

CPR literacy: Little room for ignorance on a matter of life and death

Singapore has made much progress in training residents to perform CPR and use a defibrillator, but more can be done.



CPR skills being taught at a booth run by the Singapore Civil Defence Force as part of NTUC May Day Domestic Employees Celebration 2023 at the Devan Nair Institute for Employment and Employability on Sunday. ST PHOTO: SHINTARO TAY

Marcus Ong

Mr Tan (not his real name) was playing badminton with his friends at a school sports hall. During the game, he suddenly felt unwell and collapsed. Fortunately, schoolchildren playing nearby had recently undergone cardiopulmonary resuscitation or CPR training and recognised this was a cardiac arrest.

While they started doing CPR, their teacher ran to get the automated external defibrillator (AED) that the school had recently installed in its sports hall.

Together, they were able to successfully restart Mr Tan's heart, saving his life.

This scenario of someone stricken with cardiac arrest occurs five to 10 times every day in Singapore. More than 3,000 people throughout the country will suffer an out-of-hospital cardiac arrest every year.

More than 70 per cent of these events occur at home, where family members are the ones witnessing the event. A cardiac arrest occurs when the heart suddenly stops beating and the person collapses, as in Mr Tan's case. Early CPR and defibrillation are key for survival.

CPR is the simple act of pumping a person's chest to circulate blood and oxygen to the brain and heart. This buys time for the victim and can be performed by anyone with coaching from 995 emergency service dispatchers at the Singapore Civil Defence Force (SCDF).

Combined with the use of a defibrillator, chances of survival for a cardiac arrest victim increase dramatically.

Anyone can be trained in CPR and AED skills in as little as 40 minutes. Singaporeans doing their national service will also learn CPR, and all students get an initial exposure to life-saving skills in Primary 5 and subsequently in secondary school.

To make it easier for users, AEDs today are small, lighter, cheaper and able to automatically recognise a "shockable" rhythm that requires defibrillation. They

guide a user with voice prompts on the actions to take.

Almost anyone can use a defibrillator, with the equipment being widely available even in parks and easy to use.

Yet, in Singapore, the chances that a bystander might perform CPR on someone they witness suffering a cardiac arrest is only 60 per cent and the likelihood of survival only 20 per cent.

While this is much higher than before thanks to intense efforts over the last two decades, it still lags international benchmarks such as those in Scandinavian countries like Sweden, where the bystander CPR rate is 82 per cent and survival rate is about 35 per cent.

Clearly more can be done, but how do we increase "CPR literacy" in our population?

WHAT PUTS PEOPLE OFF TRAINING?

Training numbers certainly have improved since a national survey in 2010 by Singapore General Hospital and the Health Promotion Board. The survey found that while 83 per cent of adults believed people should be trained in CPR, only 31 per cent had ever undergone training and less than 10 per cent had current certification.

Respondents were most willing to use life-saving skills on family members or relatives (87.6 per cent), then friends and colleagues (80.7 per cent) and even complete strangers (61.3 per cent).

There were other findings that jumped out, and may well be relevant today: common barriers to applying life-saving skills were lack of knowledge (36 per cent), fear of doing harm (22.1 per cent) and lack of confidence (15.3 per cent). Other reasons were fear of infectious diseases (13.3 per cent), fear of legal liability (8.2 per cent) and the casualty being a stranger (6.3 per cent).

During the Covid-19 pandemic, a study done at Duke-NUS found our bystander CPR rate dropped slightly during the height of the pandemic compared with pre-pandemic. The study suggests this drop could have been related to fewer cardiac arrests happening in public places, as

83%

Proportion of adults in a 2010 survey who believed people should be trained in CPR.

31%

Those who had undergone training before.

Under 10%

Proportion who had current certification.

well as the fear of infectious diseases.

Amid these human obstacles, much is now under way with community programmes and partnerships.

The National Community Emergency and Resilience (NCER) workgroup, co-chaired by the Unit for Prehospital Emergency Care (Upec) and the SCDF, hopes to increase the bystander CPR rate to 80 per cent and the bystander defibrillator rate to 18 per cent by 2027.

It has set an ambitious target of training and refreshing the CPR or AED skills of one million people over the next five years.

EFFORTS IN PLACE

Recognising how critical the first minutes of a cardiac arrest are, and how bystanders could provide vital help, the aim is to enrol 500,000 members of the republic to be community first responders on the myResponder app, up from 130,000.

The app notifies people if someone is having a cardiac arrest within 400m of their location, and the defibrillators nearby.

The SCDF has also using community events to train members of the public in the use of CPR and AED.

These include events jointly organised with the Community Emergency and Engagement Committees, such as Community Resilience Days and programmes under the SGSecure movement.

SCDF also conducts free Community Emergency Preparedness Programmes at its four division headquarters to impart life-saving skills to the public.

The SCDF has also been working with the Singapore Heart Foundation, People's Association and National Parks Board to have more defibrillators available.

The NCER workgroup estimates that 180,000 people are trained every year in life-saving skills by the combined efforts of the Government, community partners and private agencies.

MAKING CPR MORE ACCESSIBLE

Maintaining and increasing these

efforts will help us meet our target of one million people trained in five years.

To facilitate that, CPR training should be made simpler, easier to learn, more affordable and more convenient.

For example, a traditional CPR class usually takes three to four hours to complete and costs around \$100 to \$200 due to the equipment and manpower needed to conduct it.

However, new programmes such as the school-based Dispatcher-Assisted First Responder have taken a different approach, where the emphasis is to follow instructions provided by the officer on the 995 phone call. This programme requires only 45 to 60 minutes to complete.

Teaching is video-based and fun, with no requirements for exams or testing. It also incorporates activities for hands-on practice.

The course is supported by philanthropic and government funding and is free of charge for the public. It is a collaboration between the Ministry of Education and the Upec under the Ministry of Health.

Community penetration also needs to increase. We need more partnerships between civic societies and organisations trying to bring life-saving skills to the population.

Schools, workplaces and organisations can play a key role to increase CPR literacy by collaborating with the NCER workgroup to provide more low cost, or even free CPR and AED programmes.

For every minute that nothing is done during a cardiac arrest, the chance of survival decreases by 10 per cent. Yet, many people expect to wait for an ambulance to arrive and hesitate to take simple actions that could help save a life. We can certainly do more to keep our communities "heart-safe".

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