



TTSH nurses Kalaichelvi Govindaraju and Kumareselvi Servai (top) were given a Best award for Innovation in Healthcare at the NHG Quality Day, which showcased posters from institutions' improvement projects (right)



# Celebrating the best in quality

FOR patients on oxygen therapy, showering and going to the toilet can be strenuous. They suffer shortness of breath and their exertion can cause them to fall or collapse in the toilet.

This led TTSH nurses Kalaichelvi Govindaraju and Kumareselvi Servai to devise a project that aimed to eliminate such adverse events at a respiratory ward.

They introduced interventions to monitor patients before, during and after toileting; modified and relocated commode chairs with oxygen cylinders for easier transport; and rescheduled toileting to overlapping shift hours to allow more staff to be on standby for patients.

The project was a success. In the year following its implementation, no adverse events related to this issue were reported at the ward.

Their improvement efforts – which saved thousands in cost for TTSH and reduced patients' length

of stay – landed them a Best Award under the Innovation in Healthcare category during NHG's annual Quality Day awards on Aug 19.

This was one of [20 projects recognised at this year's Quality Improvement Awards](#), out of 70 submissions. Another [30 individuals and teams were given Excellence in Action Awards](#), out of more than 100 entrants.

The quality of the submissions made it challenging for the judging panel in choosing winners, noted Group Chief Quality Officer Tai Hwei Yee in her closing remarks at the event.

"But every single one of our nominees is a winner, because ultimately patients benefit from the changes you make in our system," she said.

The event also celebrated the contribution of patients and caregivers, with [eight of them receiving the NHG Exemplary Patient and Caregiver Award](#).

Among them is Mr Shaik Hussein, who reduced

his polyclinic visits after enrolling in NHGP's Telecare Programme in 2014, to monitor his hypertension.

Through careful dieting and conscientious management of his condition, Mr Shaik has successfully maintained an ideal body weight while achieving excellent blood pressure control, serving as a good role model for other patients.

Other caregivers were recognised for their selfless care of their friends and family.

Patients and families are one of our biggest untapped resources, Prof Tai noted in her speech.

She saluted Mr Shaik and other patients and caregivers for "teaching us how highly involved and empowered individuals can make a huge difference in patients and their care outcomes".

"You're a shining beacon of example to all of us, not just other patients and caregivers, but to all healthcare providers." ☺



TTSH dance group Black Beauties (left) reflecting Quality Day's theme of "Radical Redesign" this year



Balloon sculptors (right) provided light-hearted fun for Quality Day participants

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NHG marked its CPIP graduation ceremony this year with the launch of a book that chronicles 15 years of quality improvement initiatives in the organisation.

CPIP has been supporting NHG's quality culture and sustaining improvement efforts, noted NHG's CPIP chairman Thomas Chee in his opening remarks at the ceremony.

"It's with much pride that we weaved our CPIP journey into this book, to share our colleagues' journeys and important lessons we learnt along the way," he said.

[Orchards From Seedlings: Embracing Clinical Practice Improvement](#) features 19 selected projects and documents milestones in NHG's quality improvement journey.



**Orchards From Seedlings: Embracing Clinical Practice Improvement was launched by (from left) GCQO Tai Hwei Yee, GCEO Philip Choo and CPIP chairman Thomas Chee on Quality Day**

To date, more than 1,600 health-care professionals from NHG, other healthcare institutions and NHG's regional health partners have graduated from the programme, while more than 1,000 projects have been completed.

Although the next 15 years are likely to bring continued challenges to Singapore's healthcare system due to an ageing population and dwindling resources, Group Chief Quality Officer Tai Hwei Yee expressed confidence that CPIP will continue to evolve and create value-driven care.

Referring to the projects documented in the book, she said: "I hope the stories, and the satisfaction and learnings the participants derived from their projects, will inspire the rest of us." ☺



**KTPH anaesthesiologist Paul Wong (left) shared his insights into his project during this year's CPIP graduation, along with TSSH specialists Pua Uei (above, second from right) and Akash Verma (right)**



ELDERLY patients who complete hip fracture surgery should not have to endure significant pain, especially during attempts at early physiotherapy and rehabilitation post-operation.

But the reality on the wards was quite different to the controlled environment of the operating theatre, as anaesthesiologist Paul Wong found at Khoo Teck Puat Hospital (KTPH).

To tackle this, Dr Wong and the KTPH team began designing and implementing the routine use of intraoperative nerve blocks. They aimed to mobilise patients the day after surgery to achieve the best functional recovery for the patient.

He shared the process of implementing his improvement project at the graduation ceremony of 64 participants from the 38th and 39th [Clinical Practice Improvement Programme \(CPIP\) courses](#), at NHG's Quality Day this year.

The project resulted in a median time to mobili-

sation of only 2.3 days compared to the international median of five days.

The incidence of pneumonia has also been reduced to under 1 per cent at the hip fracture unit, reducing suffering and yielding cost savings of \$4,000 to \$5,000 per patient per intensive care admission. KTPH has also become a regional anaesthesia training centre, attracting fellows from Singapore and around Asia.

Like Dr Wong, TSSH specialists Akash Verma and Pua Uei also used CPIP methodology to improve patient care processes. They reduced the time needed to diagnose lung cancer – which increases the chances of cure – by cutting the average waiting time to do a CT guided lung biopsy from 4.5 weeks to 2.7 weeks.

Lung cancer is the top killer among cancers, killing more people worldwide than the next four most common cancers – breast, prostate, pancreas and

colon – combined.

Their team cut waiting time by adding an extra case of CT biopsy and optimising the use of sleep study beds to monitor patients after the biopsy. The best part of the project: this was achieved without affecting workflow or requiring extra resources.

"The main lesson I learnt was that through engaging stakeholders, we could uncover many pockets of hidden resources that we could tap on," noted Dr Pua.

Dr Wong, however, reminded the audience about the challenges of implementing improvement projects, including resistance from those used to established processes. His advice for others is to start initiatives from the ground up.

"If you get good results, you'll get greater buy-in from colleagues, you'll get blessings from senior management and once the change is consistent, you'll have a cultural change," he said. ☺

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# Crossing the "quality chasm"



**With chronic illnesses rising, seeing patients a few times a year will no longer suffice, said Dr Richard Milani**

IMAGINE if you were in a business selling shoes and you reviewed your sales, inventory and market analysis figures two to three times a year.

Now compare your practice to someone who looks at this info on a daily basis.

How successful do you think you will be?

This and other questions were posed by Dr Richard Milani, as he tackled the topic of re-engineering healthcare delivery systems during his keynote speech on NHG's Quality Day.

That is the "quality chasm" in healthcare today that needs to be crossed, he noted.

"The current system is aimed at delivering care to acute illnesses, when most of our diseases now are chronic illnesses," said [Dr Milani, the chief clinical transformation officer of US-based Ochsner Health System](#).

"Managing patients today, seeing them in clinics a few times a year, is not going to be enough."

Effective healthcare delivery has become more

critical as life expectancy increases in tandem with the prevalence of chronic diseases.

As an example, he said Ochsner has developed a hypertension programme for patients that uses mobile phone apps, real-time analytics and encourages home monitoring of blood pressure by patients.

"We're getting much better control because we have much more data coming in, we're providing lots of education about behaviour, we can make corrections when things aren't going well and act faster," he told the audience.

Based on the data, the programme stratifies patients into risk groups and tells doctors which patients to focus on. Individualised monthly health reports are also sent to patients' mobile phones, along with text messages of encouragement when certain milestones are reached.

"Encouragement means so much to the patients, even though a computer sent the message," said Dr Milani, adding that such digital tools can be cost-effective in managing chronic disease.

Activating patients is crucial, because patients who are more involved in their own health have greater adherence to medication and less likely to be readmitted. Patients who have stronger and wider social networks also report better health.

Dr Milani said it was important to remember that healthcare represents only 10 per cent of the factors that influences one's health status. Other important determinants include environmental exposures, social circumstances, genetic predisposition and behavioural patterns.

This means besides looking at healthcare, practitioners should also consider interventions that impact social and behavioural factors.

In US schools, for example, the simple act of serving sliced apples instead of whole apples at lunch increased consumption by more than 70 per cent, he noted.

"If we're interested in making people well," he said. "We should broaden our horizons beyond the 10 per cent." ☞

## Keeping Singapore healthy

PREVENTION is better than cure, so the US hospital that Dr Kathy Reno worked at decided to test this with a homecare programme in 1990.

They funded a nurse to visit and administer preventive care on 125 patients who suffered from chronic heart failure or chronic obstructive pulmonary disease (COPD). Results were quickly seen. The 125 patients had reported three or more admissions a year for their condition. But after 18 months of homecare, only three were re-admitted more than once a year.

These are solutions that Singapore has to consider as it looks at population health, said [Dr Reno \(right\), a JCI consultant](#) who was giving a lunchtime talk titled "Designing for community population health needs" at TTSH on Sept 14.

"You can put a business case for keeping chronic patients out, try it on a few people and see if it works," she said. "It's inexpensive and Singapore has the advantage of not having issues with travelling distances. We can justify the costs."

While Dr Reno praised Singapore for being ranked 6th in WHO's ranking of the world's health systems in 2015, she observed some gaps.



For instance, as wellness care is mainly covered by the private rather than public sector, some parts of the population might not have access to, or be able to afford it. Turning to Singapore healthcare data, she raised concerns about the high rate of hospital admissions for older people.

For those aged above 85, she noted, the rate of admission is 714 per 1,000 for men and 617 per 1,000 for women. These numbers are very high, so there is a need to find out if other facilities such as nursing homes can take the load off admissions, she said.

Dr Reno also agreed with the push in Singapore's public healthcare sector to keep as much of the population in the healthy segment as possible, given that 80 per cent of acute care here is provided by public healthcare. [NHG has been working on improving population health by collaborating with primary care providers, hospices and community hospitals, among others.](#)

"You want to keep patients out of acute care," she said. "We would like to fix things upstream when people are in a boat, not when they are in the water flailing around." ☞

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