MEDIA RELEASE

NUHS NURSES TAKE ON HIGHER ROLES WITH SMART TOOLS AND REDESIGNED CARE MODELS

NUHS Nurses' Day 2025 highlights nursing transformation across the cluster — from smart technologies to advanced practice and elevated roles

SINGAPORE — Imagine being able to monitor a patient's vital signs from anywhere in the hospital using just your mobile device – or soon, being able to speak directly with a nurse from your hospital bed with the tap of a button. These scenarios reflect how nursing at the National University Health System (NUHS) is evolving, with innovations that aim to enhance patient care and enable nurses to focus on clinical decision making and patient engagement, rather than routine tasks.

To mark Nurses' Day 2025, NUHS is highlighting how its nurses are delivering safer, more efficient and more personalised care, supported by technology, elevated responsibilities, and care models designed to meet the evolving and increasingly complex needs of patients and the healthcare system.

NUHS Group Chief Nurse Dr Catherine Koh said: "We are seeing care needs evolve rapidly, especially with Singapore's ageing populations and more patients living with chronic conditions. These changes to transform the roles and competency of nurses help ensure they are supported to practise effectively, with the right tools, education and autonomy to focus on what matters most: delivering quality care."

Using technology to support care

Across the NUHS academic health system, nurses are now working with a range of technologies – including AI-enabled tools – that help reduce repetitive tasks, improve accuracy, and free up time for clinical decision making and patient engagement.

A new AI-powered initiative, the **Endeavour AI Fall Risk Assessment tool**, is set to be introduced at the National University Hospital (NUH) in the third quarter of this year. This system automatically analyses a patient's medical history, medication list, mobility status and other data points to predict their risk of falling. Integrated with the hospital's electronic medical record (EMR) system, it will generate real-time fall risk assessments three times a day and upon admission to the ward. By automating what has traditionally been a manual, time-intensive process, the tool aims to support nurses in identifying high-risk patients earlier and implementing timely interventions. This enhances both patient safety and workflow efficiency.

At present, nurses at NUH use a suite of interconnected technologies – including **MyChart Bedside** and **bi-directional smart pumps** – to deliver safer, more coordinated care. **MediVoice by NUHS** and **Scribe by OGP** are both AI-powered speech-to-text tools available across NUHS, which help ease the task of clinical

documentation and enable better nursing-patient eye contact during clinical encounters. Nursing has convened a study to quantify nursing productivity savings from the use of MediVoice, with results expected later this year.

NUH nurses will also soon be supported by robot nurse companions that can handle routine tasks such as delivering medication, guiding patients around the ward, and sharing care instructions.

These tools reduce manual data entry, support timely medication administration, and give nurses a clearer view of patient care activities, allowing them to stay focused on clinical decisions and patient needs. (Please see **Annex** for more details on the innovations.)

With the implementation of the **VitalScout** project at Ng Teng Fong General Hospital (NTFGH), patients who require closer monitoring will put on a wearable device that enables nurses to track their vital signs in real time via mobile devices from anywhere in the ward. This enables timely intervention, reduces the need for routine manual checks, and frees up time for nurses to plan care and engage more meaningfully with patients and families.

Alexandra Hospital (AH) is pioneering virtual nursing in the wards as part of its evolving care model, showcasing one of many innovative changes unlocked by technology and artificial intelligence in healthcare. Set to be implemented by the end of 2025, this system will enable nurses to remotely monitor and interact with multiple patients in real-time through live video feeds. This approach aims to enhance response times to patient needs while reducing the frequency of routine physical rounds, potentially improving overall care efficiency.

Smart beds are also in use at AH to enhance patient safety and streamline nursing care. Equipped with built-in alarms, these beds alert nurses electronically if a patient attempts to get out of bed unassisted. Contactless sensors beneath the mattress continuously monitor heart and respiratory rates, and can weigh patients without repositioning, reducing fall risk. Lights projected onto the ward floor provide a clear visual cue indicating whether fall-prevention measures are properly activated.

NUHS@Home is a Mobile Inpatient Care at Home service where suitable patients can receive hospital treatment at home instead of a hospital ward. Tech-enabled care is provided through virtual or in-home visits by a dedicated multi-disciplinary team. NUHS@Home nurses harness the use of technology to access patient medical records on dedicated mobile devices during home visits and video calls for virtual consultations. They also facilitate patient vital signs measurement and monitoring through WhatsApp-based chatbots for patients with smartphones, or seamless Bluetooth connected devices for those without.

“These tools don’t replace nurses’ clinical judgement, but support it,” Dr Koh added. “By automating some of the more routine aspects of care, our nurses can focus on making decisions, providing comfort, and engaging more meaningfully with patients and families.”

Expanded roles beyond the hospital

Across the NUHS Regional Health System Office (RHSO) and National University Polyclinics (NUP), nurses are also leading preventive health, integrated care efforts and chronic disease self-management in the community.

At the RHSO, the **Step-up/Step-down Nurse-Led Community Care Model** enables nurses to lead seamless care transitions between hospital, home, and community settings. By practising advanced assessment, case management, and social prescribing, nurses help residents access the right care at the right time – including assessing suitable patients for referral to doctors for admissions to NUHS@Home or community hospitals when appropriate, reducing unnecessary emergency visits and acute hospital stay.

At NUP, nurses are using the population-based **Chronic Disease Management Programme (CHAMP)** chatbot, which is WhatsApp-based, to better support patients managing high blood pressure. By receiving blood pressure readings in advance, nurses can prepare more targeted non-pharmacological interventions and focus on meaningful, patient-centred conversations during consultations. This approach enables nurses to guide patients more effectively in taking charge of their own health.

A practical shift for an evolving healthcare landscape

Dr Koh said: “What sets our nurses apart is their spirit of innovation. They are not just adapting, but they are leading change with purpose, reimagining how care is delivered across our hospitals, communities and homes.”

The redesign of nursing at NUHS goes beyond adopting new tools. It involves shifting mindsets, redefining roles, and equipping nurses to meet the demands of future care. These tools and care models are part of a broader effort to reimagine how care is delivered – enabling teams to manage rising healthcare needs while maintaining quality and compassion.”

Together, these innovations reflect NUHS’s commitment to building a resilient, highly competent, and future-ready nursing workforce.

Chinese Glossary

National University Health System (NUHS)	国立大学医学组织 (国大医学组织)
National University Hospital (NUH)	国立大学医院 (国大医院)
Ng Teng Fong General Hospital (NTFGH)	黄廷方综合医院 (黄廷方医院)
Alexandra Hospital (AH)	亚历山大医院
National University Polyclinics (NUP)	国立大学综合诊疗所 (国大综合诊所)
NUHS@Home	国大医学组织居家病房
Regional Health System Office (RHSO)	区域医疗系统
Dr Catherine Koh Group Chief Nurse National University Health System (NUHS)	许晓兰博士 集团首席护理总监 国立大学医学组织 (国大医学组织)
Endeavour AI Fall Risk Assessment tool	进击人工智能跌倒风险评估工具

MyChart Bedside	病人互动平台
MediVoice	医声 AI 语音转录工具
VitalScout	可穿戴生命体征监测系统
Step-up/Step-down Nurse-Led Community Care Model	升程/降程护士主导社区护理模式
Chronic Disease Management Programme (CHAMP)	慢性疾病管理计划

For media enquiries, please contact:

Rachel TAN
Assistant Manager
Group Communications
National University Health System
Email: Rachel_YP_TAN@nuhs.edu.sg

About the National University Health System (NUHS)

The National University Health System (NUHS) aims to transform how illness is prevented and managed by discovering causes of disease, development of more effective treatments through collaborative multidisciplinary research and clinical trials, and creation of better technologies and care delivery systems in partnership with others who share the same values and vision.

Institutions in the NUHS Group include the National University Hospital, Ng Teng Fong General Hospital, Jurong Community Hospital, Alexandra Hospital and the upcoming Tengah General and Community Hospital; three National Specialty Centres – National University Cancer Institute, Singapore (NCIS), National University Heart Centre, Singapore (NUHCS) and National University Centre for Oral Health, Singapore (NUCOHS); the National University Polyclinics (NUP); Jurong Medical Centre; and three NUS health sciences schools – NUS Yong Loo Lin School of Medicine (including the Alice Lee Centre for Nursing Studies), NUS Faculty of Dentistry and NUS Saw Swee Hock School of Public Health.

With member institutions under a common governance structure, NUHS creates synergies for the advancement of health by integrating patient care, health science education and biomedical research. As a Regional Health System, NUHS works closely with health and social care partners across Singapore to develop and implement programmes that contribute to a healthy and engaged population in the Western part of Singapore.

For more information, please visit www.nuhs.edu.sg.

Annex A

Institution	Technology/ Initiative	Description	Nursing benefit
National University Hospital	Endeavour AI Fall Risk Assessment	An AI-powered tool designed to automatically predict a patient's risk of falling. Integrated into the electronic medical record (EMR) system, it analyses multiple data points – such as medical history, medications, and mobility status – and generates real-time risk scores up to three times a day and upon patient admission.	Supports current fall assessments and helps ensure no key risk factor is overlooked. It also supports timely interventions, enhances patient safety, and saves valuable time during busy ward routines.
	MyChart Bedside	A secure, patient-facing app that gives hospitalised patients real-time access to their care information – including their care team, scheduled appointments, medication times, vital signs, lab results, and nurse-assigned education materials.	Reduces routine patient queries and allows nurses to focus on clinical care and more meaningful engagement.
	Bi-directional smart pump	First introduced at NTFGH and adopted by NUH, the bi-directional smart pump is an advanced infusion pump that communicates directly with the hospital's EMR system. It receives medication orders digitally and sends infusion data back to the system in real time. This allows for automated programming of infusions from the EMR and real-time monitoring of the pump's performance.	Improves accuracy and safety in IV medication administration and reduces the need for manual programming.
	MediVoice by NUHS & Scribe by OGP	AI-powered voice-to-text tools that transcribe nurses' spoken notes into written documentation.	Reduces paperwork burden and allows nurses to focus on care delivery and patient interaction.
	Robot nurse companion	An AI-powered mobile unit developed to support nursing operations at NUH. It can	Reduces routine and logistical tasks, such as deliveries, patient

		deliver medication, guide patients around the ward, provide instructions on medication use and storage, and facilitate teleconsultations through its display screen. Equipped with sensors and image recognition capabilities, the robot can also monitor vital signs and detect patients at risk of falling.	guidance, and repeated instructions, allowing them to focus on clinical decision making and patient engagement
Ng Teng Fong General Hospital	VitalScout	The VitalScout project consists of a wearable sensor that enables continuous monitoring of a patient's vital signs – such as temperature, respiratory rate, and heart rate – and sends real-time alerts to nurses' mobile devices. The system allows nurses to view a patient's status from anywhere within the hospital.	Enables early detection of deterioration, reduces routine spot checks, and gives nurses more time to plan care and coordinate with doctors and family members.
Alexandra Hospital	Virtual Nurse	Currently still in development, Virtual Nursing is a technology-enabled hub designed to support nurses in remotely monitoring patients through live video feeds and connected systems. Once implemented, a single nurse will be able to oversee multiple patients simultaneously from a central location, watching for signs of distress, responding to patient calls, and communicating directly with patients when needed.	Enables faster responses to patient needs while reducing the frequency of routine physical rounds. Once implemented, it will extend nursing oversight and increase efficiency in stable wards.
	Smart beds	An advanced hospital bed equipped with contactless sensors that monitor heart rate, respiratory rate, and weight, and trigger electronic alerts if a patient tries to get up unassisted. Visual floor indicators show	Reduces the need for manual checks, support early intervention, and help prevent patient falls, all while easing the physical workload of care.

		whether fall-prevention settings are activated.	
Regional Health System Office (RHSO)	Step-up/Step-down Community Care model	This model enables nurses to lead care transitions between hospital, home, and community. Nurses practise advanced assessment and social prescribing, and can help residents access the right care at the right time – including assessing suitable patients for referral to doctors for admissions to NUHS@Home or community hospitals when appropriate. The step-up model was initiated at the start of 2025, and some 30 residents who faced health issues in the community have since benefitted.	Improves care continuity, and positions nurses as 'first responders' to assess needs of residents and care navigators, bringing care closer to the community.
National University Polyclinics	Chronic Disease Management Programme (CHAMP)	A WhatsApp-based chatbot that reminds patients to submit their blood pressure readings and provides tailored feedback. The medical team, including nurses, receive these readings ahead of patients' appointments at the polyclinics.	Saves up to 10 minutes per consult, reduces administrative workload, and supports more focused, patient-centred discussions. Also enables early intervention and helps patients take ownership of their health.