Out of Sight, NOT Out of Mind

Services for Patient Care at Home

Text and photos by Dr Norshima Nashi

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The interface between hospitalisation and a safe discharge home has been the subject of many studies. Those working in hospital settings may not realise that not everything prescribed is actually carried out in the home setting, for reasons such as inadequate explanation or understanding of the prescription, or difficulties in adherence for social or financial reasons. In this article, we feature two services from the National University Health System (NUHS) which aim to bridge this transition of care for those who need more guidance, as well as reflections from the programmes' participants.

GENIE

The Guided Empowerment in Navigating Illness via Empanelment (GENIE) programme is a ground-up initiative for patients requiring complex chronic care as well as frequent admitters for ambulatory-sensitive conditions (eg, fluid overload, cellulitis and diabetes complications). The programme aims to reduce acute healthcare utilisation and fragmentation of care by empanelling patients in a multidisciplinary teamlet consisting of advanced practice nurses, doctors, a pharmacist and a medical social worker.

It offers care consolidation and telehealth monitoring for complex medication titration (eg, diuretic use in cases of fluid overload due to chronic kidney disease or congestive cardiac failure, or insulin in cases of poorly controlled diabetes mellitus). For patients with acute conditions, the programme also offers a patient-activated hotline that provides appropriate triage into early clinic appointments, direct admission under the NUHS@Home programme or to the hospital's A&E department as a last resort. The ethos of the programme is that every patient, even the most underserved, can be empowered to take charge of their own health by cultivating habit formation and a "many helping hands" approach involving caregivers and community support services.

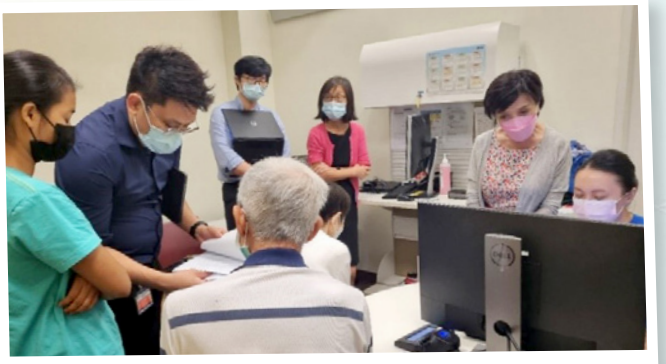
NUHS@Home

The NUHS@Home programme is one of the first local programmes to offer Mobile Inpatient Care at home (MIC@Home). The multidisciplinary teamlet consisting of nurses, doctors, pharmacists and programme coordinators provide inpatient-level care (eg, administering intravenous [IV] diuretics for fluid overload, IV antibiotics and IV hydration) in the comfort of the patient's home. The programme leverages on technology to offer vital sign monitoring and daily video consultation in a virtual ward round model, and home visits can also be performed if necessary. At the height of the COVID-19 pandemic, NUHS@Home pivoted to serve as a COVID-19 virtual ward, which was instrumental in reducing the bed crunch in hospitals. The vision of the programme is that any patient who can and wants to be at home should be at home.

Home visit by an NUHS@Home nurse to an elderly patient admitted for inpatient-level care at home

Challenges faced

The journey in setting up these services has been fraught with challenges. Serendipity has sometimes been kind and helped propel things forward. For example, the pivoting of NUHS@Home to act as a COVID-19 virtual ward helped it garner more visibility and support for resources to later continue as MIC@Home. For smaller programmes such as GENIE, manpower and resource limitations are legitimate concerns, especially if they need to be shared with similar programmes. Another concern is that both programmes rely largely on patients' self-management, which will always be variable. Upskilling ourselves in the art and science of behaviours and psychology is an oft-forgotten key focus as we navigate this space.



A multidisciplinary clinic consult for a complex chronic care patient under the GENIE programme

Reflections from participants

Shirley Chooi, Year 5 NUS Medicine student

Patients are often advised to "monitor [their] blood pressure at home" or "keep a blood glucose diary", but I had never paused to think deeper about what this means for each patient. Do they have the necessary equipment? If so, would they know how to operate the devices and record the measurements accurately? It was only during a home visit that I realised how seemingly intuitive things that healthcare professionals take for granted may be subjects of patients' difficulties.

One patient we visited had all the necessary machines donated by the GENIE programme, but we discovered that he had been placing his weighing scale on an uneven carpet, making readings inaccurate. Both the patient and his wife were illiterate and had poor vision, which increased the difficulty of measurement reading. They were also unaware that blood pressure readings comprised both systolic and diastolic figures, and they had been mistakenly recording the diastolic blood pressure under the "heart rate" column instead. They were also not technologically savvy and faced problems submitting readings over WhatsApp for the healthcare team's review. This was a humbling experience that taught me how much it really takes to care for a patient's health. There is great value in programmes like GENIE and NUHS@Home, where healthcare professionals empower patients to take ownership of their health beyond their discharge from hospital.

Shirley and Xin Wei at the void deck of Mr M's house for a home visit

Liew Xin Wei, Year 5 NUS Medicine student

It really is not easy, I concluded, after waving goodbye to Mr and Mrs M. We had just been teaching the elderly couple how to send photographs of the vital signs chart electronically. The task appeared simple but took a long hour, and uncertainty over the long-term sustainability of this teaching lingered. Discharging a patient may seem simple for healthcare workers, but we may sometimes overlook the challenges patients face in managing their medications, adhering to lifestyle restrictions and monitoring their health at home.

We can sometimes impose unrealistic caregiving roles onto their families without thinking about whether they can cope and may even be quick to label them as non-compliant when they are unable to comply with our well-meaning requests for vital sign submissions or medication adherence. GENIE and NUHS@Home, both ground-up initiatives with innovative approaches to longitudinal and empowered patient care, exemplify the profound impact a dedicated support network can have on patients. Seeing the struggles of patients at home, I am truly glad that our team was there to help them. As medical workers, we can often be blinded by resource-rich hospitals with cutting-edge technology and top-notch expertise. This home visit has indeed opened my eyes to the gaps between hospital to home that can be bridged using simple resources.

Ong Wei Tao, senior medical social worker

As a medical social worker, I often hear patients and caregivers lament about how they feel lost in the healthcare system. They feel burdened with their multiple appointments and oftentimes are not sure what these appointments are for. Some patients may think they have no choice but to attend all the appointments given to them and hence may feel that they have limited participation in their own health.

I am privileged to be part of the GENIE programme, where we endeavour to provide holistic patient-centred care with a team that actively listens to and serves patients' needs beyond those medical in nature. As a result, patients are better able to make sense of their health issues via a consolidated consultation and do not have to see multiple doctors, sometimes for overlapping issues. This also results in more effective healthcare resource allocation. The team epitomises this quote from the movie *Patch Adams*:

> **"You treat a disease, you win, you lose. You treat a person, you'll always win."**

Zhang Hui Min, advanced practice nurse

I am both personally and professionally fulfilled by the positive outcomes we have achieved as a multidisciplinary team in the GENIE programme. This experience has been truly rewarding and has reinforced my belief in the power of collaborative care. One particular patient stands out vividly in my mind. She was an elderly woman with recurrent admissions for fluid overload from advanced chronic kidney disease and a diabetic foot ulcer requiring negative pressure wound therapy. Our programme became the turning point in her journey towards better health. She was able to reduce her number of admissions with our telehealth programme, which provides close monitoring and active medication titration via telehealth. Witnessing the remarkable transformation in this patient's health was truly gratifying. Our multidisciplinary team discussions saw each member bring their unique expertise to the table in discussing complex patients, fostering an environment of continuous learning and growth.

Claudia Tan, advanced practice nurse

Our patients and caregivers have been truly appreciative of the GENIE programme. They shared that they felt less burdened and could navigate the healthcare system more meaningfully with appointment consolidation. The telehealth programme has been encouraging, especially when we see improvement in patient outcomes like diabetes control. Our strength lies in the open communication within the multidisciplinary team and our common vision for the underserved patients. Being a new programme, GENIE lacks resources such as time and manpower, which are constant constraints that need to be overcome in order for us to expand our capacity.

Wong Zhi Xin, senior pharmacist

When patients are admitted to hospital, it is sometimes difficult to get the full picture of their medication management at home. Without their own medications at hand, it can also be challenging for the elderly to describe accurately how they are taking them. We can never fully understand how patients organise or store their medications at home and how this may affect adherence. The NUHS@Home home visit serves as an option for holistic review of medication management. We can review how the medication is stored and organised, provide individualised medication counselling, and pace patients on the medication adjustments along the admission. As opposed to getting a rapid stream of information on discharge, medication changes are noted more effectively when explained in the home environment or over video call. ◆