

Members of the Naval Diving Unit rehearsing for NDP 2024 in the waters of Marina Bay on Aug 3. For the first time in NDP history, the audience will get to see a live demonstration of the navy responding to a simulated attack on a commercial ship in the Singapore Strait. ST PHOTOS: AZMI ATHNI



NDP 2024

See live how Navy, Coast Guard tackle 'ship attack', 'bomb' threat

Simulation is part of Total Defence display on how nation handles disruptions, threats

Wong Shiying

In hot pursuit of "intruders" on a black speedboat, a Police Coast Guard (PCG) patrol craft raced across the waters of Marina Bay, sirens blaring.

As the PCG craft closed in on the "intruders", the latter dropped a simulated bomb into the water and sped off, but they were quickly intercepted by the PCG.

Divers from the Naval Diving Unit (NDU) then swiftly went underwater to detonate the "bomb" and a big spray of water was seen from the surface.

This demonstration by the Republic of Singapore Navy and PCG will be part of the Total Defence 40 Dynamic Defence Display (D3) in this year's National Day Parade (NDP).

On Aug 3, the media was invited to watch how the PCG and the navy prepared for D3's maritime segment and to observe their rehearsals for NDP 2024.

The Total Defence display, with 40 assets and more than 400 par-



ticipants, will simulate various threats, including those in the air, on land and at sea.

The navy, the Singapore Army, Republic of Singapore Air Force, Digital and Intelligence Service, Singapore Police Force and Singapore Civil Defence Force will demonstrate how these threats and disruptions are dealt with.

The display will be held at the Padang for the first time, with some performances taking place in the waters of Marina Bay. This is to extend the experience to more spectators at 2024's parade, which celebrates Singapore's 59th year of independence.

For the first time in NDP history, the audience will get to see a live

demonstration of the navy responding to a simulated attack on a commercial ship in the Singapore Strait. The NDU team will enter the Padang on two combatant craft medium vessels and neutralise the threats on the ship.

The model of the PCG vessel – the 3-Series PC Class patrol craft – involved in the high-speed chase in the Marina Bay area will also be making its NDP debut.

NDU's Major Lee Zheng Rui, 33, who is in charge of the display's maritime segment, told the media that one of the biggest challenges he faced was taking naval assets into the Padang – which does not have an organic body of water and is relatively small in size.

He said: "We had to think of how to build a mock-up (of the assets) that accurately depicts what we have at sea, while not giving up on important elements we wanted to show the public."

"We broke the mock-up (commercial) ship into three parts so we could bring them into the Padang separately before joining them together."

NDU's Second Warrant Officer Roger Chan Wei Xiong, who coordinated the navy's activities with other participating entities at the Marina Bay area, said the maritime



The Total Defence display will be held at the Padang for the first time. Major Lee Zheng Rui (right) is in charge of the display's maritime segment. 2WO Roger Chan coordinates the navy's display activities at the Marina Bay area.

display team has had eight rehearsals since June 15.

The 35-year-old said: "We go to the Kallang Sea Training Centre in the morning to prepare our boats. Then, we move to the Marina Bay area by 7am to do our rehearsals."

For 2WO Chan, the difficulty in his role lies in ensuring that different elements of the maritime display come in at the right timing.

"Other than synchronising what's happening at Marina Bay

with the Padang, it's also about ensuring safety (such that) there are no collisions during the rehearsals."

Despite rehearsing on weekends and having to get up early, 2WO Chan said the effort is worth it.

"Even though it's tiring, I'm happy to contribute to NDP because we can showcase our military might to Singaporeans," he said.

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Heavy traffic expected at land checkpoints over National Day weekend

Rhea Yasmine

Travellers headed to the Woodlands and Tuas checkpoints leading up to and over the National Day long weekend should factor in additional waiting time to cross the border.

The Immigration and Checkpoints Authority (ICA) said in a statement on Aug 2 that heavy traf-

fic is to be expected at the two land checkpoints from Aug 8 to 13.

It asked that travellers cooperate with ICA officers, observe traffic rules and maintain lane discipline during that period.

For a smoother journey, ICA encouraged those travelling by car to use QR codes in lieu of passports.

It also advised motorists to check the traffic situation at the land checkpoints before embarking on their journey.

During the June school holidays from May 23 to June 25, those travelling by car waited for up to three hours before they cleared immigration due to traffic tailback from Malaysia. A daily average of almost 480,000 travellers crossed the Woodlands and Tuas checkpoints during that period, with a record number of more than 530,000 travellers on June 14.

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New tech can help in treatment plans to delay kidney failure

FROM A13

CKD due to diabetes, with 370 per million population (pmp).

Jalisco, a state in Mexico, followed in second place with 297 pmp and Singapore placed third at 250 pmp.

Diabetes is the No. 1 cause of kidney failure in Singapore, accounting for 67 per cent of new cases. The number of people with kidney failure here has gone up by 40 per cent over the past 10 years.

Currently, more than 470,000 adults in the Republic live with diabetes, and about half of them have CKD.

With the number of Singapore adults with diabetes projected to double to one million by 2050, doctors here want to be able to detect CKD early to manage it effectively.

"When you look at (patients with) Stage 5 or end-stage kidney failure among all the dialysis patients, about 70 per cent have diabetes as the underlying contributing factor.

"When they reach Stage 5, the lifespan is shortened by up to 16 years," Prof Bee said.

"In terms of the trend from 2010 to 2019, we see a large increase in the prevalence of end-stage kidney disease. I think part of this is because our diabetes patients are surviving longer with better treatments," he added.

Dr Andrew Wu, chief executive of Mesh Bio, a health technology start-up focusing on the digital transformation of care delivery, said: "We believe this technology will be instrumental in reducing the burden of diabetes complications and advancing personalised care strategies."

Using data from two hospitals and selected polyclinics under SingHealth and NHG, Mesh Bio developed HealthVector Diabetes, the world's first foundational digital twin model of human biology.

The metabolic digital twin software uses data analysis and artificial intelligence to predict the risk of CKD onset in diabetes patients over three years.

At present, patients with diabetes need to be monitored for diabetic kidney disease through yearly blood and urine tests, as early kidney disease usually does not have any symptoms. Testing is the



Associate professors Bee Yong Mong (far left) and Rinkoo Dalan worked on the project using HealthVector Diabetes to predict the risk of chronic kidney disease onset in diabetes patients over three years. ST PHOTO: SHINTARO TAY

only way to know how well the kidneys are working.

Data of 7,000 patients from SGH, TTSH and selected polyclinics was assessed to derive a risk score to

predict worsened kidney function.

Using information such as fasting blood sugar levels, cholesterol measurements, body mass index and blood pressure, the software

estimates the three-year risk for CKD development in Type 2 diabetes patients who do not have pre-existing kidney issues.

Associate Professor Rinkoo Da-

Wristbands recycled for use across shows

Esther Loi

For the first time, LED wristbands from the 2024 National Day Parade (NDP) shows are being recycled and redistributed to the audience.

Speaking to the media before the NDP preview on Aug 3, Captain Alfian Noorhaqim, the deputy organising secretary for logistics in the NDP 2024 show committee, said this is part of the committee's environmental efforts as only slightly more than 27,000 wristbands – the total seating capacity of each show – were produced in total in 2024.

"We try to maximise (the use of the wristbands) by recycling it and using it throughout multiple shows," he added, "instead of just using it once and disposing it."

Besides the wristbands being made of recycled materials, CPT Alfian said this recycling initiative allows more people to be involved in the shows through the act of reusing.

For the first six shows that started from June 22 up till July 27, the average return rate of these wristbands has been 93 per cent.

The NDP 2024 show committee told The Straits Times that for the remaining two shows on Aug 3 and 9, they are aiming for a return rate that is the same or higher than the current 93 per cent.

These wristbands, which are worn by the audience, are used from chapters three to six of the NDP show, which begins after the military parade and ceremony segment ends at about 7.30pm.

The LED wristbands allow audience members to become part of the multimedia canvas at the Padang, changing colours and blinking according to the different stage themes and rhythm of the music.

CPT Alfian noted that after each combined rehearsal or preview, the cloth straps and LED components of the wristbands will be cleaned and sanitised in time for the subsequent show.

He added that the committee is still considering if it should reuse the 2024 wristbands for NDP shows in the coming years.

Noting that the recycling of these wristbands is a "new concept for everyone", CPT Alfian said volunteers will remind the audience members to return their wristbands throughout their time at the Padang, from when they collect the bands at the entrance to the beginning of the actual show.

He added that volunteers will prompt the audience members to return the wristbands again when they exit the stands after the show ends.

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lan, an endocrinologist at TTSH, a member of NHG, said that work done using HealthVector Diabetes has shown that the predictions of the software outperformed other prediction models such as the annual blood and urine tests.

The study into the development and validity of HealthVector Diabetes was published in npj Digital Medicine journal in May 2024.

"(From there), we developed this algorithm further and subsequently fine-tuned and validated it by adding the SingHealth diabetes registry," Prof Bee said.

Prof Rinkoo said the improved software can potentially transform the care of patients with diabetes, as doctors use the information to prioritise and intensify treatments to delay the progression of kidney failure.

Once the pilot programme is launched in early 2025, Prof Rinkoo said its predictions will allow doctors to create personalised treatment for sugar and blood pressure control, which will in turn delay the onset or progression of CKD and its complications.

"This way, patients with diabetes will have an additional 15 years free from having to deal with end-stage kidney failure, and will have a better quality of life," she added.

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