

Mr Stephen Palethorpe  
Committee Secretary  
Senate Standing Committees  
on Rural and Regional Affairs and Transport  
PO Box 6100  
Parliament House  
Canberra ACT 2600

31 May 2013

**SUBMISSION OF THE NATIONAL INSTITUTE NETWORK**

**The Practice of Sports Science in Australia**

Dear Mr Palethorpe

Please find attached the submission of the National Institute Network (NIN) on the inquiry in to The Practice of Sports Science in Australia. This is a consensus paper on behalf of the NIN (excluding the AIS) and we would welcome the opportunity to give evidence to the Inquiry if required.

The National Institute Network (NIN) comprises:

- Australian Capital Territory Academy of Sport;
- New South Wales Institute of Sport;
- Northern Territory Institute of Sport;
- Queensland Academy of Sport;
- South Australian Sport Institute;
- Tasmanian Institute of Sport;
- Victorian Institute of Sport; and
- Western Australian Institute of Sport.

Yours sincerely

ANNE MARIE HARRISON  
for and on behalf of the National Institute Network

**Submission**

**to the inquiry  
into**

**The Practice of Sports Science in Australia**

**Senate Standing Committees**

**on**

**Rural and Regional Affairs and Transport**

PO Box 6100

Parliament House

Canberra ACT 2600

Phone: (02) 6277 3511

Email: [rrat.sen@aph.gov.au](mailto:rrat.sen@aph.gov.au)

by

**NATIONAL INSTITUTE NETWORK**

**C/- Victorian Institute of Sport**

**PO Box 12608 A'Beckett Street**

**Melbourne Victoria 8006**

## Overview

On 16 May 2013 the Senate referred the matter of *The Practice of Sports Science in Australia* to the Senate Standing Committees on Rural and Regional Affairs and Transport for inquiry and report.

This document provides a submission to the Senate Committee on behalf of the National Institute Network (NIN) and includes the views of: Australian Capital Territory Academy of Sport; New South Wales Institute of Sport; Northern Territory Institute of Sport; Queensland Academy of Sport; South Australian Sport Institute; Tasmanian Institute of Sport; Victorian Institute of Sport; and, Western Australian Institute of Sport.

## Background

The purpose of the NIN is to work collaboratively to develop the capacity and capability of the national high performance system. The Australian Institute of Sport (AIS), supported by the State Institutes and Academies of Sport, leads the development and implementation of strategies that build the high performance capability of identified national sporting organisations and strengthen the capability of the Australian high performance system. For example, the AIS recently released the *AIS Sports Science/Sports Medicine Best Practice Principles (SSSM)* which was developed as a practical guide to assist boards and senior management of sporting organisations in performing their oversight function in relation to SSSM practices.

There are over 100 sport science related personnel currently employed in the NIN system and following the national AIS guidelines. These personnel play a critical role for high performance sport and, through the NIN, have made significant positive contributions to Australia's sporting performance on the world stage.

This submission provides information in response to the Terms of Reference under the following headings:

- The current scope of practice, accreditation and regulation arrangements for the profession
- The role of boards and management in the oversight of sports scientists inside sporting organisations
- Avenues for reform or enhanced regulation of the profession
- The duty of care of sports scientists to athletes, and the ethical obligations of sports scientists in relation to protecting and promoting the spirit of sport
- Any other related matter.

## **The current scope of practice, accreditation and regulation arrangements for the profession**

### **Scope of Practice**

*Sport Science* is the application of scientific principles and techniques with the aim of improving sporting performance.

A *Sport Scientist* specialises in helping an individual athlete or team to improve their sporting performance through the use of scientific knowledge, methods and applications in the area of physiology, biomechanics, psychology, motor control and motor development. They evaluate research, assess and advise on the technical and practical aspects of training, injury prevention, technique analysis, nutrition, optimisation of performance, and recovery practices in all areas and levels of sport (Exercise and Sports Science Australia, 2012 [www.essa.org.au/about-us/profession/](http://www.essa.org.au/about-us/profession/)).

Also working within the boundaries of sport science are performance analysts and various allied health professionals from a variety of disciplines such as sports medicine, engineering, physiotherapy and massage therapy.

It is also important to note that the term “sport scientist” is generic and does not necessarily recognise that a team may consist of a group of diverse sport science specialists who have developed specific skill and knowledge in one area of sport science. To classify a sport scientist, recognition of education, knowledge and experiential history are important.

### **Accreditation**

Whilst accreditation as a sport scientist is not compulsory, some scientists do choose to voluntarily accredit themselves with Exercise and Sports Science Australia (ESSA). This accreditation is relevant predominately to exercise physiologists working in clinical settings and has not been considered highly relevant by other sports scientists who work with athletes. However, ESSA has recently formed the Sports Science Advisory Group (SSAG) comprised of high-profile sports scientists from all sectors of the sports science industry, including sports institutes, professional sporting bodies, university research and private sports consultancies to reassess structure and benefits of sports science accreditation across the sports industry sector and the need for greater regulation of the sports science industry by calling for the appointment of only accredited sports scientists across all sporting codes.

The accrediting bodies associated with the most common disciplines of sport science are below and show that the accreditation and professional memberships available to some sport scientists (eg specialists in skill acquisition) are not available or are so general that they are not considered relevant for those working in high performance sport:

Biomechanics	Australian & NZ Society of Biomechanics (ANZSB)
Biochemistry	Australasian Association of Clinical Biochemists
Nutrition/Dietetics	Nutrition Australia / Dieticians Association of Australia
Strength & Conditioning	Australian Strength & Conditioning Association (ASCA)
Performance Analysis	International Society of Performance Analysis in Sport
Physiology	Exercise & Sports Science Australia (ESSA)
Podiatry	Australian Podiatry Association
Psychology	Australian Psychology Board
Skill Acquisition	not available
Technology/Engineering	International Sports Engineering Association

## **Regulation**

There is no one professional body that oversees and regulates sport science in Australia.

The majority of sport scientists working in professional sport and the National Institute Network (NIN) have tertiary qualifications and are members of at least one professional body but there are individuals who have no formal qualifications and/or professional association working with athletes in Australia.

Within the NIN the National Sport Science Quality Assurance (NSSQA) program has provided a laboratory accreditation process in which there is a component of staff competency. This covers the physiology staff and has recently been broadened to include Strength and Conditioning staff. It provides very limited regulation of skill sets to the other sports science disciplines although processes have commenced for improving this. The accreditation is for a four year term and does not pertain to sport scientists employed outside the NIN.

## **The role of boards and management in the oversight of sports scientists inside sporting organisations**

Boards and management play a critical role in ensuring that the agreed processes are in place, and are adhered to, in the delivery of sport science, especially considering that there is no national regulatory body.

Policies and procedures within the NIN set the standards expected and these are monitored and enforced. Codes of Conduct are well established and promoted and many of the sport science accrediting bodies also have strict Codes of Conduct as part of continued accreditation and membership.

The NIN through its boards and management has demonstrated its important role in Australian sport in taking the responsibility to ensure policies and sport science practices are current, clear, understood and enacted by its staff.

An issue for management is the need to understand sports science processes so appropriate regulation is possible and also for articulation to Boards so they can fulfil their responsibilities to oversee safe and ethical sport science practices. A degree or experience in management is unlikely to be sufficient to manage sports scientists, and an accreditation process with minimum standards for sports science management would be advantageous. So it is suggested that the management of sport science should involve an individual(s) that understands the processes involved in the delivery of sport science. This will allow the organisation to minimise any potential risks and have responsible and safe oversight of the delivery of sport science to athletes in collaboration with coaches. However management structures will differ based on budgetary demands, organisational structure, efficiency and desired outcomes.

The recently released *AIS Sport Science and Sport Medicine Best Practice Principles* are a valuable addition to the tools and guidance available to the NIN and Sporting Organisations.

However any policy or framework is only as good as the discipline to enact it. Hence it is management's responsibility to ensure policies/procedures are current, clear, understood and enacted. Communication processes and clear lines of accountability are essential to prevent adverse behaviour and to minimise risks to athletes, coaches and, in the larger context to the organisation as a whole.

It is recognised that pushing boundaries is, at least perceived to be, necessary to gain competitive advantage for athletes, and sport scientists are often challenged to contribute, therefore making management oversight of their work important.

### **The duty of care of sports scientists to athletes, and the ethical obligations of sports scientists in relation to protecting and promoting the spirit of sport**

This should exist and needs to be adhered to, with professional accountability for actions. The culture and standards of the organisation is integral regarding the behaviours and ethics of the sports scientists and the practices undertaken.

Each organisation within the NIN has a Code of Conduct that requires staff to adhere to appropriate policies and procedures, including Australian Sports Anti-Doping Authority (ASADA) rules and regulations. Duty of care, ethical behaviour and protecting the integrity of sport are well promoted in the NIN and are required for professional membership in sport science disciplines where accreditation is possible. For example, Exercise and Sport Science Australia have a Code of Professional Conduct and Ethical Guidelines, and Sports Medicine Australia also provides this. These professional membership organisations do not currently include a requirement to abide by the ASADA rules and regulations with reference to supplementation and training practices.

Sport scientists usually work as part of an athlete service team in which practices and new ideas are moderated and where any unusual or possibly unethical or unprofessional practices surface. The service team is usually accountable to a coach, high performance director, or medical doctor and they provide a level of monitoring of expected standards in the NIN.

All NIN staff are expected to demonstrate ethical behaviour relating to moral and professional standards but expectations change and clear ethical boundaries and appropriate procedural checks for sport scientists are needed given their challenge to find an edge to improve athlete performance.

Sport scientists work with their athletes' conflicting priorities (eg. winning, making money, entertaining, health and wellbeing, fair play) in their effort to promote the spirit of sport. In the NIN, concepts such as long term athlete development, health and wellbeing, and the health of the sport are primary concerns of sport scientists, and balanced carefully against other values and outcomes such as winning.

It should be noted that boundaries change; caffeine and colostrum have previously been banned and then cleared for use. Hypoxic training has been under review on occasions and there are mixed views about its merit under ethical guidelines; however WADA's Ethical issues Review Panel have not ruled against it and the use of altitude tents are now common place. The development of the "high tech swimsuits" in swimming, bike design in cycling etc are all examples where sport science developments have been implemented and then "outlawed" by the sports governing bodies. Whether any of these examples would be deemed "not in the spirit of sport" is an interesting argument, when looking to gain a competitive advantage.

## **Avenues for reform or enhanced regulation of the profession**

High performance sport is a unique and challenging environment and this warrants consideration.

Suggestions for improvement for sport science in Australia include:

- establish best practice standards, ethical standards, and duty of care requirements for all sport scientists in Australia to assist in preserving the healthy image of sport.
- establish minimum requirements in all of the disciplines of sport science for accreditation of sport scientists to assist in the regulation of the processes that can be implemented by those accredited and those appointed to sports science positions.
- develop a national regulatory system to provide a mechanism for a collective approach for the regulation and delivery of sport science practices across all levels of sport in Australia.
- assist regulatory bodies to work with the NSSQA program to accurately reflect what is required in an elite sport setting and encourage NSSQA in its expansion of regulation for all sport science disciplines for high performance sport (eg NIN, NSOs and professional sports).
- it is respectfully considered that the current framework and requirements of a sport scientist by ESSA is inadequate for the high performance sport system
- establish ethics committees within the NIN to assist with the implementation of sport science innovations through the review and endorsement of innovations, thereby improving transparency of internal operations, communication, and awareness, to avoid unusual and unethical practices.

Signed for and on behalf of the NIN Members (excluding the AIS)

**Anne Marie Harrison**  
**Chief Executive Officer**  
**Victorian Institute of Sport**  
**31<sup>st</sup> May 2013**