

By Dr Cormac O'Muircheartaigh



Olympic and Paralympic Games

The gathering of the great tribes of the world on the battlefield of sport has just ended.

Over the last four years, the Chiefs of these great tribes have trained and chosen their finest warriors to represent their country on the playing field. The warriors stood side by side, ready to compete and display their speed, strength and skill in pursuit of victory and with it, the right to call themselves true champions. For some, the victory is in being the last man or woman standing. For others it is about finishing the race. The battlefield chosen for the latest edition of this quadrennial event was the ancient walled city of Beijing, China. The epic battle raged for a total of 28 days, spread over two separate time periods in August and September in the year 2008 AD.

It was my privilege to be present to witness the warriors in combat first-hand and to report on the amazing physical and mental feats that they accomplished.

Let me introduce myself – I am Dr Cormac O'Muircheartaigh and it has been my honour and privilege to help look after the Singapore athletes over the last four years. I am a Sports Physician based with the Singapore Sports Council (SSC) and currently have a dual role as the (Acting) Medical Director.

I am a part of a multidisciplinary team entrusted with the primary task of preparing Singapore athletes to compete at an elite international level. This team incorporates 20 Sports Medicine (SM) professionals, including Sports Physicians, Sports Physiotherapists, Sports Trainers, Physiotherapy Assistants, Nursing and Administrative staff.

25 Sports Science (SS) professionals in Exercise Physiology, Nutrition, Strength and Conditioning, Biomechanics and Sports Psychology also form part of the team. If you add in the part-time SM and SS staff (29) and the rest of the High Performance division (32), you have a team of over 100 personnel committed towards ensuring that sports excellence continues to reach new heights in Singapore.

The clinical support model that we use in SSC is an 'Athlete-Centred, Coach-Driven' one. This model is very simple to follow, once you have understood the undeniable fact that it is the athlete who has to perform. The support structures exist to allow the athlete to perform at his optimal level and the coach is the key driver of this support structure.

In collaboration with the respective National Sports Association (NSA) High Performance personnel, the SSC's Sports Medicine and Sports Science (SMSS) division provides support services to individual athletes and teams to optimise performance. This is structured through targeted multidisciplinary teams across all facets of SMSS to achieve pre-determined goals throughout an Olympic cycle. One of the critical factors in structuring these services is the role of an SMSS Coordinator to each individual Olympic sport. This role involves coordinating all aspects of service provision; from the planning stage to implementation strategies during the initial qualification stage and into the competition stage.

For Sports Medicine, our main tasks are to perform annual medical clearance examinations, annual sport-specific musculoskeletal assessments, implement targeted sport-specific injury prevention

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programmes, provide educational information on areas such as Anti-Doping and Coach education, and designing a sport-specific SMSS curriculum to monitor developmental phases of individual athletes as they progress from junior to regional to international level competition. The aim is to optimise performance while maintaining health.

For elite level athletes this can be a difficult balance to attain, but as a medical professional, the health and safety of an athlete always takes ultimate priority. By the very nature of sport, athletes do get injured and at present, the majority of my day-to-day responsibility involves injury diagnosis and management. The objective is to return an athlete to sport as soon as possible and as safely as possible, with a view on how this may impact their short and long-term sporting career and life afterwards. The decision on when to allow an athlete to return to his sport involves coordinated discussions involving the athlete, coach, High-Performance manager and all service personnel in SMSS, revolving around the competition and training plans. It is this daily interaction with the respective coaches, athletes, fellow sports science and medical professionals – all of whom have their own experience and knowledge to impart – that continues to form part of my own personal development and makes my job so rewarding.

The Sports Medicine coverage of athletes involves three main areas of focus:

- SSC Clinic sessions based at the Sports Medicine & Research Centre in SSC;
- on-site coverage at training venues and
- overseas coverage for centralised training and competition.

CLINIC SESSIONS:

The traditional way to manage athletes is to have them come in for review in a clinical setting. This is ideal for the initial diagnosis of acute and chronic injuries, for arranging investigations and for the initial period of rehabilitation. Services offered are comprehensive and tailored to the sport/athlete involved. This includes a tissue diagnosis by a sports physician/ doctor, functional diagnosis by a physiotherapist after which a rehabilitation programme and a return-to-sport plan will be developed for the athlete. During this relative rest period, the athlete will work closely with the coach to strengthen and optimise key areas in the athlete's performance such as cardiovascular fitness, strength, psychological preparation and so on. An elite athlete is rarely allowed the luxury of rest as there are always areas that can be improved,



Theresa Goh congratulating Yip Pin Xiu on winning her first medal at the Paralympics

and the down-time during recovery from injury is often the best time to work on these areas.

ON-SITE COVERAGE:

In the last few years, there has been more focus on providing services during training sessions. This is the ideal opportunity to implement measures such as changing a warm-up routine to include preventive exercises or correcting technique errors that may lead to injury. Observing all aspects of recovery from cool-down routines to nutritional strategies may entail having a physiotherapist or sports trainer away from the clinic setting on average 20-25% of the time to provide support on-site.

OVERSEAS COVERAGE:

The final area of focus for coverage is during overseas competition. Medical personnel such as a sports physician/ doctor, physiotherapist or sports trainer accompany the team for all overseas competitions over the Olympic qualification period. For example, Sailing had a sports physiotherapist traveling with the Olympic squad at every training camp and competition over the last 18 months in the lead up to the Olympic Games. At targeted times, such as at Olympic qualification events, a sports physician/ doctor, a sports psychologist and a biomechanist were also flown in to provide support services.

While the time and personnel commitment involved in this is often overlooked, the personal and professional development opportunities that come with these assignments far outweigh the former. The opportunity to meet up with fellow sports medicine professionals from countries across different continents, to observe and discuss current best practices and to learn from each other is incredible. From a medical perspective, most professionals remain very open to imparting their knowledge and experience to help an athlete return to sport. This willingness to share is commendable, especially as the performance stakes are extremely high, but it reaffirms the fact that most service providers remain true to their professional calling and are willing to help.

Along similar principles, Sports Science researches are becoming less laboratory-based – today most studies are done in a ‘field’ setting. The ability to monitor, test and directly intervene during a training session or competition is the true essence of high performance sport.

From a personal perspective, I was involved with medical service provision to the Ireland team prior to the Athens Olympic Games in 2004. I have been with the SSC since the start of the Beijing 2008 Olympic cycle and I have thoroughly enjoyed coordinating and providing medical

services to the elite and developmental athletes over this period. The sports that I have grown up with and athletes I managed in Ireland may be different, but the principles of high performance sport are the same.

I have helped prepare the Team Singapore contingents for several major Games, trying to raise the level of service provision at each event, starting with the SEA Games 2005, Asian Games 2006, Commonwealth Games 2006, SEA Games 2007, ultimately leading to the Beijing 2008 Olympic and Paralympic Games. Unfortunately, I was not present at the Beijing Olympics in a clinical capacity to follow through on the four years of preparation and complete the Olympic cycle. Ultimately, I considered my job done when the athletes left Singapore as the best prepared contingent to leave for an Olympic campaign. I did have the pleasure of attending and witnessing one of the greatest ever sporting events when I was given the opportunity to be there in a management capacity, to consolidate on an informal International SM network that we are establishing across all continents and to visit the Recovery Centres developed by countries such as USA, Australia, China, Canada, UK and Ireland. The knowledge gained from these will be used effectively and adapted to suit a Singapore context.



Gold and Silver medals and Yip Pin Xiu's swimcap on a Team Singapore tracksuit.

I did have the honour of the being the Chief Medical Officer for the Singapore Paralympic athletes during the Beijing 2008 Paralympic Games, and was both humbled and amazed by what I witnessed every day. When I first started working with athletes with disabilities, I gave natural allowances for their individual abilities or disabilities. I learnt very quickly that an elite level Paralympic athlete has the same personal expectations, commitment and goals as an Olympic athlete. What really reinforced this to me was when athletes like Theresa Goh decided to swim Breaststroke in the 100m qualifications as she was not happy with her previous swim or when Yip Pin Xiu stated, after winning the first Paralympic Gold for Singapore, that she was upset because she had not broken her own World Record in the final while winning the Gold. This search for sporting perfection is what drives athletes of all types.

I am often asked what my most memorable moments are over the last few years. There are so many that I will simply list off some memorable sporting moments that I have witnessed, that have personal significance.

The 'Big Ticket' items undoubtably would be:

- Witnessing Michael Phelps win four out of his eight Gold medals 'Live' during the Olympic Games – purely because I saw him train when he was in Singapore; and when I stood beside him I reckoned that I could take him on, no problem. (In tiddlywinks!)
- Witnessing Tao Li line up alongside her competitors at the Olympics and literally blow them and the Asian record away, as well as raise the expectations of a nation out of the water.
- Witnessing the Singapore Women's Table Tennis Team comprising Li Jiawei, Wang Yuegu and Feng Tianwei triumph in an epic battle against South Korea and battle against the dominant Chinese team in the final to win the Olympic Silver medal for Singapore – because I was part of a multiracial-multinational team of Singapore supporters determined to create as much noise and support for the ladies while being outnumbered by about 1 to 100 against the vocal local Chinese support.
- Witnessing the transformation over the last three years of a shy and quiet girl by the name of Yip Pin Xiu, into a confident world-champion under the guidance of her Coach Ang Peng Siong and Big Sister Theresa Goh,

culminating in her Gold and Silver medal haul in the Beijing Paralympic Games.

The 'smaller' items that have deep personal significance include:

- The SEA Games 2005 and 2007 Women's Gymnastics team's Gold medal haul – the team brought new meaning to the term "hard training" as I witnessed the level of training and commitment that they endured to represent Singapore.
- The SEA Games 2005 and 2007 Women's Softball team – I was present when they inexplicably lost in a Silver medal play-off to go home empty-handed in Manila in 2005, witnessed the tears and pain; and then watched them dissect minutely what had gone wrong and plan their next two year cycle in a truly professional manner, so that I had the honour of being present when they won the Silver medal in Korat during SEA Games 2007.
- Witnessing national sailor Koh Seng Leong jump out of bed the morning after a lumbar microdiscectomy declaring that he had 12 weeks to prepare for the Olympics and did not want to waste any of it in bed; and watching him push himself so that he was physically prepared for the challenges he would face in Qingdao during the Regatta.
- Witnessing Joyce Lim train and compete in the SEA Games Taekwondo tournament with an ACL deficient knee only to lose to the eventual Gold medal winner.

Above all else, these reinforce to me the mental and physical aspects present in Singapore athletes that will allow them to succeed at the senior international level.

As for what I look forward to – it is simply to still have the same enthusiasm and dedication to support the Singapore athletes under my care as I have now, as I plan for the next two year cycle that will bring youth athletes to the shores of Singapore for the inaugural Youth Olympic Games. I plan to transform the virtual 'Sports Institute' that is operational at the moment into a reality, as part of the SportsHub project, and am also planning for the next four year Olympic cycle that will bring the battles to the ancient city of London and then on to the following Olympic cycle, wherever that may take us on this great adventure. (My humble personal preference would be Rio de Janeiro, but that's another story). ■