



Changi  
General Hospital  

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SingHealth

# ANNUAL REPORT

# 20

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SPORT & EXERCISE  
MEDICINE (SEM)

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## MESSAGE FROM CHIEF SEM

2020 has been nothing short of unprecedented due to the COVID-19 pandemic, leaving an indelible mark on the healthcare industry worldwide. The crisis forced us to relook our approach to healthcare, including Sport & Exercise Medicine (SEM).

Travel restrictions and quarantine requirements accelerated the shift to telemedicine, despite physical examination forming the bulk of the SEM consultation. Our sports physiotherapists and clinical exercise physiologists also began to supervise rehabilitation and exercise remotely.

Our surveys confirmed that while those who were physically very active pre-pandemic remained just as active or even more so during the pandemic, physical activity levels fell for the bulk of the population, including those with chronic medical conditions. To address this, we doubled up on our efforts to promote physical activity among the general population and healthcare workers.

To provide more sport-specific and dedicated care to our national athletes, SSMC@SSI implemented a new model of care where each sport is assigned a dedicated care team, led by a physiotherapist. The mandatory biennial pre-participation screening process for our national athletes has also been streamlined.

As we reinvent the delivery of SEM, one thing that has not changed is our mission of integrating SEM into the overall healthcare framework, and our vision of developing into an internationally renowned Sport & Exercise Medicine (SEM) Centre.

Yours sincerely,



**Adjunct Associate Professor  
Benedict Tan**  
Chief, CGH Sport & Exercise Medicine  
Head, SingHealth Duke-NUS  
Sport & Exercise Medicine Centre

# MILESTONES

02

## 2000

**2004**  
CSMC introduced the Extracorporeal Shockwave Therapy for muscle-tendon pathologies – a first in the public healthcare system.

**2007**  
CSMC became the first accredited centre for Sports Medicine Advanced Specialist Training in Singapore.

**2011**  
CGH inked a MOU with SAF to collaborate in Sports Medicine.  
  
CSMC launched Exercise is Medicine Singapore with American College of Sports Medicine.

**2017**  
The War on Diabetes Health Peers Programme was launched and awarded the Prime Minister's Community Initiative Award.  
  
CGH signed a MOU with SportSG to collaborate in the Active Health initiative.  
  
CGH SEM trained over 2,500 MOE teachers in youth sports injury management.  
  
**2015**  
CGH SEM started training all SAF medical officers and SingHealth Family Medicine Residents in exercise prescription.

**2019**  
Expansion of SEM across SingHealth via central employment of SEM Advanced Specialist Training and Physicians.  
  
CGH SEM launched a sports clinic at Singapore Sport Institute and 2 SEM services at SGH and SKH.

## 2020

2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020

**2000**  
CGH ran a sports clinic once a week.

**2003**  
CGH launched the Changi Sports Medicine Centre (CSMC).

**2006**  
Singapore Sports Medicine Centre (SSMC) was established.

**2008**  
CGH SEM developed a training and career track for Resident Physicians (Sports Medicine).

**2012**  
CGH partnered with Singapore Sports Institute to provide Sports Medicine care for national athletes.

**2016**  
CGH SEM's research on sailing injuries and illnesses was published in the British Journal of Sports Medicine.

CGH and Lee Kong Chian School of Medicine launched the Graduate Diploma in Sports Medicine – the first and only in Singapore and Asia.

**2018**  
SingHealth Duke-NUS Sport & Exercise Medicine Centre (SDSC) was launched.

**2020**  
Telemedicine was first adopted at SSMC@SSI to support our national athletes during the COVID-19 circuit breaker.



SingHealth **DukeNUS**  
ACADEMIC MEDICAL CENTRE

**Sport & Exercise  
Medicine Centre**





# 2020

## A YEAR IN REVIEW





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# CLINICAL EXCELLENCE

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# EFFORTS DURING COVID-19

## OUR STRENGTH IN DIVERSITY

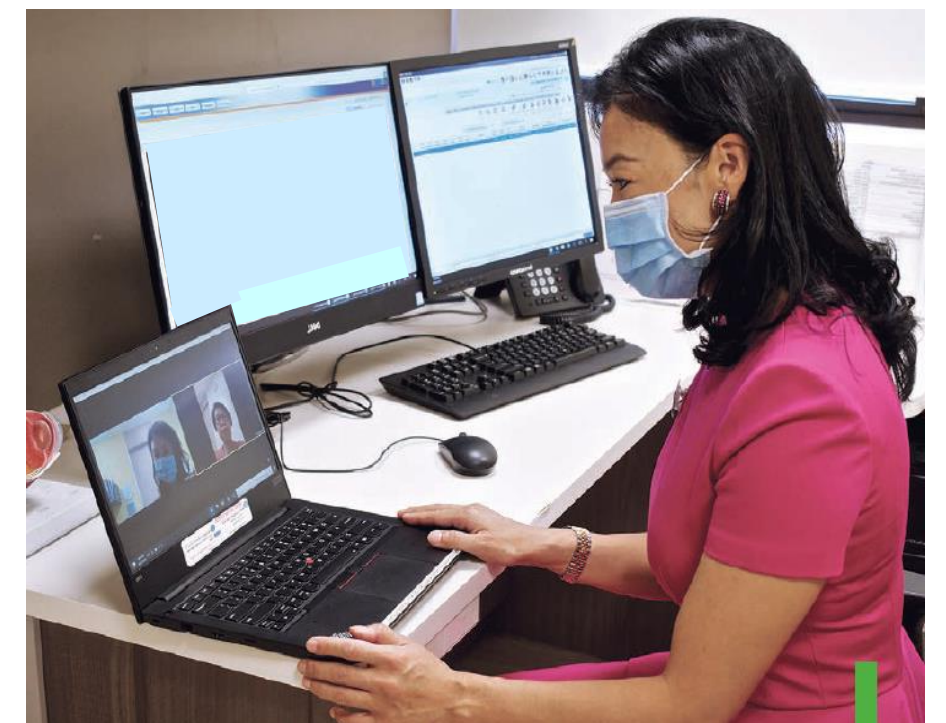
At the height of our efforts against COVID-19, several of our SEM doctors were deployed to the frontline to the foreign worker dormitories and A&E during Dorscon Orange, including our nurses who provided COVID-19 vaccination support and our Allied Health colleagues who supported with swabbing and contact tracing.

## PRIORITISING STAFF SAFETY & PATIENT CARE

In response to the COVID-19 outbreak, safety management and disposition protocols in SSMC@SSI were set in place following best practices by SingHealth. Care efforts were coordinated through athlete screening, staff segregation and safe distancing measures within the clinic. Additional resources were also introduced to continue providing athletes with the necessary care such as Telemedicine.

SSMC@SSI saw a total of 656 Telemedicine sessions during the temporary closure of the clinic in view of the circuit breaker to allow our athletes to continue receiving physiotherapy care remotely. Athletes with acute conditions were also given the access to seek medical treatment at SSMC@Novena.

Our team of practitioners at SSMC@SSI operate across a wide variety of performance sports. SSMC@SSI introduced a new service model of care where the physiotherapists take on designated team lead roles to oversee the individual needs of the athletes. A rolling system for medical screenings was implemented in October 2020 to ensure the validity of the athletes' health status, in addition to being medically fit for competitive sport.







# RESEARCH & INNOVATION



# RESEARCH

## COLLABORATION WITH Ngee ANN POLYTECHNIC SCHOOL OF HEALTH SCIENCES

Exercise Is Medicine Singapore (EIMS) worked again with Ngee Ann Polytechnic School of Health Sciences for the Final Year Project for their Nursing students where we continued on the good work done by the previous cohort in 2019 in investigating the physical activity behaviours of nursing students.

In 2020, we looked at the physical activity levels of Nursing School staff and examined the barriers to physical activities experienced by those who do not meet the recommended 150 minutes of moderate-intensity physical activity every week.

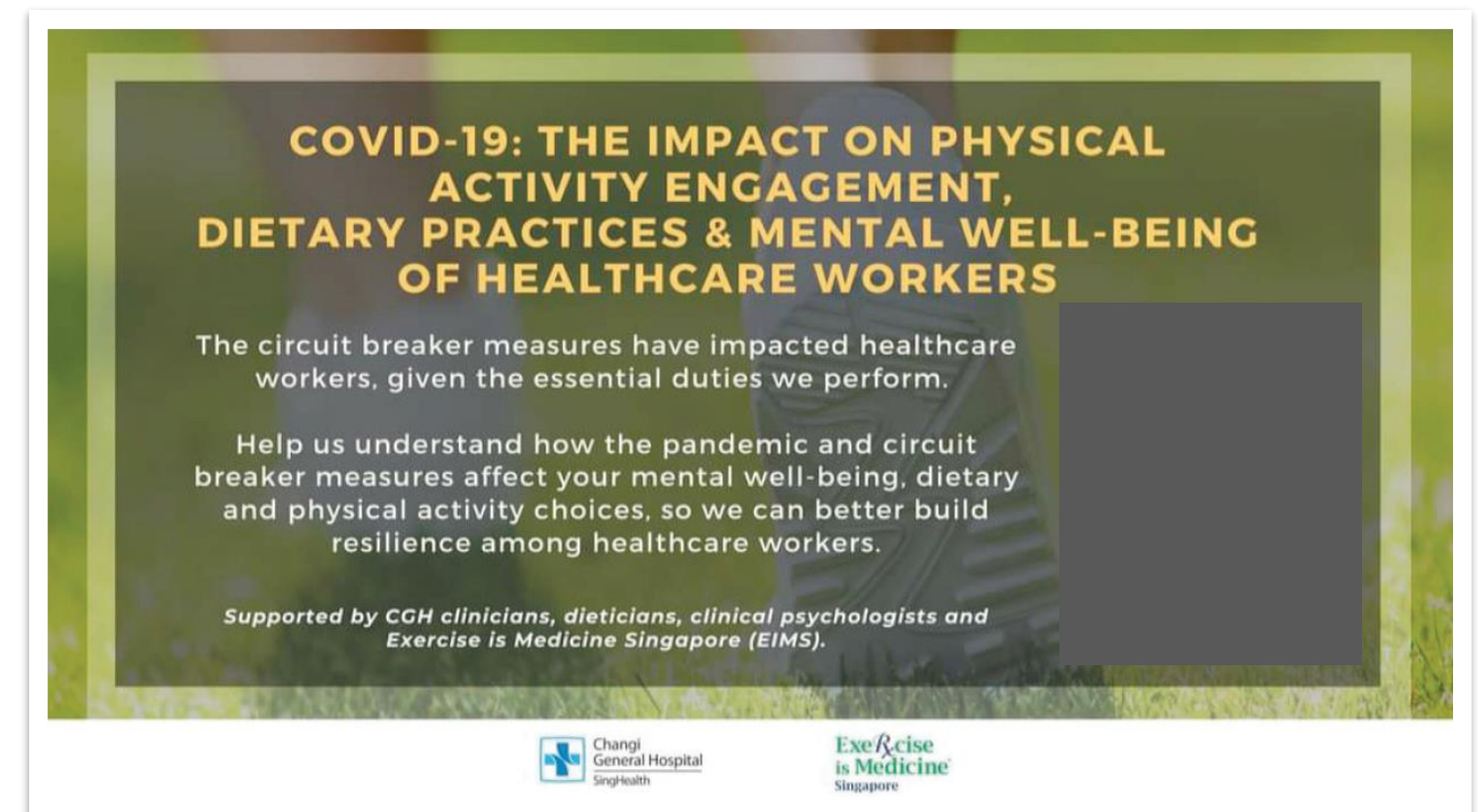
The students explored different facets of this interesting topic, with studies ranging from "Exploring physical activity levels among faculty and staff in a local polytechnic" to "Predictors and barriers of physical activity among faculty and staff of Ngee Ann Polytechnic in Singapore".



## RESEARCH ON PREFERENCES REGARDING DIGITAL HOME TRAINING PROGRAMS DURING CONFINEMENTS ASSOCIATED WITH THE COVID-19 PANDEMIC

Dr Benedict Tan and Dr Mandy Zhang were involved in the ASAP (Activity and health during the SARS-CoV-2 pandemic) multinational survey performed in 14 countries, including Singapore. The aim of the study was to examine individual preferences towards digital home exercise programmes during the COVID-19 pandemic.

## THE IMPACT OF 'CIRCUIT BREAKER' IN SINGAPORE ON PHYSICAL ACTIVITY ENGAGEMENT, DIETARY PRACTICES AND MENTAL WELL-BEING OF HEALTHCARE WORKERS IN SINGHEALTH INSTITUTIONS IN SINGAPORE



Dr Fadzil Hamzah led a multi-disciplinary team comprising a dietitian, a clinical psychologist and a clinician scientist, that conducted a prospective cross-sectional survey to investigate the exercise and diet habits, and mental wellbeing of healthcare workers in SingHealth institutions during the lockdown in Singapore. The preliminary findings of the survey were presented during the EIM Asia Regional Meeting on 11 July 2020. They were also documented in 2 research manuscripts which have been submitted for publication.



## COMMENTARY [ARTICLE]

### Impact of COVID-19: Perspectives from Sport and Exercise Medicine

*Published at the Annals, Academy of Medicine, Singapore, October 2020*

*By Dr Mandy Zhang, Dr Joshua Li, Dr Kelvin Chew, Dr Dinesh Sirisena*

The coronavirus disease 2019 (COVID-19) pandemic is a global crisis that has resulted in much of the world being placed on lockdown to limit the spread of the virus. The lockdown potentially sets back progress made by the local population and may trigger unhealthy eating habits, such as irregular meal times, snacking, increased alcohol consumption and stress eating. The article suggests that COVID-19 is more severe in individuals with diabetes, hypertension and obesity. Thus, it is imperative that despite the lockdown, patients with chronic medical conditions maintain physical activity and optimise disease control.

The pandemic also poses challenges for competitive athletes who aim to peak at certain races, or within a specific period, through the intricate science of periodisation to optimise performance. The article suggests the disruption of training programs and closure of sports and recreational facilities will inevitably lead to a degree of physical deconditioning, and psychologically, there could have been grief, stress and frustration, compounded by the removal of social support networks and training routines. Thus, it is important for sports psychologists and SEM practitioners to be cognizant of this and work together to maintain the physical and mental well-being of athletes.







# EDUCATION



# CONFERENCES & MEETINGS

## 66<sup>TH</sup> MYANMAR MEDICAL CONFERENCE

In conjunction with the 66th Myanmar Medical Conference that took place from 18th to 22 Jan 2020, the Myanmar Sports and Physical Education Department, under the Ministry of Health and Sports Myanmar umbrella organised a one-day Sports Science and Sports Medicine Conference on 22 January 2020 in Yangon, Myanmar.

Dr Benedict Tan was invited to share on the “Development of EIM Exercise Prescription Certification Course for Fitness Professionals” and presented evidence on the importance of Exercise Prescription, logging of Physical Activity as a Vital Sign (PAVS) into patients’ clinical notes, as well as success stories from EIM Singapore on planning and organising Exercise Prescription courses in Singapore.



## EXERCISE IS MEDICINE (EIM) ASIA REGIONAL VIRTUAL MEETING



The 4th EIM Asia Regional Meeting was held on 11 July 2020 online, a first for the meeting. The event was graced by American College of Sports Medicine President Dr Nicole R. Keith, EIM Vice-President Ms Robyn M Stuhr, and EIM Programme Officer Prof Mark Stoutenberg, who were participating from the other side of the world in USA.

- ◀ Dr Ng Chung Sien and Dr Fadzil Hamzah represented EIMS in presenting on ‘Positioning EIM post COVID-19’. Dr Ivy Lim also facilitated a roundtable discussion on ‘Adaptation and initiatives to thrive in the post COVID-19 new normal’.



Prof Benedict Tan receiving a token of appreciation at the 66<sup>th</sup> Myanmar Medical Conference







# COMMUNITY PROGRAMMES



# COMMUNITY OUTREACH

## WORLD DIABETES DAY WITH DIABETES SINGAPORE

EIMS celebrated World Diabetes Day 2019 at Ng Teng Fong General Hospital on November 21, 2019, supporting a public engagement event organised by Diabetes Singapore. Dr Fadzil Hamzah shared tips on ageing actively and healthily with diabetes during a 45-minute lecture-cum-interactive session with more than 200 attendees.

### Webinar with Diabetes Singapore – Living with Diabetes amidst COVID-19

Dr Fadzil Hamzah and other medical experts from various institutions shared valuable information on how COVID-19 could potentially affect people with diabetes, and how patients could still keep themselves and their loved ones fit and healthy during the pandemic. The public webinar was hosted by Diabetes Singapore and supported by Roche Diabetes Care as well as EIMS.



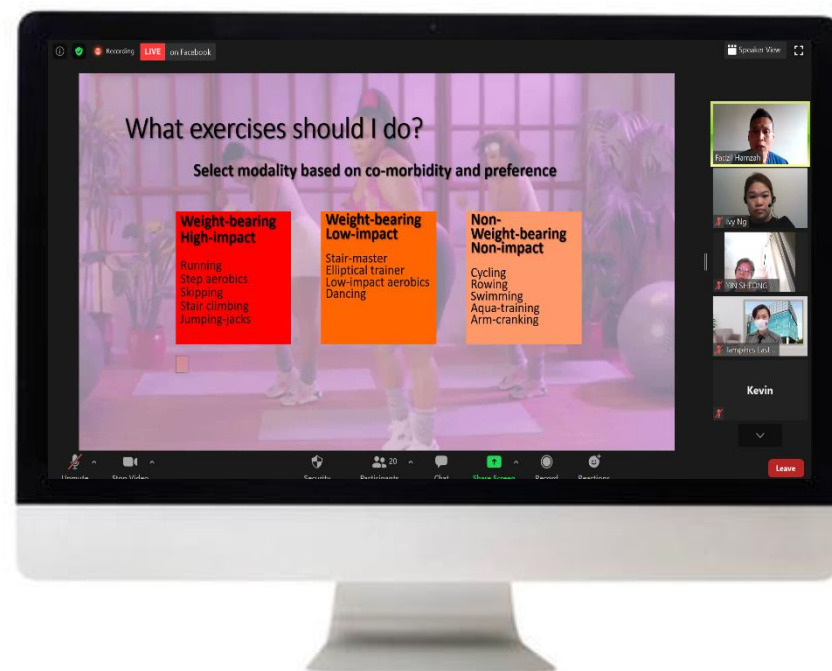
## PESTA MAKMUR @ ALJUNIED

Dr Fadzil Hamzah, also the Healthcare Committee lead for M<sup>3</sup> @Bedok was one of the panelists for a public health forum at Pesta Makmur @ Aljunied GRC 2019.

The community engagement event was organised by Kaki Bukit MAEC and supported by Changi General Hospital, Exercise is Medicine Singapore as well as M<sup>3</sup>, an alliance of three key Malay/Muslim organisations (MUIS, MENDAKI and MESRA/MAEC). The event aimed to promote health and physical activity as well as family bonding in the community through health and motivational talks, cooking demonstrations, cultural performances as well as fun and games, and was attended by more than 200 participants.



# COMMUNITY OUTREACH



## EIMS x PEOPLE ASSOCIATION FIT & WELL PROGRAMME

The pandemic has increased the need to connect digitally. To safely engage and motivate the community in making positive changes to their health and fitness during this challenging period, Singapore Sport and Exercise Medicine Centre at Changi General Hospital (SSMC@CGH), together with Tampines East Community Club co-organised a 12-week online fitness programme for the public. Led by Dr Fadzil Hamzah, the initiative was supported by EIMS and People's Association (PA).

## ExPRO FITNESS CONVENTION SINGAPORE

EIMS was proud to be a partner in ExPRO Virtual 2020, the first and only virtual fitness conference in Singapore.

Dr Fadzil Hamzah, together with Mr Seishen Ratnagopal, were invited to be the guest speakers for a 3-day event from 24 to 26 September 2020. Together, they presented a 60-minute webinar titled "Beyond Healthcare to Health: The Value of an Exercise Prescription in Chronic Disease Management", followed by a live 30-minute online interactive session with the attendees. In addition, Dr Fadzil was invited as a forum panelist alongside 3 other international health and fitness experts, where they engaged in an insightful discussion on "Healthcare and Fitness: The New Start Up".



▲ Dr Fadzil and Mr Seishen delivered a similar online webinar titled "Integrating Health and Fitness in Healthcare Following The COVID-19 Pandemic" on 29 May 2020.



# PUBLIC EVENTS

## SUNDOWN MARATHON 2020 WEBINAR SERIES

Sundown's webinar series began in 2020 to educate participants with the right set of tips for their virtual runs. The first season of the webinar, helmed by Sundown Marathon's Ambassador, Dr Benedict Tan was well-received by the Sundown community. Dr Joshua Li also co-participated in the webinar as a speaker on the topic "Running Economy: Improve Your Running Gait to Last the Distance".

## INJURY PREVENTION FOR DANCERS WEBINAR

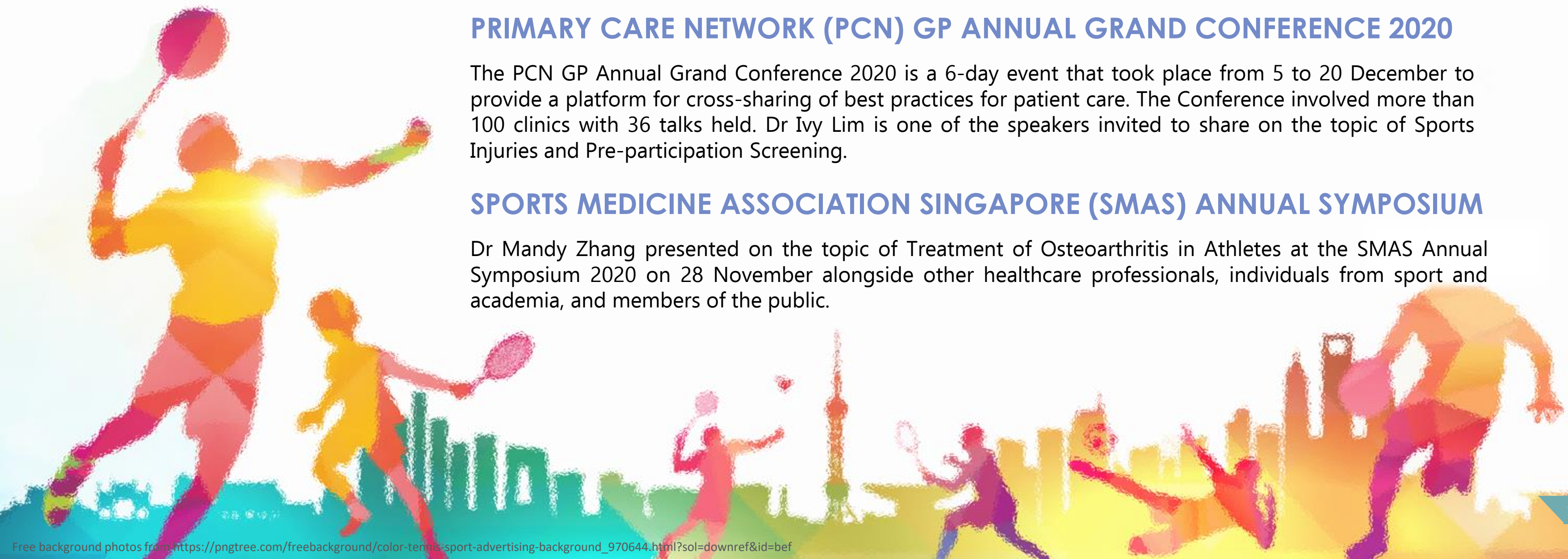
Dr Mandy Zhang presented on the topic of Injury Prevention for Dancers at LASALLE College of the Arts and \*SCAPEdance Science Programme. She also shared the knowledge and raised awareness on the different types of footwear and the importance of dancing with the right type of flooring.

## PRIMARY CARE NETWORK (PCN) GP ANNUAL GRAND CONFERENCE 2020

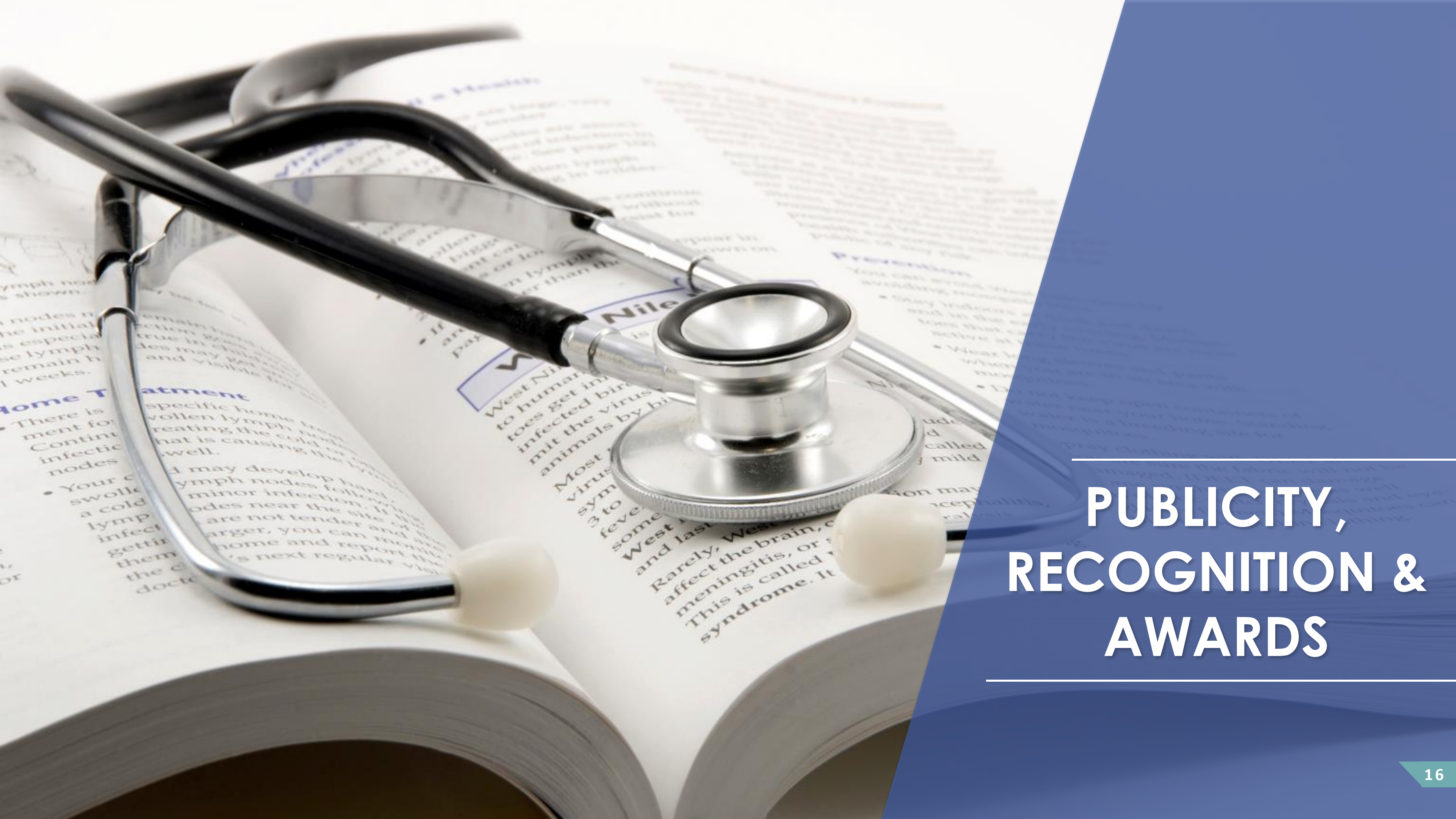
The PCN GP Annual Grand Conference 2020 is a 6-day event that took place from 5 to 20 December to provide a platform for cross-sharing of best practices for patient care. The Conference involved more than 100 clinics with 36 talks held. Dr Ivy Lim is one of the speakers invited to share on the topic of Sports Injuries and Pre-participation Screening.

## SPORTS MEDICINE ASSOCIATION SINGAPORE (SMAS) ANNUAL SYMPOSIUM

Dr Mandy Zhang presented on the topic of Treatment of Osteoarthritis in Athletes at the SMAS Annual Symposium 2020 on 28 November alongside other healthcare professionals, individuals from sport and academia, and members of the public.







# PUBLICITY, RECOGNITION & AWARDS



# MEDIA OUTREACH

SEM aims to increase public awareness on the benefits of physical activity. As more people incorporate exercise into their lifestyle and the number of sports-related injuries increase over the years, our SEM physicians' opinions are increasingly sought by various media outlets, such as newspaper, magazine, radio, and online platforms to educate the public on the field of SEM.

## Participation in Print & Online Media

Topic	Print/Online	Contributor
Advisory on visiting our elderly folks with the lifting of circuit breaker	Berita Harian	Dr Fadzil Hamzah
Healthy running habits to prevent ankle injuries	Lianhe Zaobao	Dr Joshua Li
CGH doctor answers reader's query on minimising running injuries	Lianhe Zaobao	Dr Joshua Li
Extracorporeal Shockwave Therapy	SingHealth Defining Medicine	Dr Lim Ang Tee
Treating common sports overused injuries in the primary setting	SingHealth Defining Medicine	Dr Ivy Lim
Concept of 'Exercise is Medicine'	Lianhe Zaobao	Dr Ivy Lim
Exercise for Cancer Patients	Lianhe Zaobao	Dr Lim Ang Tee
Expert tips on how to stay safe in the gym, yoga studio and swimming pool	CNA Lifestyle	Dr Mandy Zhang
How to restart your fitness during Phase 2	CNA Lifestyle	Dr Benedict Tan
'Like to jog or wear heels? Here's why you should take sprained ankles seriously	CNA Lifestyle	Dr Joshua Li
Benefits of walking	CNA Lifestyle	Dr Benedict Tan
Exercising at home	Yahoo News	Dr Fadzil Hamzah

Topic	Media	Contributor
Exercising in Ramadan	Radio Warna 94.2FM	Dr Fadzil Hamzah
New Role of Dr Benedict Tan - Medical and Scientific Commission of IOC & Role of Sports Physicians at International Sporting Events	Radio CNA 93.8	Dr Benedict Tan
Exercising to relieve stress could do harm in long run without enough recovery time or a balanced lifestyle	Radio CNA 93.8	Dr Mandy Zhang
Home based sport injuries	TV Ch8	Dr Ivy Lim
Filming of Body & Soul (Season 8)	TV Ch5	Dr Ng Chung Sien



# RECOGNITION AND AWARDS

## SINGAPORE HEALTH QUALITY SERVICE AWARDS (SHQSA) – COVID-19 HEALTHCARE HEROES

Organised by the SingHealth Duke-NUS Academic Medical Centre, the SHQSA is a nation-wide award to recognise and celebrate the exemplary efforts of healthcare professionals in improving patient experience. The award recipients were selected based on stringent criteria including testimonials from patients and colleagues of acts that demonstrated going the extra mile as well as the number of compliments and service awards received.

In 2021, SHQSA featured a Special Edition of the awards in celebration of the unity in the fight against COVID-19. This award aims to honour outstanding individuals and teams who have contributed significantly in the nation's fight against the COVID-19 pandemic. We are pleased to announce that a total of 28 staff from CGH Sport & Exercise Medicine Department received the award at the SHQSA 2021.

Congratulations to the award recipients!



Name of Award Recipients	Designation
Dr Ivy Lim	Consultant
Dr Ng Chung Sien	Senior Staff Registrar
Dr Lim Baoying	Registrar
Dr Li Zhongyi, Joshua	Registrar
Dr Suriya Prakaash	Registrar
Elaine Gomez	Senior Principal Physiotherapist
Lim Hui Yin	Senior Physiotherapist
Deon Tan Di Yong	Physiotherapist
Muhammad Fauzan Bin Surono	Physiotherapist
Suelyn Chan Ai Sim	Physiotherapist
Ho Jiaying	Physiotherapist
Megan Li Wai Ming	Physiotherapist
Teo Choon Chye	Senior Exercise Physiologist
Seishen Ratnogopal	Exercise Physiologist
Chua Kian Hao Ferdinand	Exercise Physiologist
Kan Wei Huat	Exercise Physiologist
Hoi Chuan Kiat David	Exercise Physiologist
Yeo Kai Ting, Miko	Dietitian
Goh Qiu Le	Dietitian
Nicole Niam Ming Ya	Podiatrist
Eric Huynh	Podiatrist
Santhi d/o Palani Anandan	Nurse Clinician
Mang Lun Cing	Staff Nurse
Kishaa Gowri Chandra Sekran	Senior Patient Service Associate
Tan Chou Ya	Senior Patient Service Associate
Loo Chuan Ing	Assistant Director
Mervyn Lau Ee Peng	Executive
Joann Christopher	Executive





# CGH SPORT & EXERCISE MEDICINE: AT A GLANCE



# CGH SPORT & EXERCISE MEDICINE: AT A GLANCE

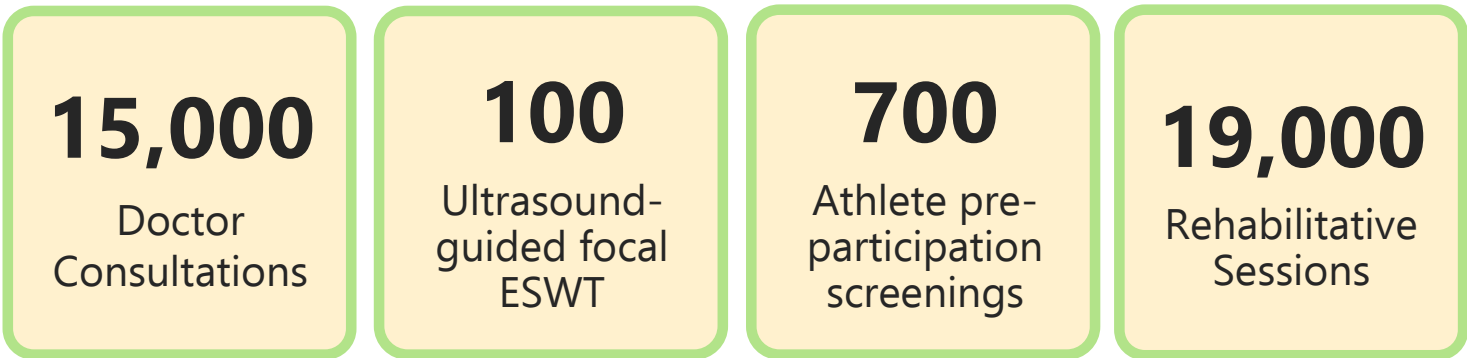
## SINGAPORE'S LARGEST SPORTS MEDICINE CENTRE

CGH's SEM department runs SSMC@CGH, SSMC@Novena and SSMC@SSI located at Singapore Sports Hub.

SSMC@CGH is the largest SEM Centre in Singapore, and the only one with a hydrotherapy pool; SSMC@SSI is the premier institution for elite sports; and SSMC@Novena is the most comprehensive in the private sector. All three Centres have a combined footprint of more than 19,000 sqft., an increase from 13,000 sqft. in 2018.

In 2019, CGH SEM expanded its footprint across SingHealth to Singapore General Hospital (SGH) and Sengkang General Hospital (SKH) with the aim to improve accessibility and provide seamless patient-centric care.

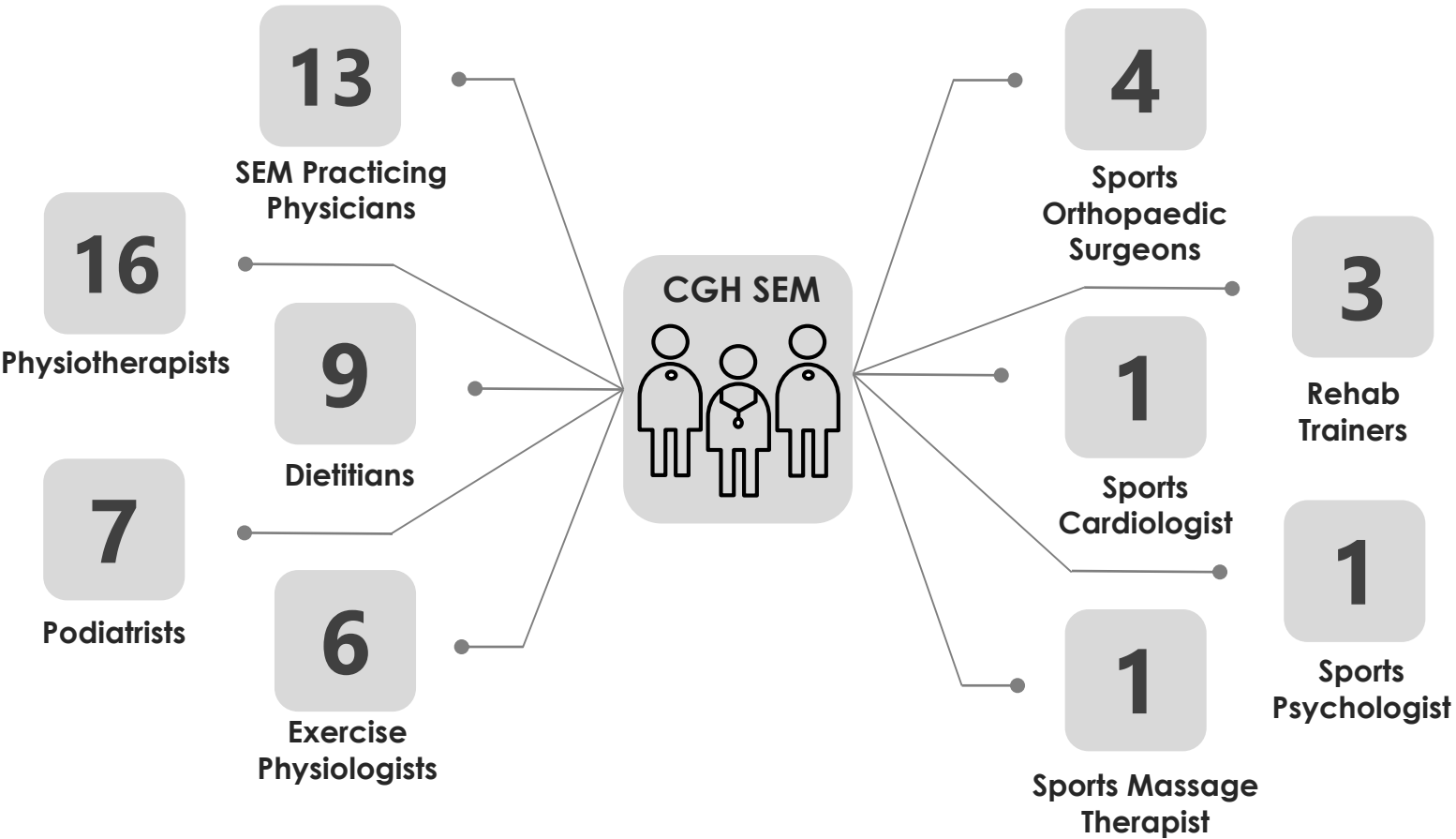
In 2020, SSMC at CGH, Novena, and SSI, together with the SEM Services at SGH and SKH saw over:



## A MULTIDISCIPLINARY SEM TEAM

CGH SEM has the largest headcount among SEM providers in Singapore, with 13 full-time physicians practising Sport and Exercise Medicine, 48 Allied Health Professionals, 8 Nurses and 24 Patient Service Associates/Administrative staff.

All Centres and SEM services have a multi-disciplinary team under one roof, providing patients an integrated, seamless Sports Medicine care.





# A CENTRE OF LEARNING

1

SSMC@CGH is the first accredited centre for Sports Medicine Advanced Specialist Training (SpMed ASTs) in Singapore.

CGH SEM has the largest number of 6 accredited supervisors and training positions for SpMed AST. We currently account for 75% of the trainees in Singapore.

6

30

Since 2012, SSMC@CGH has trained over 30 medical officers.

SSMC@CGH has provided over 400 attachments and observerships.

400

1,300

CGH physicians have trained over 1,300 local and international physicians, allied healthcare and fitness professionals in exercise prescription.

CGH SEM physicians serve as lecturers or supervisors to medical students from institutes such as Duke-NUS Medical School, Lee Kong Chian School of Medicine, SingHealth (Family Medicine Residency Programme), Yong Loo Lin School of Medicine, Nanyang Polytechnic and others.



Photo: Nanyang Technological University (NTU)







## SUPPORTING OUR ATHLETES & THE SPORTS ECO-SYSTEM

1

CGH SEM works with sports institutions such as the Football Association of Singapore and Sport Singapore, to provide athletes quality-assured and timely Sports Medicine care at SSMC@CGH, SSMC@Novena and SSMC@SSI.

2

CGH SEM provides medical coverage for major competitions and events such as ONE Fighting Championship, FORMULA 1™ Singapore Grand Prix, World University Floorball Championships, and others.

3

CGH physicians are appointed as members of international medical commissions, including the Federation Internationale de L'Automobile, World Sailing, Fencing Confederation of Asia, and Asia Rugby.

4

CGH physicians support Team Singapore as Chief Medical Officers or as part of the medical team for major games, including the ASEAN Para Games, Commonwealth Games, Olympic Games, Paralympic Games, SEA Games, Special Olympics World Games, and Youth Olympic Games.

5

CGH physicians sit in committees of National Sports Associations and other organisations such as the Football Association of Singapore, National Sports Safety, Singapore Bowling Federation, Singapore Disability Sports Council, Singapore Ice Skating Association, Singapore National Paralympic Council, Singapore Rugby Union, Singapore Sailing and more.



# THE SSMC TEAM

As a multi-disciplinary field, SEM recognises the importance of having a cohesive and collaborative team for vibrant and efficient partnerships. Thus, in CGH SEM, we have the following platforms to promote effective communication:

- Monthly multidisciplinary rounds for clinical sharing;
- Bi-monthly leadership meetings, where leaders across disciplines (e.g. SEM, physiotherapy, exercise physiology, nursing, podiatry, dietitian, operation, administration) discuss clinical and operational matters;
- Bi-monthly town hall, for discussion and updates to all team members and stakeholders across disciplines;
- Quarterly SEM Directors' meeting for strategic planning;
- Quarterly SingHealth Duke-NUS Sport and Exercise Medicine Centre EXCO meeting;
- Annual Strategic Planning Meeting where leaders discuss future strategic directions and plans, and;
- Team bonding activities, such as annual team building day, festive celebrations and gatherings.





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