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Changi
General Hospital
SingHealth

HEALING WOUNDS

CGH's one-stop centre provides early interventions and fast-tracked treatment

ON THE FRONTLINE

From pandemic to endemic

MOVED BY MOVEMENT

Serving unique needs at the Performing Arts Medicine Clinic

ISSUE 1 2022



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Changi General Hospital



PATIENTS. AT THE HEART OF ALL WE DO.®



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TIME DOES NOT HEAL ALL WOUNDS

CGH sets up a one-stop care centre for those with stubborn ulcers and sores.



CGH vascular consultant Dr Derek Ho and Nurse Clinician Ong Ling attending to a patient's chronic wound.

A tear in the skin may heal overnight for many, but for some, it can take months or even years for the wound to recover. These hard-to-heal or chronic wounds are an escalating problem worldwide and in Singapore. Today, one in 20 Singaporeans is afflicted with chronic wound conditions such as diabetic foot ulcers, pressure injuries, and arterial and venous ulcers. This is expected to increase due to an ageing population and prevalence of diabetes.

Seniors are more likely to be affected by such issues, due to underlying comorbidities such as diabetes, cardiovascular and peripheral vascular diseases, and reduced mobility. Chronic wounds can be complex and multi-factorial, with various underlying causes — some of which may not be obvious without further investigations. For example, a chronic wound on the lower limb may be referred to an orthopaedics specialist based on its location. However, the wound may not be recovering because the valves in the veins are not working effectively, and this would actually be best treated by a vascular surgeon.

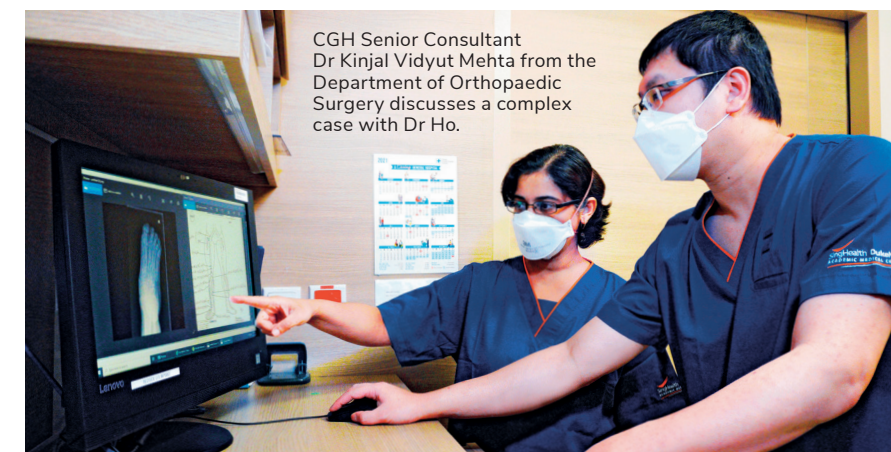
Bringing together a multi-disciplinary care team — from orthopaedics to vascular, plastic and reconstructive surgery — Changi General Hospital (CGH) has set up a one-stop **Wound Healing Centre (WHC)** to provide easy, fast-tracked access and convenience for patients with non-healing wounds. This is supported by wound specialist nurses, as well as

radiographers, podiatrists, physiotherapists and dietitians who each play a key role in diagnosing, caring and journeying with patients to recovery.

Patients can undergo diagnostic tests, assessments and outpatient treatments all within the same day at the Centre. This reduces the need for multiple visits to receive appropriate care, and this is crucial for those who are afflicted. "Time is of the essence. When you have a wound that does not seem to recover after a month or two, do not let it fester longer but seek treatment early," said Professor Ng Wai Hoe, Chief Executive Officer, Changi General Hospital. "We designed the care journey at the Wound

"Preventive interventions, early diagnosis, timely treatment and continued care are essential to keep our community well so that they can maintain their quality of life."

Dr Derek Ho, WHC Director and Consultant, Department of Surgery (Vascular Surgery), CGH



CGH Senior Consultant Dr Kinjal Vidyut Mehta from the Department of Orthopaedic Surgery discusses a complex case with Dr Ho.



Healing Centre to achieve the best possible outcomes with our patients in mind.”

Delayed recovery can lead to complications such as infections and gangrene requiring amputations. Gangrene occurs when body tissue dies due to a lack of blood flow or a serious bacterial infection. About 200 amputations are done in CGH yearly due to diabetes or peripheral vascular disease, which is a slow and progressive blood circulation disorder.

Specialists and wound care nurses at the Centre are

CGH EMBARKS ON RESEARCH FOR BETTER PATIENT OUTCOMES

To further establish the WHC in the areas of research and innovation, CGH signed a Memorandum of Understanding (MOU) with local biotechnology company Celligenics, marking the start of a new public-private partnership. Besides conducting joint research and development focused on accelerating healing, CGH will also be a test bed for innovative wound care solutions through clinical trials.

trained in the full spectrum of wound management. Depending on the needs of the patient, the nurses are able to perform therapy for complex wounds and leverage a variety of technologies such as electrical stimulation for healing and ultrasonic bedside debridement to ease the pain.

“Chronic wounds often cause immense pain and emotional distress. However, patients and caregivers often come to us only during the late stages of the wounds, which makes them harder to treat and heal. A holistic and coordinated care approach will shorten the runway for the healing

process,” added Ms Png Gek Kheng, Chief Nurse, CGH, and an Advanced Practice Nurse specialising in geriatric care.

Plans are also in the pipeline to work with community hospitals and nursing homes to identify patients with chronic wound symptoms for early detection.



SCAN THE QR CODE TO WATCH THE PATIENT JOURNEY AT THE WHC



时间不能治愈所有伤口

樟宜综合医院为慢性伤口患者设立一站式治疗中心

许多人皮肤上的损伤可能会在一夜之间愈合，但对有些人来说，可能需要数月甚至数年才能复原。这些难以愈合或慢性的伤口在全球，甚至新加坡已成为日趋严重的问题。老年人因患有潜在医疗状况如糖尿病、心血管和外周血管疾病等，以及行动不便，更容易受到此类问题所影响。慢性伤口的性质可为复杂和多原的，并带各种潜在原因。如果不深入调查，其中一些可能不易被发现。

从骨科到血管科，以及整形和重建手术外科，樟宜综合医院设立了跨学专科治疗团队的一站式伤口愈合中心，为患者提供方便和快捷的就诊机会。这项措施由伤口专科护士，以及足病学治疗师、放射技师、物理治疗师和营养师管理所支持。他们在诊断、护理和陪伴患者康复方面，各自扮演着重要的角色。患者可以在同一天内在伤口愈合中心接受诊断测试、评估和门诊治疗。

伤口延迟康复会导致并发症，例如伤口感染和以至于需要截肢的坏疽。樟宜综合医院伤口愈合中心主任兼外科顾问何俊贤说：“预防性干预、早诊断、及时治疗 and 持续护理是保持社区患者健康的关键，以便他们能够维持一定的生活质量。”该中心的专科和伤口护理护士都接受过全方位伤口护理的培训。护士会根据患者的需要并借助多种技术，例如电刺激愈合和超声波床边清创等来对复杂的伤口进行治疗以减轻疼痛。

樟宜综合医院伤口愈合中心副处长兼护理总监方月卿女士说：“慢性伤口通常会导致剧烈疼痛和情绪困扰。然而，患者和看护往往在伤口晚期才求诊，这让伤口更难治疗和愈合。一个全面和协调的护理方式将缩短康复过程。”中心也在筹备与社区医院和疗养院合作的计划，以及早发觉有慢性伤口症状的患者。



Mr Lee with vascular surgeon Dr Derek Ho (middle) and Senior Nurse Clinician Cheng Shu Hua.

DIABETES — THE MOST COMMON RISK FACTOR OF CHRONIC WOUNDS

Mr Lee Kim Loon is one of the many patients with diabetes whose chronic condition will give rise to the development of chronic wounds from diabetic peripheral neuropathy, arterial insufficiency or peripheral vascular disease.

While most people can recover quickly from a cut or scratch on the skin, patients with significant risk factors such as diabetes will need to exercise extra caution in preventing wounds around their lower limbs, especially the feet and toes area.

For these patients, a small scratch can be infected easily and develop into a chronic wound. They also may not feel pain when a wound is inflicted due to reduced sensation in the nerves from diabetes. Patients and caregivers thus need to examine the feet regularly for any wounds.



Proper and timely wound care prevents infections and helps to speed up the healing process.

HEALED in the nick of time

Like many who suffer from similar health conditions in Singapore, 74-year-old retiree Lee Kim Loon has what is called the “three highs” of chronic conditions — high cholesterol, high blood pressure and high blood sugar, which is diabetes. Furthermore, Mr Lee had not taken steps to watch his weight or exercise, and smoking heavily did not help make things any better.

When Mr Lee first found multiple black patches on his lower limbs, he did not think too much of them and waited to see if they would recover over time. It was only when a family friend, who is a physician,

pointed out that his condition looked severe, that he went to the emergency department at Changi General Hospital, where doctors assessed that he needed to be warded.

The doctors soon found the reason for his black patches — he had blocked arteries from his thighs to his toes, which restricted blood flow and had resulted in gangrene. He had to undergo a surgery to open up the blood vessels and remove the dead tissues on his feet. However, as the infection was already too deep and extensive, two toes — one on each foot — had to be amputated.

Mr Lee was referred to the Wound Healing Centre, located at the Medical Centre of Changi General Hospital, for further management. He has been going for reviews at the Centre about three times a week with vascular and plastic surgeons, as well as to regularly change his wound dressing. He has now also taken proactive steps to lose weight and quit smoking so that he can resume his daily activities.



SCAN TO WATCH A VIDEO OF MR LEE AND HIS DAUGHTER RECOUNTING THE JOURNEY FROM DETECTION TO RECOVERY

FACTS AND FIGURES

2011 CGH started building up its expertise in wound management.

2017 CGH wound specialists and nurses first attained international certification by the American Board of Wound Management.

1 DEC 2021 The CGH Wound Healing Centre was officially opened by Dr Koh Poh Koon, Senior Minister of State, Ministry of Health and Ministry of Manpower.

1,000 estimated new patients are expected to benefit annually from the care.

1,000 wound-related consultations and procedures are provided each month on average.

CHECKING YOUR BODY FOR WOUNDS



Scratches, bruises, ulcers and sores can start small and may not always be visible. Pay attention to these areas and monitor wounds regularly. Seek medical attention if any of these injuries do not get better over the span of a few weeks.

TYPES OF CHRONIC WOUNDS EXPLAINED

DIABETIC FOOT ULCER

Occurs on the feet, heels or toes of people living with diabetes.



ARTERIAL ULCER

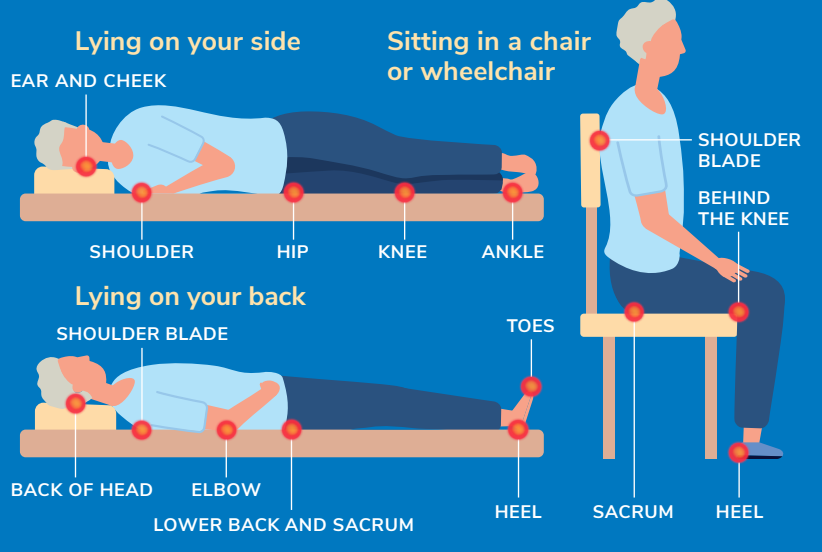
Occurs when the affected area does not receive blood supply. Most often found on the toes, feet, heels or ankles.

VENOUS ULCER

Occurs when blood pools up in the veins due to valves not working properly. Most often found above the ankle.

PRESSURE ULCER

Commonly found over a bony prominence due to limited mobility, for example, sacrum, hips, buttocks, heels, ankles, shoulder blades, spine, elbows, ears and at the back of the head.



By Ms Low Bee Geok, Community Nurse & Nurse Clinician, Changi General Hospital Wound Healing Centre

Pressure injuries afflict about 180 per 100,000 Singaporeans.

Not surprisingly, such injuries — also known as bed sores or pressure ulcers — are among the most common chronic wounds treated at the Changi General Hospital Wound Healing Centre. We address some frequently-asked questions on this topic.

What puts one at a higher risk?

You are at risk of getting a pressure injury if you:

- Are a senior, as the skin gets thinner and more fragile in old age
- Have medical conditions that cause poor mobility and/or blood circulation, for example, stroke, nerve or blood vessel disease
- Have poor nutrition and hydration
- Are underweight or overweight
- Have frequent contact with moisture due to diaper use

What happens if a pressure injury is left untreated?

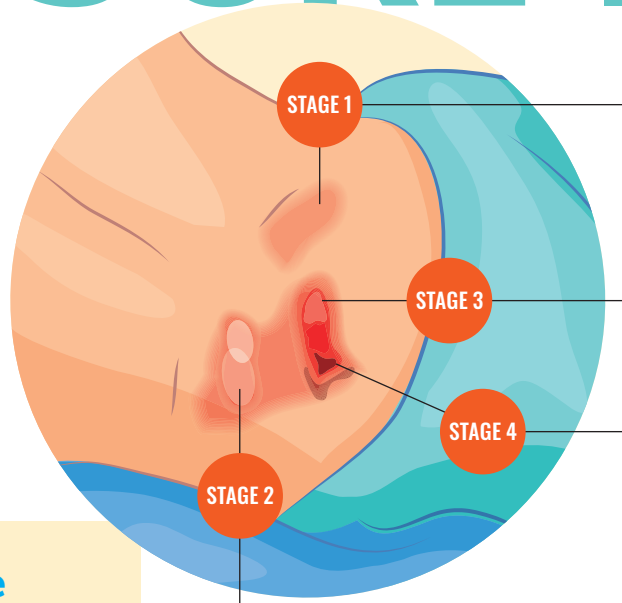
When a pressure injury is left untreated, it can worsen and infection may set in, causing wounds to present with dead tissues and pus. The person may experience pain or discomfort, and show signs of lethargy or fever. These pressure injuries can take months or even years to heal — and as they worsen, they can become harder to treat.

In serious cases, sepsis may set in, which can be life-threatening. If the wound reaches the bone, it can cause a bone infection which would require a long course of antibiotics. In such circumstances, hospitalisation for treatment of the infection is necessary.

PRESSURE INJURY 101

What is a pressure injury?

A pressure injury refers to localised damage to the skin and its underlying tissues due to prolonged lying or sitting in the same position for long periods. A pressure injury is usually located over a bony area of the body. It begins as a small redness on the skin and can quickly develop to affect deeper tissues if proper care is not rendered.



- STAGE 1** Non-blanchable, visible redness on skin surface that does not go away when skin is pressed.
- STAGE 2** Damage to the top layer of the skin, or a blister filled with clear fluid.
- STAGE 3** Injury extends into the tissue beneath the skin, forming a small crater.
- STAGE 4** Injury extends deeper, forming a large crater where deeper tissues, tendons and bone may be visible.

How are pressure injuries treated?

Treatment varies at different stages, and should be reviewed by a healthcare professional regularly.

STAGE 1

- Apply hyper-oxygenated spray over the bony area three times daily while gently massaging the area for one minute.
- Use soft silicone foam dressing that provides cushion support to the affected area so as to reduce shear and friction.
- Keep heels off the bed surface by placing a pillow under the calves.

STAGE 2

A dressing is required to protect the pressure injury. It is vital to keep the dressing dry at all times, and to change it immediately when soiled. Seek professional advice if the wound does not improve after two to three days.



STAGE 3-4

A healthcare professional will need to regularly review the pressure injury, including any deep tissue injury and unstageable pressure injury. A treatment dressing regime will be prescribed.

Pressure injuries are classified by severity, from STAGE 1 to STAGE 4.

Sometimes a pressure injury does not fit into one of these stages.

Deep tissue injury: The skin appears intact but tissues underneath are damaged. Skin looks purple or dark red, or there may be blood-filled blisters.

Unstageable: The affected wound is covered by a layer of dead tissues that looks yellow, brown or black. The depth and stage of the wound can only be determined after the removal of dead tissue.

CGH Chief Nurse and WHC Co-director Ms Png Gek Kheng (left) with a wound care nurse.



EASING THE PRESSURE

Six steps to preventing and managing a pressure I.N.J.U.R.Y.

I ncontinence care

Constant exposure of skin to moisture from urine or faeces can cause skin damage, increasing risks of pressure ulcers. Practise good personal hygiene to prevent skin breakdown. Cleanse skin with water or pH-balanced cleansers, and dry skin gently and thoroughly after each episode of incontinence. Check with a wound care specialist or nurse on suitable products for protection and dry skin.

N utrition & hydration

Eating a balanced diet provides the nutrients required to maintain healthy skin. *Read more on Page 7.*

J ust move

Move regularly to prevent pressure injuries. Turn bed-bound patients every two hours, changing their lying positions to the right, left and flat. If chair-bound, change positions at least thrice per hour while seated. With a caregiver's help, lean forward and back or to the sides; raise the body from the chair by lifting upward, or lift feet off the footrest regularly.

U se pressure-relieving surfaces

There are many types of mattresses, cushions and aids designed to reduce pressure on the skin.

R eassess skin regularly

Detect pressure injuries early by checking the skin for:

- Unhealthy colour changes that do not go away, such as red, purple, blue or black skin.
- Skin texture changes like dry patches, swelling, blisters or skin breakage.
- Changes in skin temperature, such as warmer or cooler areas of skin.

Y ou should seek help early

See a healthcare professional if you notice skin changes. A worsened pressure injury can become harder to treat and lead to complications.

预防及管理压力性损伤

遵循六个简单步骤

每10万名新加坡人当中, 就有大约180人遭受压力性损伤。这是樟宜综合医院伤口愈合中心最常见和治疗的慢性损伤之一。

压力性损伤通常位于身体的骨骼部份。起初, 皮肤会出现小红斑, 若不进行适当的护理, 它会迅速发展而影响到更深层的组织。

失禁护理

皮肤持续接触尿液或粪便中的水分会导致皮肤受损并增加压疮的风险。为防止皮肤破损, 保持良好个人卫生是很重要的。

用水或酸碱平衡的洗洁剂来清洗皮肤, 并在每次失禁后, 轻轻及彻底地抹干皮肤。请向伤口护理专家或护士咨询合适的护肤产品。

营养和水分补充

均衡饮食可提供保持皮肤健康所需的营养。请参阅第七页。

移动身体

经常摆动能够防止压力性损伤。长期卧床的病人需每两小时翻身一次, 变换身体向左向右及躺平的位置。

坐轮椅的人士则必须每小时改变坐姿至少三次。在看护人的协助下, 他可以前后倾身或向两侧倾身; 将身体从椅子上抬起, 或经常将脚抬高脚踏板。

使用减压垫

有许多类型的床垫、靠垫和辅助工具可以减轻对皮肤的压力。

定期评估皮肤情况

定期检查皮肤有助及早发现和治疗压力性损伤, 并避免并发症。检查皮肤时, 注意以下情况:

- 不健康、不消退的肤色变化, 例如红色、紫色、蓝色或黑色的皮肤。
- 皮肤质地的变化, 例如皮肤出现干燥斑块、肿胀、水泡或破裂。
- 皮肤温度的变化, 例如温度升高或降低的皮肤部分。

及早寻求援助

若您发现任何皮肤的变化, 请向医疗保健专业人士查询。压力性损伤一旦恶化, 就会更难治愈, 并可能导致并发症。

By Ms Sandra Tan, Dietitian, Changi General Hospital

EATING your way to better healing of wounds

Nutrition plays a vital role in the prevention and treatment of chronic wounds, such as pressure injuries. Inadequate nutrition increases the risk of developing pressure injuries and infections, which delays the healing process.

It is crucial to have enough calories from your meals in the form of carbohydrates, protein and fat. Without sufficient calories, our bodies will then tap on our energy stores and protein from our muscles to produce energy to meet our needs. This in turn leads to muscle wasting, which further impairs the wound healing process.

THE PROS OF PROTEIN

Protein is vital for the growth and repair of our body tissues and in collagen formation. Studies have found that an increased protein intake is linked to improved pressure injury healing. The Pressure Injury Advisory Panel (2019) recommends that individuals with pressure injuries should consume 1.2-1.5g of protein per kilogram of body weight spread throughout the day. Protein comes from both animal sources such as chicken,

fish, eggs, red meat and dairy products, as well as plant sources such as tofu, soy and bean products. As a rule of thumb, each meal should contain a protein source in order to meet the daily requirements.

Vitamins and minerals — in particular antioxidants such as vitamins A, C and E and minerals such as zinc — accelerate wound healing.

Staying well-hydrated also helps in the wound healing process.

SEEKING GUIDANCE ON YOUR DIET

At Changi General Hospital (CGH), dietitians ensure patients receive the right nutrients in the right quantity to aid the wound healing process. Part of a multi-disciplinary team at the CGH Wound Healing Centre, they assess and calculate nutritional needs, and provide specifically-tailored dietary advice. It is recommended to visit a dietitian for wound(s) that are not healing over time.



Aim to have adequate protein in the form of animal or plant products for each meal.

Sufficient calories coming from carbohydrates, protein and fat are essential to produce energy for the body to function.

Red, yellow and green fruits, and vegetables such as red peppers and broccoli provide vitamins, while meat, poultry, dairy and wholegrain products contain minerals and amino acids to aid the wound healing process.

Ensure sufficient hydration by drinking 1.5-2L of water daily.

Seek a dietitian's help for specific and tailored dietary advice in the management of pressure injuries.

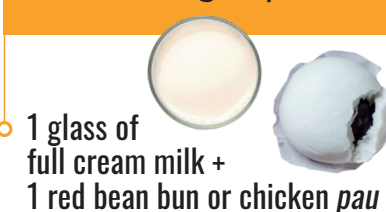


4 plain crackers with 2 slices of cheese



2 slices of toast with 1 scrambled or half-boiled egg

Here are some high-protein snack ideas containing about 300 calories and 10-15g of protein that you can consider including in your diet:



1 glass of full cream milk + 1 red bean bun or chicken pau



1 cup of soya bean milk + 1 tuna sandwich



1 bowl of oatmeal prepared with 3-4 tablespoons oats + 1 glass of low-fat plain milk

By Ms Ng Jia Ming, Changi General Hospital

From PANDEMIC to ENDEMIC

With the nation's transition to endemic living with COVID-19, restrictions to our daily lives are gradually adjusted. But the fight is far from over — with the healthcare system withstanding immense pressure since the beginnings of the outbreak. The team members of Changi General Hospital (CGH) have steadfastly held the fort on the hospital front while caring for patients from hospital to home, and coping with the new normal. They share their stories of commitment, resilience and solidarity.

WITH GREAT KNOWLEDGE COMES GREAT RESPONSIBILITY

It's never an ordinary day for **Dr Tan Seow Yen**, who heads the Department of Infection Prevention and Control (IPC) at CGH and wears multiple hats in the fight against COVID-19. Dr Tan is involved in the epidemiological investigation of COVID-19 cases within the hospital. Together with her team, she plays a critical role in keeping patients and fellow colleagues safe from COVID-19 by formulating infection control protocols. They also carry out in-depth investigations of positive cases, and set in place measures to mitigate the risk of transmission.

Besides helping out on the ward rounds to care for patients, Dr Tan is also involved in the stewardship of COVID-19 therapeutics,

which involves the holistic assessment of the patients' overall medical condition to determine the evidence-based prescription and care which would best benefit them. She partakes in COVID-19-related research projects, such as studying its clinical features, diagnosis, treatments and vaccination.

Transiting into endemicity has brought along a different set of challenges on both the clinical management, as well as infection prevention and control fronts for Dr Tan. The Delta variant, with its increased transmissibility and shorter incubation period, and most recently, Omicron, has kept everyone on their toes. The nature of cases is also starkly

different, as the profile of patients has changed over the past two years. "In the first year of the pandemic, the patients consisted largely of young and healthy migrant workers. This gave way to more complex cases as more elderly patients — often with underlying medical conditions and some requiring longer durations of critical care — were admitted into the hospital," says Dr Tan.

Change is the only constant, as Dr Tan continues to helm the timely alignment of the hospital's protocols — which includes the management of symptomatic and asymptomatic patients and staff — that are adjusted accordingly almost every week. The fluid situation also requires constant



"It was particularly gratifying to be able to make a difference, by providing accurate information, and allowing people to make an educated decision on their health. Even though it seems like a small thing, it serves as a reminder to everyone, that our actions — no matter how small — can make a difference."

Dr Tan Seow Yen
Department of Infection Prevention and Control (IPC), CGH

acclimatisation from every member on the frontlines. Coupled with the fact that the healthcare workers have been on heightened alert for two years, it has proven no easy feat retaining highly-stringent infection control protocols in the hospital. "My team constantly engages our colleagues to keep them informed and to clarify doubts. It is important to communicate not just the protocol itself, but also the rationale behind it, so that it aids understanding and implementation," says Dr Tan.

Despite these heavy responsibilities on her shoulders, Dr Tan's level-headedness and cheerful personality has stood her well in the crisis. She shares a memorable experience, of when she gave a talk to seniors at a community centre to encourage them to get vaccinated. She recalls a particular elderly gentleman who asked many questions during the Q&A session and once his questions were answered, promptly headed to the vaccination centre to get his jab.

STAYING STRONG IN ADVERSITY

CGH Senior Staff Nurse **Faithe Poh** typically works in a ward that provides specialised geriatric holistic care for elderly patients with multiple problems and geriatric syndromes. Working closely with a multi-disciplinary care team, ward nurses provide acute medical care and treatment, as well as undertake the holistic planning of their post-discharge care to ensure a smooth reintegration back into the community.

As hospital resources were reallocated to handle the surge in cases due to the pandemic, Ms Poh's ward was converted on a few occasions to contribute to the care of COVID-19 patients and those on quarantine order requiring medical attention. Like many of her fellow nurses, she had to adapt to providing a wide spectrum of care needs and closer monitoring as the virus proved unpredictable in its effects on different patients.

These days, Ms Poh dons the full personal

protective equipment (PPE) to care for patients diagnosed with COVID-19. "The turnover is very fast as we strive to make space for patients who need acute care. We also minimise breaks to ensure that we do not over-utilise the PPE as it has to be discarded every time we drink water or visit the restroom. It's very hard work," says Ms Poh.

Despite the volatile situation and evolving protocols, the close-knit community of nurses is a lifeline to Ms Poh. It is an immense source of quiet strength and reassurance, she emphasises, "to know that others are in the same boat as you and fighting the same battle". Her fellow nurses also formed a team who shared their experiences to help others familiarise themselves with procedures.

Ms Poh's work is not only physically draining, but also extremely emotionally challenging at times. As healthcare workers on the frontlines, she and her fellow



"We also had to be pillars of support for these patients. Though it was quite tiring and draining, being able to alleviate their pain and grief, even if it was by a little, made our work meaningful and worthwhile."

Ms Faithe Poh
Senior Staff Nurse, CGH

nurses show up at work daily knowing that they may have to activate emergency step-up medical care for deteriorating patients or even deal with a death.

There were also times when she cared for grieving patients who had lost their family members to COVID-19 complications, just days prior to their admission. Some had to miss the funerals or cremations of their loved ones. It was especially difficult for the elderly as they had limited means of communication with their family.

Ms Poh recalls the most difficult moments to be the ones when these patients would be in tears as they lay in the hospital bed. "I remember one morning as I served the medication, this patient told me in tears, 'It is 8am and they are sending my husband to be cremated now'. What brought relief to the patient was that we were able to video-call their family to allow her to be virtually present."



Chow Weiling A&E Senior Staff Nurse



The Accident & Emergency (A&E) Department has always been a busy place in hospitals, but with COVID-19, frontliners like Ms Chow have been experiencing the full brunt of this long-drawn battle. The introduction of the home recovery programme for asymptomatic patients last year proved a great relief, as frontliners at A&E are now better able to focus on treating emergency and acute patients.

"It is important for me to think on my feet and be competent in the assessment, prioritisation and provision of assistance for various scenarios efficiently and effectively. Thankfully, the Antigen Rapid Test (ART) has proven a huge help for quick detection and decision-making for admissions."

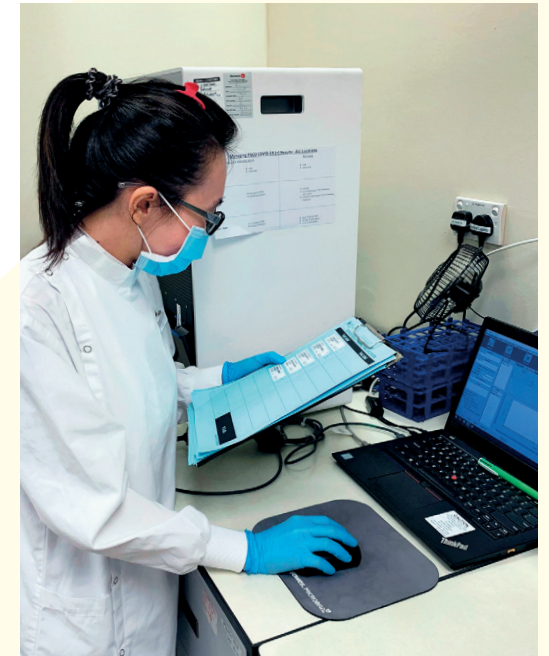


"The challenges as a frontliner are not easy — the worry and uncertainty of patients and accompanying visitors are what we face each day. As we are working in a high-risk area, we sometimes also feel anxious when a colleague tests positive. The support and encouragement from my family members, colleagues and the community helps me to press on."



Nennie Fadillah Hasnawi
A&E Patient Service Associate Executive

Patient service associates like Ms Nennie are usually one of the first touchpoints that patients and visitors encounter during their visit to CGH — she registers outpatients, facilitates admissions, provides financial counselling and runs counters at the A&E. On top of these duties, Ms Nennie works closely with the nurses to assign patients for consultations, activates the escalation of cases, and manages the flow of patients at the A&E.



Eng Li Ching
Senior Medical Laboratory Scientist

The CGH microbiology laboratory operates around the clock to support the hospital's COVID-19 operations, with the release of test results affecting key decisions such as patients' treatment and ward movements. Ms Eng oversees the COVID-19 laboratory processes, from keeping track of priority-testing protocols to registering swab samples and the release of test results.

"It is always a race against time, so teamwork is important in communicating and ensuring that these updates are carried out promptly and results are released smoothly."



Candyce Lee
Inpatient Operations Executive



Having joined healthcare to help others, Ms Lee leads a team of Patient Service Ambassadors at the wards in supporting doctors, nurses and allied health professionals to ensure a smooth journey from admission to discharge to home for patients. Beyond administrative work, the team's operative duties range from rapid contact tracing and ward management, to the activation of COVID-19 wards.

"I feel proud to be part of the strong CGH family who work tirelessly to serve the community. The past two years have been challenging, but fulfilling with many humbling lessons learned. I am confident that the healthcare family will continue to excel and improve for the betterment of the community."



By Dr Mandy Zhang, Consultant, Department of Sport and Exercise Medicine, Changi General Hospital

Moved by Movement

Dancing can bring happiness and sometimes, much more than that.

I dance because it brings me joy. I started with ballet since I was three. I also did hip-hop, contemporary and Chinese dance as a teenager, and my favourite moves are Latin these days. Dance has the amazing ability to engage me physically, emotionally and socially all at the same time, as I connect the beauty of music and movement. Dance has its own vocabulary, techniques and skills, which must be appreciated and applied, to understand the art. It holds a special place in my heart.

Dancing can help individuals improve their physical, emotional and psychological well-being. It can in fact be included as part of the 150 minutes-per-week moderate intensity exercise as advised by the Health Promotion Board. In addition, dance promotes the experience of 'flow', which allows one to focus on the music, rhythm and motion.

Unfortunately, dance injuries are common, usually due to overuse. It is important



to be mindful and take preventive steps, to be able to mitigate the risks of dance-related injuries.

What should you do if you get injured when dancing?

In general, if you experience pain — rest it. If there is

associated swelling over the area — ice and elevate. Should the pain become persistent or increase over time, or is associated with weakness, tingling or numbness, it is advisable to seek medical attention.

Where can you go to get help?

Most dance injuries can be managed with adequate rest, analgesia, activity modification and physiotherapy, while surgery may be required in recalcitrant or severe cases.



Dr Mandy Zhang has a special interest in performing arts medicine, especially in dance medicine. She is currently the Chair for the Performing Arts Medicine special interest group under the Sports Medicine Association Singapore (SMAS) and a member of the Professional Development Committee and Research Review Taskforce in the International Association of Dance Medicine and Science (IADMS).



Dr Zhang conducts an ultrasound scan for a patient.



CGH provides multi-disciplinary care at the Performing Arts Medicine Clinic: Dr Lim Ang Tee, Consultant, Department of Sport and Exercise Medicine (top, middle) with a physiotherapist and patient at SSMC@Novena; Clinical Associate Professor Peter Lu, Senior Consultant, Department of Otorhinolaryngology - Head & Neck Surgery (below, right) checks the vocal cords of a patient model through a video stroboscopy at the CGH Voice Clinic.



Medical professionals play a vital role in treating, managing and also in preventing injuries. Dancers tend to respond well to medical providers who respect the aesthetic demands, intricacies and intensity of dance.

Multi-disciplinary care for unique health needs

Besides dancers, instrumentalists are also prone to extreme bodily stress and strain, and face anxiety and mental health issues at times as they spend long periods practising a short musical phrase over and over to get the nuance right. Many vocalists also subject their vocal cords to prolonged duration of use, and/or may perform at high volume,

and are thus susceptible to developing voice conditions.

To this end, **Changi General Hospital launched the Performing Arts Medicine initiative to support the physical and mental health needs unique to dancers, instrumentalists and vocalists in a timely manner.** A Performing Arts Medicine Clinic (PAMC) has been set up to provide one-stop multi-disciplinary care — from evaluation, treatment and rehabilitation to injury prevention, wellness and education — by a team of doctors, physiotherapists, podiatrists, psychologists and dietitians. Similar services are offered at the Singapore Sport and Exercise Medicine Centre (SSMC)@CGH.

TACKLING THE PERILS OF PERFORMANCE

MUSCULOSKELETAL DISORDERS

Most of these involve the ankle, foot, knee or lower back for dancers, and the shoulder, wrist and fingers for instrumentalists. The majority are due to overuse and repetitive stress, but other risk factors include fatigue, incorrect technique, poor footwear, and flooring that provides insufficient supportive impact for the joints.

PAMC's services include:

- ▶ Pre-participation screening
- ▶ Injury diagnosis and management
- ▶ Performer wellness and injury prevention
- ▶ Pointe preparedness
- ▶ Physical therapy
- ▶ Sports massage

VOICE DISORDERS

Laryngitis, vocal cord haemorrhages, polyps and nodules are some of the common injuries in vocalists. Besides hoarseness and poor vocal endurance, a performer can be affected by a variety of medical conditions which can include laryngitis, rhinitis and sinus disease, and gastroesophageal reflux disease.

PAMC's services include:

- ▶ Voice Clinic consultation
- ▶ Video-endoscopic and video stroboscopic examination of larynx
- ▶ Speech therapy

Other services based on the patient's personalised treatment plan include:

- ▶ Diet and nutrition
- ▶ Hand occupational therapy
- ▶ Orthopaedics
- ▶ Physiotherapy
- ▶ Podiatry
- ▶ Psychology



SCAN THE QR CODE TO FIND OUT MORE ABOUT THE OTHER SPECIALISTS

As we look forward to a year of new beginnings, it is good practice to take stock and set goals for enhancing your mental wellness. Mental wellness is all about acting, feeling and thinking in ways that benefit your well-being. It allows you to cope with challenges, be productive in tasks and contribute to those around you.

A good way to do so is by developing our resilience, defined as the ability to adapt well and become stronger after something bad happens. Most of us have a base resilience in what is known as our initial resilience bank. Fortunately, resilience is not a fixed trait, and we can learn to increase our resilience bank.

TAKE ON 2022 WITH RESILIENCE



THE RESILIENCE CHECKUP gives an indication of our starting point, which we can use to track our progression as we practise resilience skills. It is not a diagnostic tool. Try it out — on a scale of 0 to 10, rate how much you believe each of the following statements. A rating of 0 means you do not believe it at all, and 10 means you think it is completely true.

1	I generally feel strong and capable of overcoming my problems.	
2	When I get stressed, I usually bounce back fairly quickly.	
3	I generally function well in the various areas of life: job or school, relationships and play.	
4	I generally stay calm and steady when the going gets tough.	
5	I am generally flexible — if my usual way of doing things isn't working, I readily try something else.	
6	I am in a good mood most of the time.	
7	I think well of myself and like who I am inside.	
8	Difficult times don't change the way I feel about myself.	
9	I believe that if I try my best, things will usually turn out well.	
10	I am good at reaching out and connecting with people.	
11	I usually try to solve my problems, but I know when to bend if something is beyond my control.	
12	I anticipate difficult situations, make a plan and carry out my plan.	
13	I enjoy life and am satisfied with what I am contributing to the world.	
14	I am good at coping with strong negative emotions.	
15	I am good at separating myself from people who get me down or upset me.	
16	I have goals and am optimistic about my future.	
17	I am involved in a variety of activities that I enjoy.	
18	I don't have self-destructive habits.	
19	I feel at peace with myself and my past. I've grown stronger from what I've experienced.	
20	I don't beat myself up when my best efforts don't succeed.	
21	I know when to seek help, and where to find it.	
22	I stay focused and think clearly under pressure. I am persistent, determined and resolved.	

ADD UP YOUR SCORE

WHAT IS YOUR TOTAL SCORE?

A higher score (towards 220) would reflect higher resilience. Consider which statements you would like to focus on to guide you in increasing your resilience skills.

Adopted from Schiraldi G. R. (2017) *The Resilience Workbook: Essential Skills to Recover from Stress, Trauma and Adversity*. Oakland, CA: New Harbinger.



TIPS to stay resilient

Exercise

Exercise enables your body to release endorphins which make you feel positive and uplifted. Studies have also shown that through exercise, the brain receives enough oxygen to help alleviate depression and anxiety.



Communicate and Connect

We may not always be able to meet face-to-face but it is vital to maintain human connections. Make time to do so regularly. Technology can prove useful in reaching out to family and friends.



Pause before Acting

If you are feeling overwhelmed by uncertainties, pause to reflect before jumping into action. It is important to stay grounded and open to feedback when working through challenges.

Focus on the Positives

When we are not in our comfort zone or meet with obstacles in our relationships or work, remember to deploy positive communication, seek help from others where necessary and even pick up new skills along the way.



This article is brought to you by the Department of TRaCS, Changi General Hospital. TRaCS aims to develop greater psychological resilience by empowering people through knowledge and skills; thus, promoting a culture of positive mental wellness in the workplace and community.

CGH PUBLIC FORUM WEBINAR

UNDERSTANDING DELIRIUM : Confusion in elderly



05 MARCH 2022 SAT

10.00 AM – 11.30 AM

PROGRAMME

- 10.00 AM **Opening address**
Clin Asst Prof Ong Pui Sim
Senior Consultant, Department of Psychological Medicine
- 10.05 AM **Understanding the differences between dementia and delirium**
Dr Ooi Chun How
Senior Consultant, Department of Geriatric Medicine
- 10.20 AM **Mood and behavioural disturbances in delirium**
Clin Asst Prof Bharathi Balasundaram
Senior Consultant, Department of Psychological Medicine
- 10.35 AM **Behavioural management in delirium**
Louisa Tan
Senior Clinical Psychologist, Department of Clinical Psychology
- 10.55 AM **Question & answer session**
Moderated by: Clin Asst Prof Ong Pui Sim
- 11.25 AM **Closing remarks**
Clin Asst Prof Bharathi Balasundaram
Senior Consultant, Department of Psychological Medicine



SCAN THIS QR CODE OR VISIT THIS URL TO REGISTER!*

<https://bit.ly/cghpublicforum5march>

*Registration will close when the capacity limit is reached.

INSPIRED

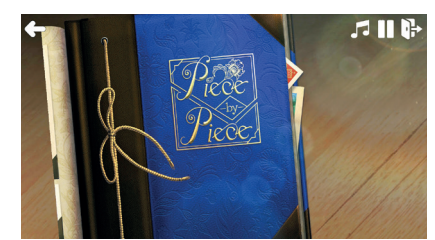


Robots in our care team: CGH Chief Executive Officer Prof Ng Wai Hoe (centre) believes in developing robotics to take on time-consuming, routine tasks so that healthcare can become more humanised.

Piecing memories together

Tangrams are not just a favourite with the young. CGH and the Singapore University of Technology & Design (SUTD) co-created **Piece by Piece**, a mobile game application to stimulate seniors with dementia and engage them meaningfully through reminiscence therapy and technology.

Tangrams with themes based on Singapore's traditions and culture — such as old scenes of kampongs and Samsui women — are designed to evoke memories of Singapore in the old days. Find the Piece by Piece app on the Play Store or App Store.



BWatch-ing over our patients

With the ability to differentiate between blood and other fluids, the Blood WArning Technology with Continuous Haemoglobin (**BWATCH**) device created by CGH and SUTD can continuously monitor any bleeding from wound sites after invasive medical procedures in real time, thus enhancing patient safety. This medical innovation has been validated in a published clinical trial, and patented in Singapore and the United States.

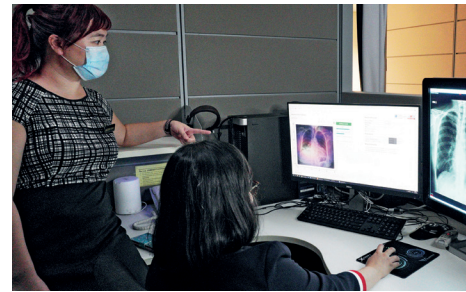
WATCH THE VIDEO ON HOW BWATCH WORKS



Predicting with AI

Using over 3,000 chest X-ray lung images and 200,000 data points to train and test an engine, the CGH care team developed an AI predictive tool to calculate almost instantaneously the risk of pneumonia patients requiring critical care.

The Community Acquired Pneumonia and COVID-19 Artificial Intelligence Predictive Engine (**CAPE**) is able to provide early warnings to doctors before the pneumonia patients are likely to become critically ill, so that they can prescribe the appropriate measures to improve patient outcomes.



A SMART HOSPITAL FOR SUSTAINABLE PATIENT CARE

A round-up of recent healthcare innovations by the CGH team.

New waves of healthcare innovations around the world are being accelerated to meet evolving patient needs. Changi General Hospital (CGH) actively pursues a culture of research and innovation, forging strong partnerships with local and international partners to discover and co-create radical solutions across the entire continuum of care for our community. CGH's areas of focus include medical technology, robotics, clinical research, population health, health services research and translational research. These in turn

leverage areas of strength such as ageing, sports medicine, mental health and rehabilitative medicine. The hospital is also embarking on non-traditional areas of research, as it takes over the care of the Changi Prison community this year, and partners East Coast GRC MP Jessica Tan to develop a dementia-friendly neighbourhood. CGH is not only big on robotics and automation but has also adopted digital technologies — from Artificial Intelligence (AI) to wearable medical devices and telemedicine — to enhance delivery of care and achieve sustainable healthcare. Its team of robots

perform daily tasks such as cleaning and delivery of meals, medical specimens and case notes, and care for patients through robotic therapy, gait assessment, social stimulation and precision medicine.

Check out some of CGH's research and innovations to care for patients from hospital to home:



Hanging out with the bot

The youngest dancer in the hospital is none other than our social robot **Pepper**. It plays a key role in conducting interactive group activities for senior patients at CGH, including those with dementia or delirium, enabling not just cognitive stimulation but also aiding in reducing functional decline.

Customised by the CGH care team to speak various languages, Pepper's wide repertoire of stretching exercises, short dance routines, cognitive stimulation therapy and reminiscence therapy has been well-received by patients. With this good aide, nurses can focus on clinical tasks such as monitoring the participants' physical conditions to provide enhanced patient care.



A 'brake' in medicine delivery

Who would have guessed that a tab could put a stop in medicine delivery for the safety of patients? A CGH pharmacist and an SUTD student devised an additional barrier for a syringe by affixing a series of labelled tabs to the syringe handle mount. Known as **Syringe Brake**, this low-cost flow restrictor device controls the amount of medicine delivered. The innovation was trialled by CGH and other hospitals, and brought to market. Today, it is used in the emergency departments of three hospitals.



Bringing GPFirst — a CGH Initiative — to the Nation

An award-winning framework for advancing care delivery in the community.

Changi General Hospital (CGH)'s GPFirst team clinched the National Clinical Excellence Team Award at the prestigious National Medical Excellence Awards (NMEA) 2021 for its outstanding contributions and achievements in establishing the GPFirst programme, a public-private healthcare partnership that encourages patients to seek treatment with General Practitioners (GPs) for appropriate conditions instead of going to the hospital's Accident & Emergency (A&E) department.

Conferred by the Ministry of Health, the award recognises the efforts of outstanding clinicians and other healthcare professionals for their achievements in advancing healthcare, improving the standards of patient safety and driving research and education, which ultimately improves people's lives.

Right-Siting Care Delivery

The GPFirst programme was the brainchild of a group of CGH clinicians who observed that patients were visiting the A&E for conditions that can be managed by GPs. The GPFirst team developed the patient-centric programme in 2014 to nudge patients with mild to moderate conditions to visit a GP instead.

In right-siting care, the GPFirst team adopted a multi-pronged approach by partnering GPs and engaging the community to shape health-seeking behaviour. This not only reduces the number of non-emergency cases at the A&E, but also allows patients with mild to moderate conditions to seek treatment at GPs in their vicinity for greater convenience and shorter waiting times.

Since its inception, more than 35,000 patients in the East have benefitted from the programme. This was possible because of the strong collaboration with the

network of GP clinics in the eastern region of Singapore that was established over the years. Close to 180 GP clinics have participated in the GPFirst programme, forming a lively ecosystem to provide accessible, holistic and integrated care with better health outcomes for patients.

On the A&E front, there was also a reduction in walk-in attendances by close to 40 per cent, and a 14 per cent drop in the proportion of A&E attendances with mild and moderate conditions from 2014 to 2019. Close to 90 per cent of GPFirst participants rated their overall experience as good or excellent.

"The A&E is meant for serious injuries and emergencies that require immediate attention. Our GPs are well-equipped to care for patients with mild to moderate conditions and can make appropriate assessment if one requires A&E attention," says Clinical Associate Professor Steven

Lim, the programme's director and Senior Consultant, A&E, CGH. "The national award also recognises the efforts of our main partners, the GPs, who have walked alongside us in this care transformation journey. The GPFirst team will continue to play a part in transforming our healthcare landscape, facilitating care shifts beyond the hospital to the community, and expanding the GPFirst programme to more healthcare institutions," says Clinical Associate Professor How Choon How, Senior Consultant, Care and Health Integration, CGH.

The GPFirst Programme has since been expanded nationwide to benefit more patients. To date, Khoo Teck Puat Hospital, National University Hospital, Ng Teng Fong General Hospital, Sengkang General Hospital and Woodlands Health Campus have implemented the programme, and more are expected to roll it out.

To learn more about these conditions, visit www.GPFirst.sg or the [GPFirst Facebook page](#).

OVER 35,000 PATIENTS BENEFITTED FROM THE GPFIRST PROGRAMME

40% REDUCTION IN WALK-IN ATTENDANCES IN THE A&E



Organised by Changi General Hospital (CGH), Changi Run 2022 is the second edition of the virtual running event. Themed "We Dare to Care", it aims to build on the solidarity of the eastern community in Singapore. While daring to care and going beyond to serve our community are the guiding principles of CGH, Covid-19 continues to underscore the urgent need to help vulnerable groups in our society. This virtual event gives us the opportunity to bring people together to celebrate our unique Changi identity while creating a brighter future for those in need.

REGISTER NOW!

<https://wejust.run/changirun2022>



EVENT PERIOD

15 January - 14 March 2022

CATEGORIES

Virtual Run - 50km/100km
Virtual Cycle - 100km/200km

Distance can be completed in multiple sessions

Changi Run 2022 will raise funds and awareness for:



In an emergency, every second counts! The Emergency Medicine Academic Clinical Programme (EMACP) promotes research, innovation and education within the Emergency Medicine speciality that leads to positive outcomes for patients that come to the hospital with life-threatening medical emergencies.



HomeCare Assist (HCA) ensures that needy patients with chronic illnesses or conditions continue to be cared for in their own homes after discharge from hospital. Often, essential consumables and treatment can be a financial strain on low-income families. HCA provides short-term interim assistance for patients for up to six months after their discharge.



Go to a GP for mild to moderate symptoms such as abdominal pain or indigestion, cold/flu, cuts/bruises, fever, headaches, hives, insect bites/stings, mild burns, nausea/vomiting, nosebleeds, sore eyes, strains and sprains.

WHERE TO TURN TO

Go to the hospital emergency departments only for emergencies that could result in serious complications or death, such as strokes, heart attacks and serious injuries.

前往家庭诊所

▶ 轻度至中度的症状, 如腹痛或消化不良、感冒/流感、割伤/擦伤、发烧、头痛、荨麻疹、虫咬/蜇伤、轻度烧伤、恶心/呕吐、流鼻血、眼睛酸痛、拉伤和扭伤。

哪里看诊

前往医院急诊部门

▶ 可能导致严重并发症或死亡的紧急情况, 如中风、心脏病发作和重伤。

将家庭医生首选计划推广全国

樟宜综合医院发起的这项计划(GPFirst)有助于加强社区内的医疗护理生态系统。

樟宜综合医院的家庭医生首选计划(GPFirst)团队在2021年全国医学卓越颁奖典礼上荣获全国卓越医学团队奖, 以表彰其在推出家庭医生首选计划中所做出的突出贡献和取得的成就。

这项公立医院-私立家庭诊所合作计划鼓励患者在适当的情况下首先前往家庭诊所就诊, 而不是直接前往医院挂急诊。该奖项由卫生部颁发, 旨在表彰杰出的临床医生和其他医疗保健专业人员在推进医疗保健、提高患者安全标准以及推动研究和教育从而最终改善人们生活方面所取得的成就。

以适当的方式获得妥善护理

家庭医生首选计划由一群来自樟宜综合医院的临床医生所发起。他们注意到, 很多到医院挂急诊的患者的病情完全能由家庭医生治疗。

为了缓解急诊部门出现非紧急病例的状况, 并优先为病情较重的患者提供紧急护理, 家庭医生首选计划团队在2014年发起了这项以患者为中心的计, 鼓励病情属于轻度到中度的患者去家庭诊所接受治疗。

为了确保患者以适当的方式获得妥善护理, 家庭医生首选计划团队采取了多管齐下的方法, 与家庭诊所合作, 并让社区积极参与, 以鼓励适当的就医行为。这不仅减少了急诊部门非紧急

病例的数量, 还让轻度至中度病症患者可以就近寻求家庭医生的治疗, 获得了更大的便利性, 同时也极大缩短了等待时间。

自该计划推出以来, 东部地区有超过3万5000名患者从中受益。正是由于医院与新加坡东部地区的家庭诊所在多年来展开的强有力合作, 才取得了如此成就。目前有近180个家庭诊所加入了家庭医生首选计划, 形成了一个积极活跃的生态系统, 为患者提供便利、全面与综合的医疗护理服务, 更有效地保障了该区域居民的健康福祉。

在医院急诊部门, 无预约的就诊人数减少了近40%, 挂急诊的轻度至中度病症患者人数比例也下降了14%。参与家庭医生首选计划的患者中有近90%将他们的整体体验评为良好或优秀。家庭医生首选计划目前已在全国范围内推广, 让更多患者受益。

迄今为止, 邱德拔医院、国立大学医院、黄廷方综合医院、盛港综合医院和兀兰医疗保健园均已实施了该计划, 预计还会有更多医院将在不久的将来加入该计划。GPFirst计划已在全国范围内扩展, 以惠及更多患者。迄今为止, 邱德拔医院、国立大学医院、黄廷芳综合医院、盛港综合医院和兀兰医疗保健园已经实施了该计划。

要了解有关这些病情的更多信息, 请浏览 www.GPFirst.sg 或家庭医生首选计划的面簿页面。

OUCH! DOES MY WOUND NEED STITCHES?

If you are bleeding excessively from a nasty gash, see a doctor who will assess your wound based on its location, size and severity, your age, and any comorbidities. Stitching may be done for lacerations longer than 5cm, as the thread helps to hold the skin together, lowers chances of bleeding and infection, and minimises scars.



WHAT HAPPENS IN A STITCHING PROCEDURE?

- 1 Your skin around the laceration will be disinfected with antiseptic.
- 2 Normal saline or water may be used to remove foreign matter and bacteria when there is a high risk of infection.
- 3 Your hair may be trimmed to help with wound visualisation. Current evidence recommends NOT shaving the hair around the laceration as this increases the risk of contamination, as debris may fall into the wound.
- 4 Debris or foreign objects are generally removed by the care team using appropriate equipment to control any possible bleeding.



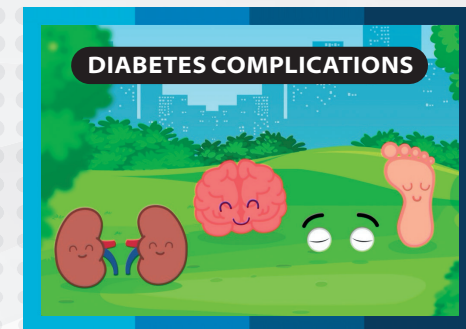
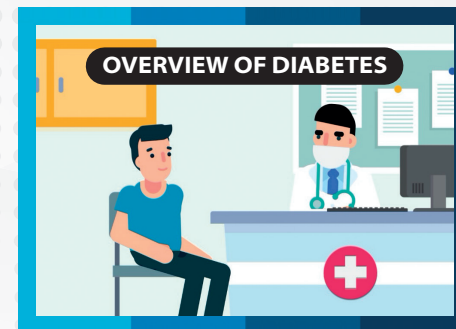
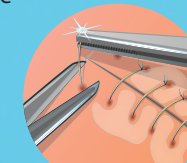
DO I NEED TO TAKE ANTIBIOTICS?

For high-risk (e.g. bite wounds, excessive contamination, immunocompromised state) lacerations with signs of infection, antibiotics may be given. When there are no obvious dirt, infection, or bone or tendon complications, there is no need to take prophylactic antibiotics. Taking antibiotics for uncomplicated lacerations results in increased antimicrobial resistance, and exposure to side-effects, such as vomiting, diarrhoea, loss of appetite and abdominal pain.



HOW DO I CARE FOR MY STITCHES?

- 1 Follow the doctor's instructions on how long you need to keep your wound dry, and whether you need to keep a dressing on.
- 2 It is normal for stitches to cause some redness or itch. Check the wound daily for signs of infection, such as red streaks, increased swelling, pus or pain.
- 3 Clean the wound with clean water. Do not scrub or soak the wound.
- 4 Change your dressing regularly, or if it gets wet or dirty.
- 5 Your doctor will inform you when to have your stitches removed. You may feel a tugging sensation, but it should not hurt.



Understanding Diabetes

DIABETES IS A CONDITION THAT HAPPENS WHEN YOUR BLOOD SUGAR OR GLUCOSE IS HIGH. Learn more about diabetes, including how to manage the condition to prevent complications, in these videos brought to you by Changi General Hospital.

Scan the QR codes to watch the videos and answer the questions below to test your knowledge about diabetes!

1. Which statement best describes type 2 diabetes?
 - (a) Complications arising from type 2 diabetes are less serious than those of type 1 diabetes
 - (b) Insulin is not used to control blood glucose in patients with type 2 diabetes
 - (c) Type 2 diabetes is only diagnosed when the patient is admitted to hospital with a serious illness
 - (d) In addition to medication, diet and exercise can help to control blood glucose levels
2. Which of the following is important in the prevention of diabetes complication?
 - (a) Keeping HbA1c < 7%
 - (b) Keeping cholesterol and blood pressure under control
 - (c) Quitting smoking
 - (d) All of the above



Email your answers to caring@cggh.com.sg by 28 February 2022. Five selected readers stand to receive a token of appreciation.

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