

THE EMERGING SPECIALITY OF SPORTS PHARMACY

– *Written by David Mottram and Mark Stuart, UK*

INTRODUCTION

Participation in sport and exercise is undertaken at all levels, from amateur enthusiasts to elite athletes. Pharmacists are frequently approached by people who engage in sport and exercise for advice about drug treatment or on general healthcare associated with their participation in sport. There is a growing need for specialist pharmacists in the area of sport and exercise in order to fulfil this valuable healthcare role. These specialists may be described as sports pharmacists.

In this article the authors will draw on their recent experiences of working with pharmacists in a sport-orientated environment and then speculate on how these experiences may be used to develop

the concept of sports pharmacists on an international scale.

RECENT EXPERIENCES OF SPORTS PHARMACY

The London 2012 Olympic and Paralympic Games

The 2012 Olympic and Paralympic Games were awarded to the City of London in 2005. The London Organising Committee for the Olympic and Paralympic Games (LOCOG) was established to plan and deliver the Games.

Within the LOCOG Medical Services, the authors set up a Pharmacy Planning Committee¹. Mr Mark Stuart was the Pharmacy Clinical Lead and Superintendent Pharmacist. Planning for the pharmacy

services for the London Olympic Games began in 2008, immediately after the Beijing Olympic and Paralympic Games.

Medical Services for London 2012

LOCOG Medical Services comprised a number of specialist work streams including pharmacy, sports medicine, primary care, physiotherapy, emergency medicine, dentistry, optometry, podiatry and medical imaging. These services operated across three polyclinics at the Athlete Villages at Stratford (Olympic Park), Eton Dorney (rowing and canoe sprint events) and Weymouth (sailing events).

The operation period of the service was 70 days between July and September 2012, from the opening of the Olympic Village



Image: The London 2012 Anti-Doping Laboratory operated by King's College London. Image Credit: LOCOG.

to the close of the Paralympic Village. The service to spectators covered 17 days of Olympic competition and 11 days of Paralympic competition.

Pharmacy Services at London 2012

Pharmacy services at the London 2012 Olympic and Paralympic Games were amongst the most advanced and comprehensive of any Olympic and Paralympic Games.

The principal scope of the pharmacy service was to:

1. Provide three fully equipped outpatient pharmacies in each of the three Village Polyclinics.
2. Write the Olympic and Paralympic Pharmacy Guides, incorporating the drug formulary.
3. Develop policies and procedures for the operation of pharmacy services at all Games venues for all healthcare professional groups.
4. Provide safe and reliable systems for drug supply and stock control at all Games venues.
5. Recruit, educate and train the pharmacy volunteers.

6. Run a minor ailments scheme for all non-athlete accredited personnel.

7. Provide a comprehensive medicines information service for all medical personnel.

The polyclinics each contained a fully stocked pharmacy to provide the medicines requirements of accredited athletes, team officials, Olympic and Paralympic family and other residents of the Villages.

The Olympic Village Pharmacy was situated in a purpose-built polyclinic located in the athletes' residential area. The pharmacies in the Weymouth Sailing Village and Eton Dorney Rowing Village were situated in facilities within the residential areas of these villages.

The pharmacies operated in a similar style to an outpatient dispensary. Additionally, they were the co-ordinating points of medicines supply for the athlete and spectator medical facilities at all Olympic and Paralympic venues, including the five cities hosting the preliminary Olympic football matches.

Pharmacy clinical services provided the medicine needs for the Olympic Games, this included 11,200 athletes of 26 Olympic

sports across 34 competition venues and also the medicine needs of the Paralympic Games, which included 4,200 athletes of 20 Paralympic sports across 21 competition venues. In total, the pharmacy services covered the needs of around 200,000 accredited people, as well as an estimated 9.2 million spectators attending events.

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The pharmacies dispensed close to 6,000 prescription items written by local UK doctors and for around 1,000 visiting team doctors from 205 different countries.

In order to provide the pharmacy services for the London 2012 Games, over 100 pharmacist volunteers were recruited from around the UK. These volunteers had a variable range of experience in sport-related pharmacy. As described later in this article, the authors provided education and training for the pharmacists, prior to the Games. By

the end of the Games, all the pharmacists had an enhanced level of knowledge in sports pharmacology, and were aware of the fundamental clinical aspects of sports medicine, enabling them to confidently contribute to the care of athletes within the specialised multidisciplinary environment of the polyclinic. The opportunities for pharmacists in this specialised environment highlighted the important role that the profession has alongside other athlete-focussed care disciplines.

THE WIDER ROLE OF SPORTS PHARMACISTS

In contrast to the unique environment of medical and pharmacy services at international games, sports pharmacists must contribute to the health of sportspersons in a variety of other clinical settings.

Sports pharmacy in daily practice

Clinical settings may range from community-based pharmacy, which offers a convenient and accessible resource, to a hospital orthopaedic ward where a pharmacist may be involved as part of a multidisciplinary team in the monitoring and management of medication for injuries of an acute or chronic nature as a result of sport or exercise injury.

In all clinical settings, sports pharmacists can complement the work of the sports physician, physiotherapist, podiatrist and other healthcare professionals involved with athlete care. The pharmacist's role in sports medicine often co-exists with other health specialties and can form part of a holistic approach to patient care.



Image: The Polyclinic in the Olympic Village.

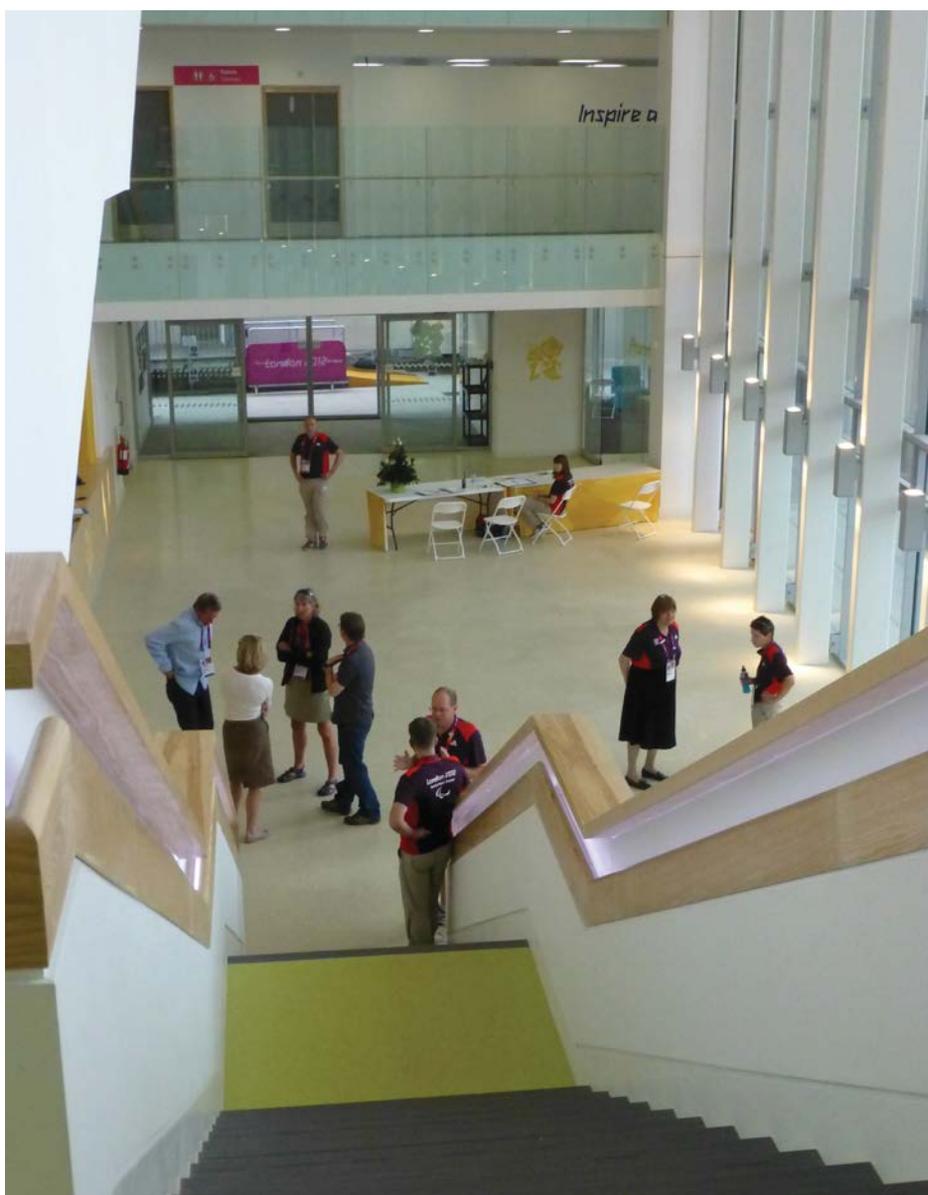


Image 3: The Polyclinic in the Olympic Village.

The general responsibilities of sports pharmacists

A sports pharmacist must be aware of the specific care and support required by people who engage in sport and exercise. The sportsperson may require advice on the drug treatment for acute or chronic medical conditions, the management of sport injuries or on the use of dietary or ergogenic supplements. For competitive athletes, advice on the prohibited status of substances is a prime consideration.

Specific role of sports pharmacists for elite athletes

Regrettably, there are circumstances when an athlete may take a drug that appears on the World Anti-Doping Agency

(WADA) Prohibited List. For a minority of athletes, deliberate use of prohibited substances and methods is perceived as a shortcut to improved performance.

However, there have been many cases in which the use of a prohibited substance, by an athlete, has been inadvertent; none-the-less, strict-liability rules have resulted in severe penalties being applied. WADA has recognised this problem and introduced a Specified Substances clause to the Prohibited List regulations. Had these athletes had better access to well-informed professional advice, many of these cases could be avoided with a significant reduction in both the administrative cost of adverse-findings cases and the associated stress for the athletes.

Pharmacists at sporting events

An extended role for sports pharmacists is as a specialist at major sporting events. At international games including Olympic and Paralympic, Asian, All-Africa and Pan American Games, purpose-built medical facilities are provided. Medical services invariably include clinical pharmacy services. Specialist sports pharmacists are ideally placed to fulfil this high profile and specialist role.

In summary, scope of the speciality of sports pharmacy is presented in Figure 1.

EDUCATIONAL TRAINING FOR SPORTS PHARMACISTS

Most pharmacy degree courses are generalist in nature and therefore produce pharmacy graduates who have knowledge and skills across the whole range of pharmacy practice. It is at the post-graduate level that pharmacists become specialists in disciplines such as oncology, paediatrics psychopharmacy. With the increasing involvement of pharmacists in sport, it is clear that specialised training in the field of sports medicine for pharmacists is needed.

SPECIALISED EDUCATION AND GOVERNANCE

Existing education programmes

The authors have recently produced a web-based learning programme, which was used to educate pharmacists and other healthcare professionals in their role as volunteers for the London 2012 Olympic and Paralympic Games².

Pharmacist volunteers for London 2012 were required to undertake this web-based learning programme and to successfully complete the associated online assessment, prior to undertaking their role at the Games. The programme was also made available to other healthcare volunteers at the Games. New initiatives such as this are warranted on a larger scale to develop a robust system of learning and accreditation for pharmacists across the globe wanting to specialise and practice in the sports medicine environment.

Development of new education programmes

A system of ongoing learning programmes that can be used to educate pharmacists worldwide and to develop their

THE SPECIALTY OF SPORTS PHARMACY COVERS

Awareness	<i>Awareness of drugs in sport in the community, medicine & industry for both performance modification and the prevention and treatment of disease.</i>
Therapy	<i>Knowledge of therapeutic use of drugs in sport and how pharmacist interventions can support sport related illness or injury.</i>
Prevention	<i>Use of pharmacotherapy to prevent sport-related illness or injury and maintain well-being.</i>
Optimisation	<i>Safe and rational use of nutrition and supplements to optimise performance.</i>
Abuse	<i>Knowledge of the use of drugs in sport for competitive advantage.</i>
Detection	<i>The science of detecting drugs of abuse in the body.</i>

Figure 1:
The scope of sports pharmacy.



skills to become sports pharmacists is long overdue.

Such programmes might be studied by distance learning, thereby allowing any pharmacist or other healthcare specialist to undertake their studies regardless of their country of residence. Continuing professional development is a requirement for all healthcare professionals worldwide. The development of new education programmes would contribute to the portfolio of materials available for this purpose.

Professional standards

A new professional body to regulate the specialty of sports pharmacy is also warranted, in line with other professions working in the field of sports medicine. Such a professional body might perform the following functions:

- To develop pharmacy healthcare professionals worldwide, who have specialist knowledge and understanding of drug use in sport and exercise in its widest context.

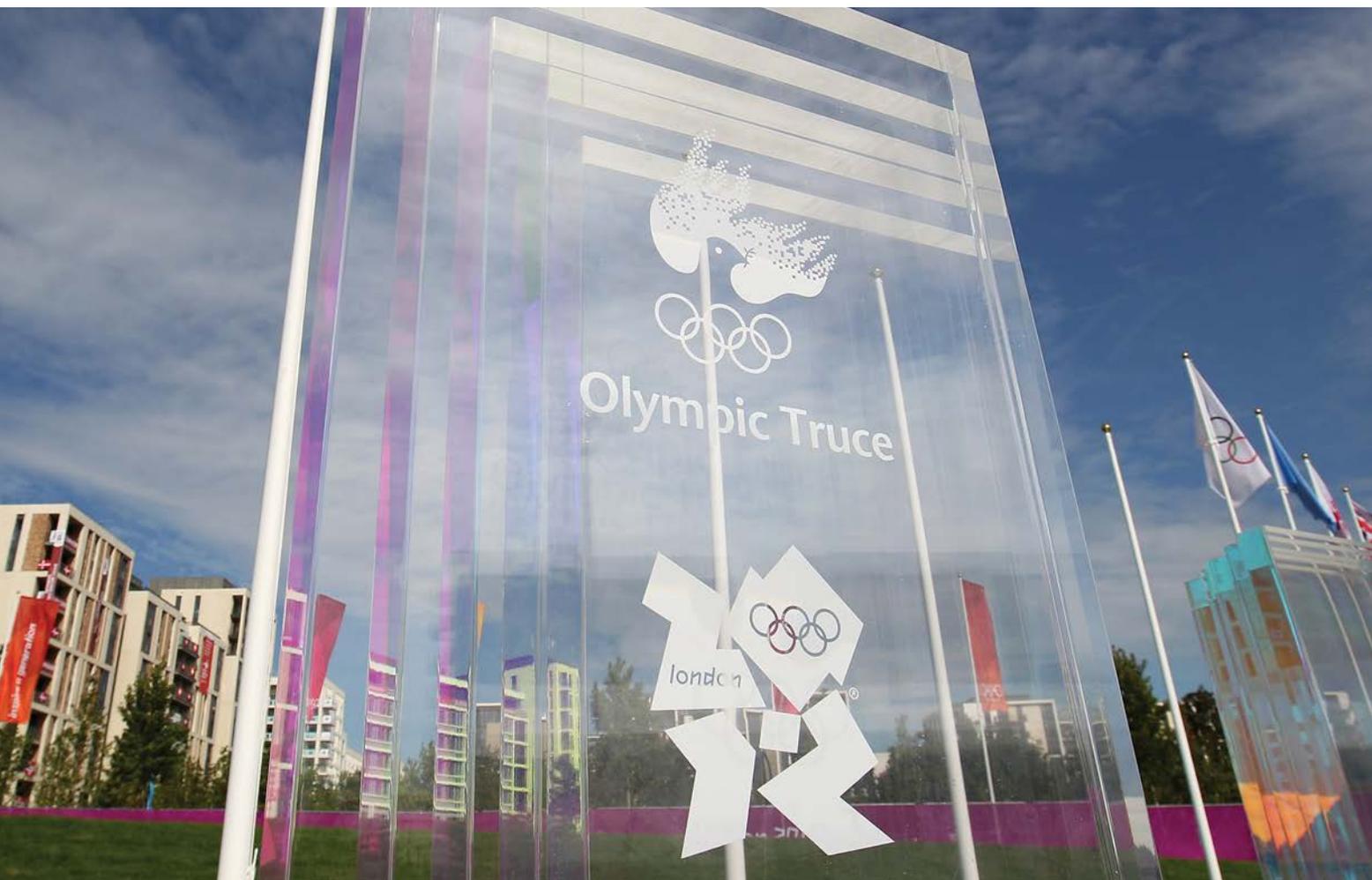
- To create a standardised level of accreditation for the specialty.
- To ensure that those who participate in sport and exercise can access professionals with sound knowledge of drug use in sport, including prohibited substances and anti-doping regulations.
- To help to prevent athletes from inadvertent use of prohibited substances.
- To strengthen the anti-doping movement through awareness and education.
- To develop leaders for the promotion of anti-doping in sport.
- To provide a valuable resource to advise and participate in medical services for major sporting events.

If such a professional body was created, stringent membership requirements would be needed to ensure that high international standards were maintained and that the body represented a reputable collection of experts in the field.

Completion of a specified international diploma or postgraduate certificate

course would be required, along with full registration to practice with a national pharmacy regulatory body. A portfolio of continuing professional development in the area of sport and exercise medicine would need to be considered in line with modern approaches in continuing medical education.

The creation of such a professional body would require close collaboration and support from major national and international sporting and medical organisations.



CONCLUSION

In most countries, there is an increasing level of participation in sport and exercise from amateur level to international elite competition. This worldwide population of sport enthusiasts require advice and support from well-informed healthcare professionals.

While the concept of sports physicians, sports scientists and sports physiologists is well established, the profession of pharmacy is newly emerging as a valuable contributor to the health of athletes. Future initiatives focussing on standardised education and professional regulation are required to cement pharmacy as an important and necessary faculty in the field of sports medicine.

References

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