

# Revision, uptake and coding issues related to the open access Orchard Sports Injury Classification System (OSICS) versions 8, 9 and 10.1

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**Abstract:** The Orchard Sports Injury Classification System (OSICS) is one of the world's most commonly used systems for coding injury diagnoses in sports injury surveillance systems. Its major strengths are that it has wide usage, has codes specific to sports medicine and that it is free to use. Literature searches and stakeholder consultations were made to assess the uptake of OSICS and to develop new versions. OSICS was commonly used in the sports of football (soccer), Australian football, rugby union, cricket and tennis. It is referenced in international papers in three sports and used in four commercially available computerised injury management systems. Suggested injury categories for the major sports are presented. New versions OSICS 9 (three digit codes) and OSICS 10.1 (four digit codes) are presented. OSICS is a potentially helpful component of a comprehensive sports injury surveillance system, but many other components are required. Choices made in developing these components should ideally be agreed upon by groups of researchers in consensus statements.

**Keywords:** sports injury classification, epidemiology, surveillance, coding

## Introduction

Ongoing sports injury surveillance is a fundamental pillar of sports injury prevention,<sup>1-4</sup> in a process described originally by van Mechelen et al<sup>5</sup> and more recently by Finch.<sup>6</sup> It is to sports medicine what cancer registries are to oncology or traffic accident databases are to traumatology. One of the reasons why sports injury prevention has been generally elusive is that there are very few long-standing sports injury surveillance systems in the world. Many of the existing systems are funded by professional sporting competitions, as part of due diligence, but on the premise that the *raison d'être* for professional sport is entertainment rather than injury containment. Some of the long-standing injury surveillance systems in non-professional sport have led to successful injury prevention, such as the Accident Compensation Corporation (ACC) in New Zealand<sup>7-9</sup> and the National Register of Catastrophic Spinal Injuries in the USA,<sup>10</sup> plus the introduction of breakaway bases in some amateur baseball leagues.<sup>11</sup> In professional sport there have been some successful reductions of specific injuries.<sup>12</sup>

An important part of injury surveillance is coding of injury diagnoses, although it is important to note that there are many other aspects to injury surveillance systems than just coding.<sup>1</sup> The two major purposes of coding are to facilitate retrieval of records of a certain type for future analysis and to collate diagnoses into common groups to follow trends in injury incidence and prevalence<sup>13</sup> (as per the van Mechelen paradigm<sup>5</sup>). There is a trade-off between simplicity (which assists ease of use and categorization) and a comprehensive list of codes (which improves accuracy).<sup>13,14</sup>

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Only a few papers have analysed issues related to coding of sports medicine diagnoses, such as accuracy.<sup>14,15</sup> These issues have some importance however, as they have the ability to affect the comparability and compliance of injury surveillance.

The Orchard Sports Injury Classification System (OSICS)<sup>13,14,16,17</sup> is perhaps the world's most widely used injury coding system in sports medicine. Its uptake is due to a combination of being a free-to-use system and having codes which are specific to sports medicine.

OSICS was updated to version 6 in 1998, version 7 in 2000 and version 8 in 2002. In 2005, it was determined that, for some purposes, there were permanent inadequacies in a three character coding system.<sup>14</sup> Therefore, a four character system was created in 2007.<sup>13</sup> It was named OSICS version 10 as it was envisaged that there would still be a role for a three character system and that when OSICS 8 was updated it should be called OSICS 9. Minor updates which only change a few codes can be made, with versions progressing using a decimal point (for example this study will include OSICS version 10.1 which is only marginally different to OSICS 10).

The aims of this study were to:

1. document the extent of uptake of OSICS by major research groups in sports medicine
2. discuss the issues and problems with implementation and coding of OSICS from experienced stakeholders, along with suggestions for how to handle conflicts
3. present suggested standard injury categories for some of the world's major sports where injury classification is used, and
4. present updated versions of OSICS (version 9 and version 10.1)

## Methods

The first author and creator of OSICS (John Orchard) along with the primary creator of OSICS version 10 (Katherine Rae) are in regular email contact with key stakeholders in the sports of football (soccer), Australian football, cricket, tennis and rugby union, the sports in which OSICS has primarily been used. The majority of these stakeholders are included as coauthors in this paper. In addition, programmers associated with various athlete management systems, who have installed OSICS as a freeware add-on, were consulted via email. This consultation process was fairly informal, particularly by comparison to the processes involved in updating more comprehensive and established systems like the International

Classification of Diseases (ICD). However, this consultation process was the same as the process for updating OSICS versions 1 through 7.

To further assess uptake of OSICS, various literature searches were performed for the expressions 'OSICS' and 'Orchard codes' (PubMed, Sport Discus, Google Scholar) as well as a citation tracker for the specific OSICS papers.<sup>13,14,16,17</sup>

## Results

The following groups/sports have been identified as users of OSICS:

1. Australian Football League injury surveillance, which has used OSICS for 18 seasons and was the original system for which the OSICS codes were designed.<sup>12,18–22</sup> OSICS has also been used for other Australian football studies.<sup>23</sup>
2. Cricket Australia injury surveillance system<sup>24,25</sup> and international consensus definitions for cricket injuries.<sup>3,4</sup>
3. UEFA injury surveillance system<sup>26–28</sup> and international consensus definitions for football (soccer) injuries.<sup>1</sup>
4. A rugby union injury surveillance instrument,<sup>29</sup> an international consensus statement on injury definitions and data collection for rugby union injuries<sup>2</sup> and the England Rugby Injury and Training Audit which has used OSICS since its inception in 2002.<sup>30,31</sup>
5. The international consensus definitions for tennis<sup>32,33</sup> and Tennis Australia injury surveillance system.
6. Experts providing advice to the International Olympic Committee on injury surveillance in team sports.<sup>34</sup>
7. Multiple athlete management systems including Sports Injury Manager, Athletic Logic, Fairplay and Injury Tracker.

OSICS version 8 has been previously identified as being superior to the ICD 10 for coding sports injury diagnoses.<sup>14</sup> However, deficiencies in OSICS 8 led to the development of a new version of OSICS. This was labelled version 10, as it included a significant modification of the inclusion of a fourth character.<sup>13</sup> This enabled OSICS 8 to be updated at a later date to a version 9, still using three digits only, which is presented in this paper. OSICS 10, by virtue of a greater number of codes, is able to give more comprehensive diagnostic differentiation and hence greater diagnostic accuracy than a 3 digit system.<sup>13–15</sup> The three digit system still retains a potential advantage of having fewer choices for the user and therefore finding an applicable code from a shorter list may be easier. However, this advantage is

obviously negated if the user feels that no code is correct or specific enough.

In a computerised system, it is not ideal to have an unfiltered drop down list of all OSICS codes to choose between. This involves many hundreds of codes, often making it hard for the user to find the most applicable code (particularly in OSICS version 10). It is recommended that programmers include filters for any or all of body part, injury type, or keywords, which can then reduce a drop-down list of potential codes to a small number from which to choose. An 'intelligent' system could use keywords from a text diagnosis provided to suggest the best fit OSICS codes to form a drop down list, from which the user could choose the most appropriate code. An even more intelligent system could allow the user to expand the drop down list (if nothing suitable was suggested in the drop down list) or narrow it (if too many codes were provided to choose between). If no filtering is used, it would be recommended that the body part was chosen as the first word of the text descriptor field, which would help organise an alphabetical list of text fields (eg, calcaneus fracture, rather than fractured calcaneus).

Suggested or example injury categories for some of the major sports which use OSICS are presented in Tables 1, 2 and 3. These vary between sports to reflect the relevance of various diagnoses. For example, abdominal ('side') strains are common injuries in fast bowlers in cricket, but rare injuries in most other sports. Stingers or burners (cervical nerve root compression injuries) are common injuries in rugby union but again uncommon in other sports. These injury categories should probably be further refined by consensus groups within the sport, hence are listed as suggested rather than recommended at this stage. Some injury categories need to be separated depending on the injury definition in a sport. For example, in the football codes, head and facial lacerations are common enough to warrant a separate injury category if the injury definition is based on medical treatment. However, if the injury definition is based on time loss (with a threshold of 24 hours or more), then head and facial lacerations probably do not warrant their own separate category, as they rarely result in time loss other than possibly on the day of occurrence. The suggested and example categories represent the bias of the primary author and are not necessarily the preferences of the other authors in their particular sports. They have been included because of the presence of injury category code numbers for OSICS 9 in the Appendix.

**Table 1** Suggested global injuries category for merging of OSICS codes

Region ID	Region	Injcat ID	Injury category
1	Head and neck	1	Head and neck soft tissue trauma
		3	Eye injuries
		5	Concussion
		6	Facial bone fractures
		9	Other head organ damage
		11	Skull and neck fractures
		12	Neck neurological injuries
		17	Jaw sprains
		18	Neck muscle strains
		19	Neck sprains
2	Shoulder/arm/elbow	21	Shoulder sprains and dislocations
		22	A-C (acromioclavicular) joint
		23	Fractured clavicles
		24	Shoulder tendon injuries
		25	Other arm and elbow fractures
		26	Shoulder and arm stress fractures
		29	Shoulder and arm neurovascular
		30	Upper arm muscle strains
		32	Shoulder and arm soft tissue trauma
		33	Elbow sprains or joint injuries
3	Forearm/wrist/hand	34	Elbow tendon injuries
		40	Forearm fractures
		41	Scaphoid fractures
		44	Other wrist and hand fractures
		45	Forearm and hand stress fractures
		46	Forearm and hand soft tissue trauma
		47	Forearm and hand neurovascular
		48	Hand tendon injuries
		49	Wrist and hand sprains and dislocations
4	Trunk/back/buttock	51	Rib fractures
		52	Rib and costochondral bruising
		53	S/C joint sprains
		54	Abdominal and thoracic organ damage
		55	Lumbar and thoracic fractures
		56	Rib stress fractures
		57	Pneumothorax

(Continued)

**Table 1** (Continued)

Region ID	Region	Injcat ID	Injury category
5	Groin/hip/thigh	59	Lumbar and thoracic soft tissue trauma
		60	Buttock injuries
		61	Lumbar and thoracic sprains
		62	Lumbar stress fractures
		63	Trunk muscle strains
		72	Hip joint injuries
		73	Groin and thigh stress fractures
		74	Hip and groin contusions
		75	Groin strain injuries
		76	Pelvic and thigh fractures
6	Knee	77	Groin and thigh neurovascular
		81	Hamstring strains
		82	Quadriceps strains
		83	Thigh contusions
		91	Knee – ACL (anterior cruciate ligament)
		92	Knee – MCL (medial ligament)
		93	Knee – PCL (posterior cruciate ligament)
		94	Knee cartilage injuries
		95	Knee and patellar tendon injuries
		96	Other knee sprains
7	Lower leg/foot/ankle	97	Patella instability
		98	Patella stress fractures
		99	Knee and patella fractures
		100	Knee contusions
		101	Leg fractures
		102	Leg stress fractures
		103	Calf strains
		104	Leg and foot soft tissue trauma
		105	Shin soreness
		106	Achilles tendon
8	Medical illness	107	Ankle sprains and joint injuries
		111	Foot bone fractures
		112	Foot stress fractures
		113	Foot and ankle neurovascular
		118	Other shin and foot stress injuries
		119	Foot sprains
		121	Illness, general
		122	Environment-related illness

**Table 2** Suggested specific injury categories for Australian football and cricket, further merged from the categories in Table 1

Injcat ID	Australian football category	Cricket category
1	Other head and neck injuries	Other head and neck injuries
3	Other head and neck injuries	Other head and neck injuries
5	Concussion	Other head and neck injuries
6	Facial fractures	Facial fractures
9	Other head and neck injuries	Other head and neck injuries
11	Other head and neck injuries	Other head and neck injuries
12	Other head and neck injuries	Other head and neck injuries
17	Other head and neck injuries	Other head and neck injuries
18	Other head and neck injuries	Other head and neck injuries
19	Neck sprains	Other head and neck injuries
21	Shoulder sprains and dislocations	Other shoulder injuries
22	A/C joint injuries	Shoulder/arm/elbow fractures
23	Fractured clavicles	Shoulder/elbow tendon injuries
24	Other shoulder/arm/elbow injuries	Shoulder/arm/elbow fractures
25	Other shoulder/arm/elbow injuries	Shoulder/arm/elbow fractures
26	Other shoulder/arm/elbow injuries	Shoulder/arm/elbow fractures
29	Other shoulder/arm/elbow injuries	Other shoulder injuries
30	Other shoulder/arm/elbow injuries	Other shoulder/arm/elbow injuries
32	Other shoulder/arm/elbow injuries	Other shoulder injuries
33	Elbow sprains or joint injuries	Elbow sprains or joint injuries
34	Other shoulder/arm/elbow injuries	Shoulder/elbow tendon injuries
40	Forearm/wrist/hand fractures	Forearm/wrist/hand fractures
41	Forearm/wrist/hand fractures	Forearm/wrist/hand fractures
44	Forearm/wrist/hand fractures	Forearm/wrist/hand fractures
45	Forearm/wrist/hand fractures	Forearm/wrist/hand fractures
46	Other hand/forearm/wrist injuries	Other wrist/hand injuries
47	Other hand/forearm/wrist injuries	Other wrist/hand injuries
48	Other hand/forearm/wrist injuries	Other wrist/hand injuries

(Continued)

**Table 2 (Continued)**

Injcat ID	Australian football category	Cricket category
49	Other hand/forearm/wrist injuries	Other wrist/hand injuries
51	Rib and chest wall injuries	Other buttock/back/trunk injuries
52	Rib and chest wall injuries	Other buttock/back/trunk injuries
53	Rib and chest wall injuries	Other buttock/back/trunk injuries
54	Other buttock/back/trunk injuries	Other buttock/back/trunk injuries
55	Lumbar and thoracic spine injuries	Other buttock/back/trunk injuries
56	Rib and chest wall injuries	Side and abdominal strains
57	Rib and chest wall injuries	Other buttock/back/trunk injuries
59	Lumbar and thoracic spine injuries	Other buttock/back/trunk injuries
60	Other buttock/back/trunk injuries	Other buttock/back/trunk injuries
61	Lumbar and thoracic spine injuries	Other buttock/back/trunk injuries
62	Lumbar and thoracic spine injuries	Lumbar stress fractures
63	Other buttock/back/trunk injuries	Side and abdominal strains
72	Other hip/groin/thigh injuries	Other hip/groin/thigh injuries
73	Other hip/groin/thigh injuries	Other hip/groin/thigh injuries
74	Thigh and hip contusions	Other hip/groin/thigh injuries
75	Groin strains and osteitis pubis	Groin strains and osteitis pubis
76	Other hip/groin/thigh injuries	Other hip/groin/thigh injuries
77	Groin strains and osteitis pubis	Other hip/groin/thigh injuries
81	Hamstring strains	Hamstring strains
82	Quadriceps strains	Quadriceps strains
83	Thigh and hip contusions	Other hip/groin/thigh injuries
91	Knee ACL	Knee ligament injuries
92	Knee MCL	Knee ligament injuries
93	Knee PCL	Knee ligament injuries
94	Knee cartilage	Knee cartilage
95	Knee and patella tendon injuries	Other knee injuries
96	Other knee injuries	Other knee injuries
97	Patella injuries	Other knee injuries
98	Patella injuries	Other knee injuries
99	Other knee injuries	Other knee injuries
100	Other knee injuries	Other knee injuries
101	Leg and foot fractures	Other leg/foot/ankle injuries

(Continued)

**Table 2 (Continued)**

Injcat ID	Australian football category	Cricket category
102	Lower leg/foot stress fractures	Lower leg/foot stress fractures
103	Calf strains	Calf strains
104	Other leg/foot/ankle injuries	Other leg/foot/ankle injuries
105	Other leg/foot/ankle injuries	Other leg/foot/ankle injuries
106	Achilles tendon injuries	Other leg/foot/ankle injuries
107	Ankle sprains or joint injuries	Ankle sprains or joint injuries
111	Leg and foot fractures	Other leg/foot/ankle injuries
112	Lower leg/foot stress fractures	Lower leg/foot stress fractures
113	Other leg/foot/ankle injuries	Other leg/foot/ankle injuries
118	Other leg/foot/ankle injuries	Other leg/foot/ankle injuries
119	Other leg/foot/ankle injuries	Other leg/foot/ankle injuries
121	Medical illnesses	Medical illnesses
122	Medical illnesses	Environment-related illness

**Table 3** Example specific injury categories for football (soccer) and rugby union, further merged from the categories in Table 1

Injcat ID	Soccer category	Rugby union category
1	Other head and neck injuries	Other head and neck injuries
3	Other head and neck injuries	Other head and neck injuries
5	Concussion	Concussion
6	Facial fractures	Facial fractures
9	Other head and neck injuries	Other head and neck injuries
11	Other head and neck injuries	Other head and neck injuries
12	Other head and neck injuries	Neck stingers/burners
17	Other head and neck injuries	Other head and neck injuries
18	Other head and neck injuries	Other head and neck injuries
19	Other head and neck injuries	Neck sprains
21	Shoulder sprains and dislocations	Shoulder sprains and dislocations
22	A/C joint injuries	A/C joint injuries
23	Fractured clavicles	Fractured clavicles
24	Other shoulder/arm/elbow injuries	Other shoulder/arm/elbow injuries
25	Other shoulder/arm/elbow injuries	Other shoulder/arm/elbow injuries

(Continued)



**Table 3** (Continued)

Injcat ID	Soccer category	Rugby union category
26	Other shoulder/arm/elbow injuries	Other shoulder/arm/elbow injuries
29	Other shoulder/arm/elbow injuries	Other shoulder/arm/elbow injuries
30	Other shoulder/arm/elbow injuries	Other shoulder/arm/elbow injuries
32	Other shoulder/arm/elbow injuries	Other shoulder/arm/elbow injuries
33	Other shoulder/arm/elbow injuries	Elbow sprains or joint injuries
34	Other shoulder/arm/elbow injuries	Other shoulder/arm/elbow injuries
40	Forearm/wrist/hand injuries	Forearm/wrist/hand fractures
41	Forearm/wrist/hand injuries	Forearm/wrist/hand fractures
44	Forearm/wrist/hand injuries	Forearm/wrist/hand fractures
45	Forearm/wrist/hand injuries	Forearm/wrist/hand fractures
46	Forearm/wrist/hand injuries	Other hand/forearm/wrist injuries
47	Forearm/wrist/hand injuries	Other hand/forearm/wrist injuries
48	Forearm/wrist/hand injuries	Other hand/forearm/wrist injuries
49	Forearm/wrist/hand injuries	Other hand/forearm/wrist injuries
51	Rib and chest wall injuries	Rib and chest wall injuries
52	Rib and chest wall injuries	Rib and chest wall injuries
53	Rib and chest wall injuries	Rib and chest wall injuries
54	Other buttock/back/trunk injuries	Other buttock/back/trunk injuries
55	Lumbar and thoracic spine injuries	Lumbar and thoracic spine injuries
56	Rib and chest wall injuries	Rib and chest wall injuries
57	Rib and chest wall injuries	Rib and chest wall injuries
59	Lumbar and thoracic spine injuries	Lumbar and thoracic spine injuries
60	Other buttock/back/trunk injuries	Other buttock/back/trunk injuries
61	Lumbar and thoracic spine injuries	Lumbar and thoracic spine injuries
62	Lumbar and thoracic spine injuries	Lumbar and thoracic spine injuries
63	Other buttock/back/trunk injuries	Other buttock/back/trunk injuries
72	Other hip/groin/thigh injuries	Other hip/groin/thigh injuries
73	Other hip/groin/thigh injuries	Other hip/groin/thigh injuries
74	Thigh and hip contusions	Thigh and hip contusions
75	Groin strains and osteitis pubis	Groin strains and osteitis pubis
76	Other hip/groin/thigh injuries	Other hip/groin/thigh injuries

(Continued)

**Table 3** (Continued)

Injcat ID	Soccer category	Rugby union category
77	Groin strains and osteitis pubis	Groin strains and osteitis pubis
81	Hamstring strains	Hamstring strains
82	Quadriceps strains	Quadriceps strains
83	Thigh and hip contusions	Thigh and hip contusions
91	Knee ACL	Knee ACL
92	Knee MCL	Knee MCL
93	Knee PCL	Knee PCL
94	Knee cartilage	Knee cartilage
95	Knee and patella tendon injuries	Knee and patella tendon injuries
96	Other knee injuries	Other knee injuries
97	Patella injuries	Patella injuries
98	Patella injuries	Patella injuries
99	Other knee injuries	Other knee injuries
100	Other knee injuries	Other knee injuries
101	Leg and foot fractures	Leg and foot fractures
102	Lower leg/foot stress fractures	Lower leg/foot stress fractures
103	Calf strains	Calf strains
104	Other leg/foot/ankle injuries	Other leg/foot/ankle injuries
105	Other leg/foot/ankle injuries	Other leg/foot/ankle injuries
106	Achilles tendon injuries	Achilles tendon injuries
107	Ankle sprains or joint injuries	Ankle sprains or joint injuries
111	Leg and foot fractures	Leg and foot fractures
112	Lower leg/foot stress fractures	Lower leg/foot stress fractures
113	Other leg/foot/ankle injuries	Other leg/foot/ankle injuries
118	Other leg/foot/ankle injuries	Other leg/foot/ankle injuries
119	Other leg/foot/ankle injuries	Other leg/foot/ankle injuries
121	Medical illnesses	Medical illnesses
122	Medical illnesses	Medical illnesses

Some sports/users may prefer not to combine body parts and injury types in the same table. For example, in the soccer<sup>1</sup> and tennis<sup>32,33</sup> consensus statements the groups recommended tabulating separately by body area and then by injury type. It is easier (but still not straightforward) to determine the boundary between categories when choosing a 'body part' or 'injury type' list, compared to a more global injury category list. For example, should groin/hip/thigh be a body part category or separated into groin/hip and thigh? And if it is separated, are all adductor muscle strains to be included in the groin section, or does it depend on whether they are proximal (groin) or distal (thigh)? It is useful to be able to read, say, the rate of 'muscle strains' from a surveillance system and also the rate of 'thigh injuries'. Where

the consensus statements currently recommend tabulating separately by body part and by injury type then obviously this format is recommended.

However, many readers of reports will specifically want to know the rate of common injuries, such as 'hamstring injuries' for example. This rate is not clear if only categorization is made by body part and then by injury type. If a hybrid table is formed (as has been attempted in Tables 2 and 3) there needs to be agreement on which injuries warrant their own separate category (balanced against the need to keep the table a reasonable size). Depending on how common hamstring injuries are in a sport, they can form their own separate injury category or can be combined with quadriceps strains (to form a category of 'hamstring and thigh muscle strains') or with groin and quadriceps muscle strains (to form a category of 'upper leg muscle strains'). Because of the multiple approaches of tabulating categories, it is suggested that each sport includes this issue as part of future consensus statements or consensus statement updates.

New lists of injury codes for versions 9 (three digit codes) and 10.1 (four digit codes) are available from <http://injuryupdate.com.au/research/OSICS.htm>. OSICS version 10 has recently been translated into Spanish (<http://www.apunts.org/ficheros/apunts/videos/ocsis10-es.xls>) and Catalan,<sup>35</sup> with further versions possible in other languages.

## Discussion

This paper presents for the first time OSICS version 9, which is essentially the first major modification of OSICS 8, retaining the three code system. It is ideal for use in an injury management system where easy and simple coding is preferred. This is most likely to be the case where the main purpose of coding is to assist grouping into larger injury categories for presentation in reports or scientific papers. Where the aims of an injury surveillance system also involve an archiving function, to be able to retrieve records with greater specificity, OSICS version 10 is preferred. This study also presents version 10.1, which is very similar to the original version 10 but contains a few minor modifications (hence does not qualify as a major rewrite, which may one day be done with a version 11).

One of the major advantages of OSICS is the fact that the system is available worldwide for free use. This fact alone is a good explanation for the popularity and uptake of the system. However, the fact that no income is earned by the system means that updates and product support are below an ideal level. Most users would probably prefer suboptimal support and an ongoing free system compared to a product licence with a greater level of support for queries and system implementation.

Ideally, in the future, a major update of OSICS (say to version 11) would involve a formal consultative process in a similar fashion to updates of the ICD. Part of the process could include, for example, multiple expert and novice users attempting to code a long list of provided text diagnoses. Where there was broad agreement amongst the users, no changes to codes would be deemed necessary. Where users were in disagreement or unable to agree on a suitable OSICS code, a new or modified code could be established for the new version. Such a process would be time- and resource-consuming and would require funding. If a private body provided the funding for such a process, it may require assignment of copyright in the new system in return. This would obviously improve the system, but potentially at a cost of the new version being freely available for use.

It is important to note that OSICS is not a comprehensive injury surveillance system itself, only a system for coding major diagnoses. Diagnosis and injury code are important fields in a sports injury database or injury surveillance system.<sup>36</sup> Other data which are also relevant are injury side, injury mechanism (eg, noncontact vs contact), date of onset, date of return (severity), activity of onset (eg, match play, training, insidious onset) and exposure time. Another dilemma which users and coordinators of injury surveillance systems must address is whether to allow multiple injury codes/diagnoses for single events. For example, a valgus mechanism knee injury is a single event but may be associated with a combination of injuries (such as medial collateral ligament (MCL) + anterior cruciate ligament (ACL) sprains). This could be coded as a single injury, with deference given to the more significant of the two diagnoses (ie, ACL injury is of more significance than MCL injury). Alternatively it could be coded as two different injuries with the same mechanism and date/time of onset. It is also possible in an injury surveillance system for a single injury event to contain multiple injury codes as part of the one 'injury' (ie, combined ACL/MCL diagnosis).

Because there are so many similar dilemmas when conducting injury surveillance, it is recommended that for sports where many different groups are undertaking injury surveillance that consensus papers be developed.<sup>1-4</sup> With respect to use of OSICS, for those consensus groups that decide to recommend it, there would be a lot of benefit in suggesting broad injury categories for tabulation (cricket consensus statement paper<sup>3,4,37</sup>). The more common ground there is between various research groups in their methodology, the more valid are comparisons between studies undertaken by different author groups.

## Disclosures

The authors report no conflicts of interest in this work.

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