



SCDF ambulance crew treating a mock patient in 2021 while demonstrating a new integrator system to speed up emergency care. Paramedics now have the skills and equipment to perform more interventions at the scene and en route to hospital. ST PHOTO: LIM YAOHUI

Unleashing potential of paramedics can fill critical healthcare gaps

The paramedic profession has come a long way, and it's now poised for a bigger stage in the healthcare industry.

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July 8 is International Paramedics Day, which celebrates the role of paramedics in our healthcare system.

One of the remarkable figures of the profession in Singapore was Ms Susan Yap, who tragically lost her battle with cancer in 2018. But her life's work highlighted the critical role paramedics play in the healthcare system.

She started her career as a dedicated hospital nurse before transitioning to become an ambulance officer in the Singapore Civil Defence Force (SCDF) in the early 1990s.

As one of the first few individuals to receive a paramedic scholarship to Canada, Susan went on to become a respected instructor in the field, playing a crucial role in training the first few cohorts of paramedics.

She subsequently spent the next 15 years working with us on ground-breaking research in the realm of cardiac arrest.

The paramedic profession has come a long way from the days when it was more about attending trauma emergencies in a timely manner. Paramedics today play a bigger role in Singapore's integrated healthcare system amid manpower constraints and new challenges posed by an ageing society.

But the profession needs more recognition. How many times have we seen an ambulance whiz past us on the road, or a paramedic helping someone on the streets? Yet when we think of healthcare workers in Singapore, we don't usually think of paramedics.

THE DEVELOPMENT OF PARAMEDICINE

The training of ambulance personnel before the 1990s focused on basic first aid and trauma management.

Ambulance personnel were

governed by the "scoop and run" mantra, where the main aim was to transport patients to a hospital as fast as possible. However, the emergency medical community has since realised that many emergencies, such as cardiac arrest and trauma, are time-sensitive.

The earlier advanced life-saving treatments – such as cardiopulmonary resuscitation, defibrillation, medications and procedures like stopping bleeding – are applied, the better the outcomes.

For example, during a cardiac arrest, for every minute that nothing is done, the chance of survival drops by 10 per cent. When dealing with trauma, there is the concept called the Golden Hour, which states that the decisions made and treatment given in the first hour after injury, which is the pre-hospital arena, determines if the casualty lives or dies.

Paramedics now have the skills and equipment to perform more interventions at the scene and en route to hospital.

Tertiary institutions, such as the Institute of Technical Education (ITE) and polytechnics also conduct courses to train paramedics. Paramedics replaced the nurses running ambulances, and we now have a well-trained force of more than 300 paramedics in the SCDF, as well as many others in the private sector and the Singapore Armed Forces (SAF).

Currently, they are able to even treat and discharge patients at the scene itself.

For example, patients with epistaxis (bleeding from the nose) or minor trauma may just need first aid and do not need to be transported to the hospital, and the paramedics are able to manage them safely in the community.

Paramedic training has also evolved from being vocation-based to more academic-informed training, where practice is informed by evidence and the latest medical science.

There is constant engagement in

a rigorous training programme and continuous learning to ensure that quality care is being delivered to patients.

Today, paramedics also fulfil many other roles, such as supporting 995 emergency medical calls, quality improvement, disaster management and community outreach.

Paramedics in the private sector also have important roles in medical evacuation, safe transport to medical facilities and medical cover for events. Some paramedics are now employed in hospitals where they support triage, medical transport, emergency procedures and patient care.

CRITICAL CHALLENGES, UNTAPPED SOLUTIONS

Even as Singapore's healthcare system has overcome many obstacles, new challenges lie ahead.

The ageing population has led to a steady rise in ambulance calls, with an annual increase of 5 per cent to 10 per cent over the past decade. The Covid-19 pandemic placed immense pressure on emergency medical services, exacerbating bed blocks and overcrowding in our emergency departments. Additionally, hospitals are grappling with manpower limitations and a shortage of beds.

Patients are also presenting with increasingly complex emergencies, often with underlying chronic diseases that also need treatment. The interconnectedness of social, emotional, and psychological factors with medical crises is getting more attention, prompting a shift towards prioritising quality of life and population health.

Consequently, healthcare is evolving from a hospital-centric model to one that extends its reach into the community.

Tapping the potential of paramedics in these circumstances is a sensible strategy to explore.

Paramedics can initiate treatment and refer patients to more appropriate medical services rather than the traditional model of transport to the emergency department, which has resulted in bottlenecks worldwide at hospitals.

Such models are already in place

in countries such as Britain, Denmark, Australia and the United States.

In many of these advanced systems, the emergency medical service is interconnected with the wider healthcare system, including urgent care and community-based services.

Paramedics in these countries practise "see and treat" and "treat and refer" models of care. Dispatch and ambulance staff are trained and empowered to triage and evaluate patients.

Paramedics are able to make a diagnosis and recognise patients who may not require hospital care and are able to come up with a treatment plan, and refer these patients back to community-based primary care, mental health or social services as appropriate.

Very often in these systems, paramedics are backed up by physicians using video-conferencing and telehealth consultations.

In Singapore, efforts are currently under way to explore such alternate care pathways.

Training, upgrading the capability of our paramedics and empowering them is an urgent task in view of the challenges ahead.

Paramedics should be recognised as healthcare professionals in their own right, and have the confidence of the public. Talented young men and women need to be attracted to this profession.

In order for the profession to be sustainable, we need to have more pathways for them to progress in their careers and improve their clinical and professional skills.

The paramedics of the future can help play a key role in addressing critical gaps in our healthcare systems.

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