcare twisting and unfolding before our eyes at the turn of the decade, it remains anybody's guess what the healthcare system will be like in ten or 20 years' time. One thing remains certain – medical care must continue to be patient-centric and it will do all providers good, us included, to ensure that medical care remains accessible, affordable and timely. ♦

### Legend

1. Dr Shravan Verma seeing a patient in her home

Dr Shravan graduated in biomedical and electrical engineering from Duke University, US, and with an MD from Duke-NUS Medical School. Entering medicine with a goal of bridging technology and healthcare, he started Speedoc to provide a platform for overall improvement in access to healthcare.



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