

SportSafe

Australian Sports Injury Data Dictionary

**Guidelines for injury data collection and classification for
the prevention and control of injury in sport and recreation.**

Working Document

Acknowledgments

This working document of the Sports Injury Data Dictionary was prepared by the Australian Sports Injury Data Working Party, with support from the Australian Sports Injury Prevention Taskforce and Active Australia.

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About the Working Party

The ASID Working Party is a national group including representatives from the fields of epidemiology, statistics, database management/computing, injury surveillance, sports administration, both male and female sports participants, sports medicine professionals. It also has links with major national health and sport data collections, such as the National Injury Surveillance Unit, Australian Bureau of Statistics and the Active Australia Monitoring Group.

Wide consultation has taken place in the development of the data dictionary, which has included a one day workshop, a session at the Australian Conference of Science and Medicine in Sport 1997, working meetings and valuable comments and input from Dr David Chalmers, Alex Donaldson, Dr John Orchard, Dr Willem van Mechelen, Dr David Janda, Qld, SA and WA Branches of Sports Medicine Australia.

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Table 1: Summary table of data items and source

| Data Item | Data Source/s | Core or Recommended Item |
|--|------------------------------|---------------------------------|
| Administration Items | | |
| Person recording case information | ASIPWP | Strongly recommended |
| Immediate source of injury record | ASIDWP | Strongly recommended |
| Date of injury | NDSIS v2.1 | Core |
| Time of injury | NDSIS v2.1 | Recommended |
| Date of injury record | NDSIS v2.1 | |
| Demographics | | |
| Age | NDSIS v2.1 | Core |
| Gender | NDSIS v2.1 | Core |
| Area of usual residence | NDSIS v2.1 | Strongly recommended |
| Place of Injury Occurrence | | |
| Name of injury place - text | ASIDWP | Strongly recommended |
| Place of injury - type | NDSIS v2.1 | Strongly recommended |
| Sport and recreation places - specific | ASIDWP | Strongly recommended |
| Part of specific injury place | ASIDWP | Recommended |
| Activity When Injured | | |
| Activity when injured - broad areas | ICECI | Core |
| Activity when injured -name of sport or activity | ASIDWP, ASC, NDSIS v2.1, CAS | Strongly recommended |
| Phase or aspect of involvement in activity or event | ASIDWP | Recommended |
| Major Injury Factors | | |
| Injury Factors | NDSIS v2.1, ASIDWP | Strongly recommended |
| Equipment used with intent to protect against injury | ASIDWP | Strongly recommended |
| Mechanism of Injury | | |
| Mechanism of injury | NDSIS v2.1, ASIDWP | Core |
| Narrative of mechanism of injury | NDSIS v2.1 | Strongly recommended |
| Body Region Injured | | |
| Body region and body chart | NDSIS v2.1 | Core |
| Specific structure injured | ASIDWP | Recommended |
| Nature of Injury - Pathology | | |
| Nature of injury | NDSIS v2.1, ASIDWP | Core |
| Provisional diagnosis text | Free text | Optional |
| Treatment Factors | | |
| Date of presentation | NDSIS v2.1 | Strongly recommended |
| Time of presentation | NDSIS v2.1 | Recommended |
| Reason for presentation | ASIDWP | Recommended |
| Treatment | | |
| Treatment | ASIDWP | Strongly recommended |
| Advice given to injured person | ASIDWP | Strongly recommended |
| Referral | ASIDWP | Strongly recommended |
| Treating person | ASIDWP, SMA | Strongly recommended |

Introduction

Australian information on the incidence, severity and causes of sport and recreational injury is limited. There are several sources of sports injury data which include:

- VISS - Victorian Injury Surveillance System, which analyses data from 25 Victorian hospitals
- SMIS (Sports Medicine Injury Surveillance) project which is collecting data on new injuries presenting to 5 sports medicine centres in Melbourne
- hospital discharge data (beginning with cases in 1996/97)
- NSW Youth Sports Injury Report
- sporting organisation or competition collections such as the AFL injury record
- insurance records
- individual sport, club or practitioner collections

(Please refer to the SportSafe webpage for contact details for data collections on www.ausport.gov.au/partic/spsafe.html)

With such a variety of sources of injury information, all collected with different methodology, it is difficult to provide comprehensive information on the incidence, costs and impact of sports injury in Australia.

Injury surveillance is the ongoing systematic collection, analysis and interpretation of health data needed to plan, implement and evaluate public health programs (Graitcer et al., 1987). Injury surveillance can provide the information necessary for determining priorities and targets for prevention activities by specific sports, organisations, or groups of participants (Finch, 1997). Surveillance data can sometimes be used to evaluate the effectiveness of current activities or be used to trial new policies on rules or protective equipment.

Barriers towards collecting sports injury data by clubs and organisation include the lack of clear guidance about what information to collect and how it should be done. A standardised data collection methodology, including a simple to use data collection form, was identified as a key requirement by sporting clubs and organisations (Finch et al., 1995).

Australian Sports Injury Prevention Taskforce

The feasibility of a national sports injury data and information system was identified as a priority in 1997 by the Australian Sports Injury Prevention Taskforce (ASIPT). A vital element of this system would be the sampling and collection of information across all levels of sport and recreation. To do this, a standardised approach to the collection of injury data in a variety of sport settings was recommended for investigation. The Australian Sports Injury Data (ASID) Working Party was established in October 1997 to undertake this project.

Australian Sports Injury Data Working Party

The working party conducted a review of local and international data sources and current Australian sports injury data deficiencies. The main data sources included the National Data Standards for Injury Surveillance Version 2.1 (NDSIS v2.1), International Classification of Diseases Version 9 and 10 (ICD 9&10), Orchard Sports Injury Classification System (OSICS) and a sample of national and international injury data collection forms. This review guided the development of a sports injury data dictionary for sports injuries in Australia.

Sports injury information can be collected from a variety of settings which include hospital emergency and outpatient departments, sports medicine clinics, medical practices, sporting and recreational

venues and schools. The person recording the information can vary between settings, with a sports first aider recording information at a club, or a doctor recording information at a clinic or hospital. Therefore, the data dictionary and data collection forms need to be comprehensive, but also user friendly. The ASID working party has focused on the information requirements for non-professional formal sport, school sport, and data from clinical and insurance settings, as these areas are not well serviced by current data collection resources.

Australian Sports Injury Data Dictionary

The Australian Sports Injury Data Dictionary has been developed to provide guidelines for injury data collection and classification for the prevention and control of injury in sport and recreation. The dictionary is written to assist sporting and recreation organisations, researchers, sports medicine professionals, first aiders and individual clubs collect information on sports injury. The sporting organisation or researcher may customise a data collection form to suit their needs, but a sporting club may choose to use the sport specific forms. The dictionary is prescriptive in the use of data categories and options within those categories. This is necessary if the advantages of comparability and consistency are to be gained. Users are, of course, free to design forms and data systems that meet their needs, and to extend the items and classification in the Dictionary.

A definition of sports injury is essential for all data collections, and a formal definition that is workable for all settings has not been established. Several definitions of sports injury are included in Appendix B. Whatever definition of injury is used for a collection, it is important that it is documented, understood and applied in the data collection process. For instance, an injury sustained at the 1997 Australian Masters Games was defined as an injury incident in which a member of the sports medicine team attended and provided treatment. This included assessing a concussion, dressing a wound or taping an injured finger. If the team member was called to assess an injured player, but no injury was evident and the player returned immediately to play, then an injury report was not required.

Injuries range from trivial to devastating. Sometimes injury severity forms part of the case definition for an injury surveillance system (eg one may wish to omit trivial injuries) and it is often useful to record information that indicates the severity of the cases. The best developed approach to measuring injury severity is in terms of “threat to life” (eg Osler 1997). Fortunately most sports injuries pose little or no threat to life, so other approaches to severity measurement are required (van Mechelen 1997). These can include:

- the nature of injury eg fracture or bruise
- the duration and nature of treatment of the injury eg surgery or rest
- sports time lost eg 3-6 months for an ACL reconstruction, 3 weeks for a ligament sprain
- working time lost (this can vary depending on the occupation of the person)
- permanent damage eg permanent disability such as loss of an eye, head injury
- costs of sports injury, includes the financial implications of the previous 5 dot points

Further description on severity of injury is included in Appendix C.

Issues Addressed by the Data Dictionary

Some of the identified problem areas from the review of current injury data collections have been addressed by the ASID working party in the working draft of the dictionary. The number of sports and activities listed in the dictionary has been expanded from 35 in the NDSIS v2.1 to over 120. Additional categories in the ‘activity when injured’ category allows for formal club sport to be differentiated from social sport, recreation, fitness activities and informal play. This information allows identification of the organisation or individual who is responsible for the safe conduct of the activity, which will help to target the most appropriate injury prevention strategy.

Place of injury has also been addressed to provide a further breakdown of 'recreation/fitness area' and 'sports or athletic area' area into practical classifications of where people are participating. The responsibility for the provision of a safe environment can lie with local, state and federal governments, and private facility owners. Policies directed at providing safe environments will need to be developed in conjunction with these facility providers. The additional classifications of sport and recreation places will also provide information on levels of participant supervision. A surfer at an unpatrolled beach will have minimal supervision, whereas, an indoor cricket game will be well supervised. It will be easier to implement prevention strategies in a well supervised place of activity.

Injury factors are broken into types of objects, substances and environment factors involved in the occurrence of injury. A list of potential sports injury factors have been subjectively edited from the NDS-IS v2c list. This list will be modified so that the most relevant factors to sport are listed and the use of the 'other' category will be minimal. Factors that are shown to be not related to sports injury will be deleted. The complete NDS-IS v2c list is in Appendix D.

The use and regulation of protective equipment can be quite a controversial issue in sport. Bicycle helmets are now mandatory in Australia, but even though there is data to support the use of helmets, cyclists still show resistance by carrying their helmets on the handle bars. Questions on the use of protective equipment on the injured body part have been included in the dictionary to establish relationships between equipment and injury. This information will assist sports, clubs or controlling bodies make decisions on the use of protective equipment.

The options for 'body site of injury' have been fairly limited in the reviewed data collection forms. Comments received from the field included that it was difficult to select the most appropriate category for a groin strain and that the categories were not specific enough for a professional filling out the form. Dr John Orchard has developed a classification of injury system that address the specific body and is included in Appendix A. As well, the NDSIS v2.1 list of body regions has been expanded into specific structures such as muscle, ligament, blood vessel, cartilage and nerves. This will allow further identification for data entry and subsequent searching of specific injuries such as muscle tears, tendon injuries and bony fractures.

'Nature of injury presented' using the list from the NDSIS v2.1 with additions that account for the most common sports injury pathology. Recent data collections from masters, university and police and fire games revealed that sprain and strain were the most common injuries accounting for 48% of injuries at the Healthpact 6th Masters Games in Canberra in 1997. The categories of sprain and strain have been separated in the data dictionary, with other addition such as blisters, hyperthermia or heat stress, bruise/haematoma and inflammation/swelling.

Treatment factors are included in the dictionary as injury reporting is often conducted at treatment settings. Adequate documentation of treatment is essential for ongoing treatment, medico-legal reasons and to provide the necessary information for injury analysis. Treatment information will also provide details to analyse the cost of injury, the severity of the injury and the services required to provide sports medicine coverage for events.

Working Draft of the Dictionary

This dictionary is distributed as a working draft, recognising that it is yet to be applied in the settings of sporting and recreation clubs, sporting and recreation organisation, sporting districts, local councils or schools. The dictionary and associated data collection forms and an Access database will be available to a large cross section of sporting organisations and settings for feedback on the usefulness of the document and associated resources. Comments are sought and are most welcome. The dictionary, data forms and database are available without cost by downloading the files from the SportSafe web page (www.ausport.gov.au/partic/spsafe.html). Hard copies or disk copies are available from the ASC bookshop at a cost.

Please address comments on the dictionary, data forms or database by email to smanat@sma.org.au or by post to Sports Medicine Australia, PO Box 78, Mitchell ACT 2911.

Administration Items

Person recording case information

Definition This data item characterises the person providing the injury details on the data collection form. It is **not** the setting of the data collection. Typically, but not always, this will be the person providing the initial management, treatment or assessment of the injury, eg. emergency department staff, sports trainer etc.

Guidelines Select the first appropriate category in the list or select other and specify if known.

Comment: The item is useful for identifying who is completing the forms in a particular setting also establishing expectations on the quality of the data.

Coding Options

1. self - injured person
2. health professional (includes, nurse, doctor, allied health professionals)
3. sports first aid/ sports trainer
4. parent or guardian
5. other (specify) _____
99. unknown

Immediate source of injury record

Definition This item describes the immediate source of where the injury data is collected.

Guidelines Select the most appropriate source of the injury record.

Comment: Injury records will differ in the variety of settings. Insurance records are often compiled a significant time after the injury and be a compilation of medical and allied health records. The amount of information related to treatment will also differ between the sources.

Coding Options

1. hospital - ambulatory (includes emergency department and outpatients)
2. hospital - in-patient record
3. sports medicine clinic record
4. other health clinic record (eg General Practitioner)
5. dental records
6. allied health service records
7. insurance company records
8. sports event medical coverage service records
9. school records
10. sporting club or organisation records (eg pony club, basketball club)
11. sporting and/or recreation facility records (eg indoor stadium, aquatic centre)
12. tertiary education setting records
13. other setting records (specify) _____
99. unknown

Date of injury

This item provides the date on which the injury occurred. The date of injury should be a compulsory data item in all sports injury data collections. It should be recorded in the following format:

DD/MM/YYYY

Time of injury

The time at which the injury occurred should be recorded by using a 24 hour clock. A 12 hour clock may be used on a data collection form but it is important to indicate whether the injury occurred during the morning or afternoon.

In some settings, where the time of treatment of the injury is also recorded, the difference between these two variables can be used to determine the time lag between injury and administration of treatment.

HrHr/MinMin am/pm

Date of Injury Record

This item is the date on which the injury record is made. It is not necessarily the same as the date of injury. For example, a person may not attend a sports medicine clinic for treatment of their injury until days after the injury occurred. This date can be cross referenced to the source of record date of injury.

DD/MM/YYYY

Demographics

Age

The age at the time of injury of the injured person is one of the most important variables needed to characterise people and populations. It should be a compulsory data item for all sports injury data collections. Recording of the Date of Birth is the preferred measure of age , since it allows direct comparison with other variables such as the Date of Injury.

Date of Birth

DD/MM/YYYY

If age (in years) is used, this should be recorded as the “age last birthday”.

Age in years

XXX years

Comment: if there is reluctance for the person to reveal their date of birth, the month and year is desirable.

Gender

The gender of the injured person should be recorded in ALL sports injury data collections since injury risk appears to differ between males and females. The following coding is recommended.

Coding Options

1. male
2. female
3. not stated, inadequately described.

Area of usual residence

The area of usual residence is an important demographic variable. It may not necessarily be the same as the area where the injury occurred. It is used to build a demographic profile of the injured population.

XXXX

In order to fully characterise the demographic profile of a group of people, additional information may be required. The suburb name should therefore also be given in words.

Suburb name

Comment: Postcodes vary greatly and this variable is often difficult to use.

Place of injury occurrence

Definition Place where person is participating in activity and is injured

The place of injury is important in data collections to ascertain where the injury occurred with sufficient detail to describe the place/venue/facility. This information is useful for determining the patterns of injury as they relate to the types of places that people use for sport, recreation and leisure.

An activity that is undertaken in an indoor or outdoor environment can have a very different risk profile. Weather can impact greatly on the playing conditions in an outdoor environment and influence temperature, humidity, surface conditions of the playing area or water conditions. For indoor facilities, the environment can be better controlled and greater risk of injury may relate to factors such as placement of equipment and separation of players from spectators and officials.

Most often, the place of injury on an injury surveillance form will name the specific place of injury for example, a specific leisure centre, tennis centre or aquatic complex. This level of identification is suitable for analysis at a local level, but it will be important for large scale injury surveillance that the injury place is defined according to national data standards.

To improve the safety of the playing environment, it is important to ascertain who is responsible for providing the facility or outdoor area. The owner may be a local council, state or federal government, private owner or lessee. It may be the council's responsibility to provide the facility and to maintain it, but it is also a club or organiser to ensure the area is safe before activity commences.

Name of injury place - text

Guidelines write actual name of place in text (eg Melbourne Cricket Ground)

| |
|-------|
| _____ |
|-------|

Place of Injury - Type

(Data source NDSIS v 2.1, p 26)

Guidelines Choose the most appropriate category or for the injury place. If more than one is appropriate, choose the one first in the list.

1. Home (includes farm house)
2. Residential Institution (excludes hospital)
3. School, other institution or public administrative area (excludes hospital [4]; includes child day care centre)
4. Hospital or other health service
5. Recreation/fitness area (place mainly for informal recreational activity)
6. Sports or athletics area (place mainly for formal sports)
7. Street or highway (public road)
8. Trade or service area
9. Industrial or construction area
10. Mine or quarry
11. Farm (excludes farm house)
12. Other specified place (includes forest, beach, abandoned building)
13. Unspecified place

Sport and Recreation places- Specific

Definition: The type of place for sport or recreation at which the injury was sustained.

Guidelines: “Specific Sport and Recreation Place” is intended to enable more specific coding of places coded to “5. Recreation/fitness area” or “6. Sports and Athletics area” in the previous item, “Place of injury – Type”.

First, select the most appropriate category from the “Specific Sport and Recreation Place” list. Second, indicate whether this Place is best described as an “indoor” or “outdoor” place. Third, select the most appropriate type of owner/manager for the place.

This list includes the most common types of venues at which sporting activities occur, with special emphasis on places designed for this purpose. It is not exhaustive, and sport sometimes occurs at many other types of place. Use the “other” categories to record such places.

In this item, *outdoor* and *indoor* refer to the venue. This may not always correspond to the location of the person when injured. For example, use *outdoor* for injuries at or around a swimming pool that is open to the sky, even injuries that occur in a changing room.

Owned or managed: A venue may be owned by one party (eg a State government) and managed by another (eg a sports federation). Select the party with most direct operational control over the venue – usually the managing body.

Comment: For more detailed coding of types of place that are not specialised sport or recreation places, consider using the NSD-IS items “Place – sub-type” and “Place – part”.

A. Categories of specific sport and recreation place

Places intended to be used solely or mainly for a particular sport

Includes places used by more than one sport with very similar requirements, or for which the place is modified from time to time (eg a field used for one sport in summer and another in winter). Record according to the use of the venue when the injury occurred.

Includes the whole of a venue – ie: playing area, spectator areas, changing and storage areas, etc.

1. Court

1. tennis
2. basketball
3. netball
4. squash
5. volleyball
6. court for other sport

2. Field

Includes playing areas given special names such as pitch, oval, ground and diamond.

1. Australian football
2. soccer
3. rugby league
4. rugby union
5. cricket
6. hockey
7. baseball
8. softball
9. field for other sport

3. Track and field venue

1. Track and field venue

4. Combat sport venue

1. boxing venue
2. other combat sport venue

5. Racing track

1. velodrome or other cycling track
2. motor-sport track
3. horse racing track
4. other racing track

6. Target range

1. shooting (all types of firearms)
2. archery
3. other target range
- 4.

7. Other specialised sports place

1. golf course
2. tenpin bowling venue
3. lawn bowls (?links)
4. climbing venue
5. other specialised sports place _____
- 6.

Places intended to be used for multiple sports, or sport and recreation

Includes places normally used for two or more sports at the same time (eg sporting complexes) and multipurpose venues.

Includes places used for sport and for recreation (eg many swimming pools)

8. Swimming facility

9. Fitness centre

10. Sports ground (multi-purpose or undefined)

11. Gymnasium

12. Ice rink

13. Snow sports area

14. Skate-boarding/in-line skating facility

15. Dance venue

16. Billiards, pool, snooker venue

17. Other multiple use sports facility _____

Other and unspecified places

Includes: places not primarily intended for sport or recreation.

18. Other place _____

(ie a place coded 1 to 4 or 7 to 12 in Place of injury – Type)

19. Unspecified place

B. Indoor or outdoor place

1. indoor
2. outdoor
3. other _____
4. unknown

C. Owned by or managed by

1. local council
2. state government
3. federal government
4. private

5. other _____
6. unknown

Part of Specific Injury Place

Definition part of specific injury place

Guidelines this category can include travelling to and from an activity. This item identifies the part of the venue where the injury occurred. A more specific explanation can be defined using the 'other' category, for example in a specific quarter or zone of play.

- | |
|---|
| <ol style="list-style-type: none">1. within the bounds of the participation area/field of play2. surrounds, including spectator area, car park, officials area3. warm up area4. dressing rooms, showers5. travelling to and from event/activity6. other _____7. unspecified |
|---|

Activity when injured

Activity when injured: broad areas

(Source: International Classification for External Causes of Injuries [ICECI])

- Definition** The general type of activity being undertaken by the person when injured.
- Context:** This item categorises sport into ‘organised’ and ‘unorganised’ categories. The unorganised category was created to include informal and social sport, fitness activities, and recreational activity. These categories are important to differentiate injuries that occur in a formal club structure to those that occur ad hoc such as in back yard cricket and touch at lunchtime.
- Guidelines** Select the most appropriate item which best characterises the type of activity being undertaken by the person when injured. If two or more items are judged to be equally appropriate, select the one that comes first in the code list.
- Comment:** **Organised Sport** is limited to organised physical activities undertaken under the auspices of a sports club, federation or similar organisation.

Unorganised Sport includes all sport and recreation physical activities that are not included in organised sport. This category can be broken down further where more information is required.

Coding Options

| |
|------------------------------|
| 1. paid work |
| 2. unpaid work |
| 3. travelling |
| 4. organised sport |
| 5. unorganised sport |
| 6. leisure |
| 7. education |
| 8. health care |
| 9. vital activity |
| 10. being taken care of |
| 11. nothing in particular |
| 18. other specified activity |
| 19. unspecified activity |

5 Unorganised Sport

5.1 Fitness activity includes activities such as aerobics, weights, running/jogging, walking.

5.2 Recreational activity includes outdoor and adventure sports

5.3 Social and informal sport includes informal activities such as backyard cricket or lunch time volleyball which are not conducted under the auspices of a club, but are recognised as a form of sport. It is important to differentiate formal and informal sport so that factors such as having formal enforcement of rules by a referee, preparation of the playing area and training of the players etc are taken into account when recording injury.

Activity when injured - Name of sport or activity

(expanded from 'Activity when injured' items 4 and 5)

Definition Type of sport, recreation or activity performed or participated in at the time of injury.

Guidelines It is possible to choose either the broad level of activity by using the whole numbers, or specify the particular activity with decimal numbers from the list of activities below. This coding will facilitate comparisons of sports across data collections.

1. Ball Team

- .01 basketball
- .02 handball
- .03 netball
- .04 volleyball
- .05 Australian football
- .06 rugby league
- .07 rugby union
- .08 soccer
- .09 touch
- .10 futsal (indoor soccer)
- .11 grid iron
- .12 korfbal
- .99 other

2. Bat and Ball Team

- .01 baseball
- .02 cricket
- .03 hockey
- .04 indoor cricket
- .05 lacrosse
- .06 softball
- .07 vigoro
- .99 other

3. Water Team

- .01 Rescue and Resuscitation
- .02 canoeing
- .03 rowing
- .04 water polo
- .05 yachting
- .99 other

4. Boat

- .01 canoeing
- .02 rowing
- .03 surf boating
- .04 yachting
- .99 other

5. Individual Water Based

- .01 fishing
- .02 surfing
- .03 surf life saving
- .04 swimming
- .05 diving (platform/springboard)
- .06 water skiing

- .07 underwater sports (scuba diving and snorkelling)
- .08 wind surfing
- .99 other

6. Ice and Snow

- .01 bob sled
- .02 cross country skiing
- .03 down hill skiing
- .04 freestyle skiing
- .05 ice hockey
- .06 speed skating
- .07 ice skating/dancing
- .08 luge
- .09 ski patrol
- .10 snowboarding
- .11 tobogganing
- .99 other

7. Individual Land Based

- .01 athletics
- .02 orienteering
- .99 other

8. Racquet

- .01 badminton
- .02 squash
- .03 table tennis
- .04 tennis
- .99 other

9. Acrobatic and Aesthetic

- .01 acrobatics
- .02 aerobics
- .03 callisthenics
- .04 gymnastics
- .05 marching
- .06 synchronised swimming
- .07 trampolining
- .08 dancing
- .99 other

10. Target

- .01 archery
- .02 bocce
- .03 billiards and snooker
- .04 lawn bowls
- .05 croquet

| | | | |
|--|----------------------------------|-----|-------|
| .06 | darts | .99 | other |
| .07 | golf | | |
| .08 | ten pin bowling | | |
| .09 | shooting | | |
| .99 | other | | |
| 11. Combative | | | |
| .01 | boxing | | |
| .02 | fencing | | |
| .03 | akido | | |
| .04 | judo | | |
| .05 | ju-jitsu | | |
| .06 | karate | | |
| .07 | kendo | | |
| .08 | kung fu | | |
| .09 | taekwondo | | |
| .10 | wrestling | | |
| .11 | self defence | | |
| .99 | other | | |
| 12. Power | | | |
| .01 | powerlifting | | |
| .02 | strength and conditioning | | |
| .03 | weightlifting | | |
| .99 | other | | |
| 13. Equestrian | | | |
| .01 | dressage | | |
| .02 | endurance riding | | |
| .03 | eventing | | |
| .04 | pony club | | |
| .05 | show jumping | | |
| .06 | polo/polocrosse | | |
| .07 | rodeo | | |
| .08 | trotting/harness | | |
| .09 | racing | | |
| .10 | mustering or stock work | | |
| .11 | trail or general riding | | |
| .99 | other | | |
| 14. Adventure | | | |
| .01 | abseiling | | |
| .02 | hiking | | |
| .03 | mountaineering | | |
| .04 | rafting | | |
| .05 | rock climbing | | |
| 15. Motor | | | |
| .01 | motor cycling | | |
| .02 | motor racing - car | | |
| .03 | go-karting/karting | | |
| .99 | other | | |
| 16. Wheeled | | | |
| .01 | BMX | | |
| .02 | cycling - road | | |
| .03 | cycling - mountain | | |
| .01 | in-line skating (roller blading) | | |
| .02 | roller hockey | | |
| .03 | roller skating | | |
| .04 | skateboarding | | |
| .99 | other | | |
| 17. Multidiscipline and Related | | | |
| .01 | biathlon | | |
| .02 | modern pentathlon | | |
| .03 | triathlon | | |
| .04 | duathlon | | |
| .99 | other | | |
| 18. Aero | | | |
| .01 | aerobatics | | |
| .02 | gliding | | |
| .03 | hang gliding | | |
| .04 | parachuting | | |
| .05 | para-gliding | | |
| .99 | other | | |
| 19. Disabled | | | |
| .99 | other | | |
| 20. Other | | | |
| .01 | Aussie Sport (modified sport) | | |
| .02 | school sport | | |
| .03 | school PE | | |
| .04 | school free play | | |
| 21. Unspecified | | | |
| .99 | other | | |

Phase or aspect of involvement in activity or event

Definition the phase of the activity when the injury occurred.

Guidelines Select term most applicable to a particular sport or select ‘other’ category and explain

Comment: This item will help to identify the particular phase of sport when injury occurs. If trying to identify when during competition the injury occurred, to try and relate the injury to warm up or fatigue, it would be important to record the time of injury, the amount of time the person had been participating and the time into the game.

Coding Options

- | |
|---|
| <ol style="list-style-type: none"> 1. pre-event (eg journey, taping, dressing) 2. warm up 3. training 4. competition 5. cool down 6. post event (eg journey, showering) 7. during other activity _____ 8. unknown |
|---|

Activity when injured: grade or level

Definition: Grade or level of competition or type of activity at the time of injury. The elite level includes state or national representation, a national level competition such as the National Basketball League or National Soccer League, or athletes on an AIS/SIS scholarship. The grade of competition can be broken down into Masters/Veterans, Adult/Other and Junior. The grade of competition can be broken down into sport specific categories if required.

Guidelines: Using the matrix, identify if the competition is elite or non-elite and then the grade of activity.

Comment: This item can help to identify if injuries are more prevalent in elite or non-elite competition as well as if the injury rate is higher in lower grade competition. In some sports the level of sports medicine support is higher for first grade with doctors, physiotherapists and sports trainers, whereas in lower grades the players are not well supported. Skill levels and fitness may vary between levels of play and relate to injury prevalence.

| Elite | Non-elite/other |
|--|--|
| Masters/Veterans | Masters/Veterans |
| <ul style="list-style-type: none"> • age groups etc | <ul style="list-style-type: none"> • age groups etc |
| Adult/Other | Adult/Other |
| Examples <ul style="list-style-type: none"> • 1st, 2nd, 3rd etc grade • Pennant, A, B, C grade • weight categories etc | Examples <ul style="list-style-type: none"> • 1st, 2nd, 3rd etc grade • Pennant, A, B, C grade • weight categories etc |
| Junior | Junior |
| <ul style="list-style-type: none"> • age or weight categories etc | <ul style="list-style-type: none"> • age or weight categories etc |

Injury Factors

Definition Types of objects, substances and environmental factors involved in the occurrence of injury.

Guidelines Select the code that best describes the main factor which led to the occurrence of the injury. Give preference to specific factors over general ones. If two or more categories are judged to be equally appropriate, select the one that comes first in the code list.

Alternatively, as sports injuries are often multi-factorial, a data collection system might record more than one factor. In a situation where there are two or more risk factors, list the item occurring first in the list as factor 1 and the next factor in the list as factor 2.

The following list has been subjectively abbreviated from NDS-IS - Level 2, item 6 Major Injury Factors to include factors most relevant to sport. Where the item maps to the NDSIS list, the code item is shown. Where there is an asterisk (*), the item has been added as a potential injury factor. As the item is used in sports injury surveillance and feedback is given, the factor list will be modified.

A complete list of injury factors from the NDS-IS v2c is included in Appendix D for reference.

| Injury Factor Group Name | Factor Number | Title |
|---|---------------|---|
| EXTERNAL FACTORS | | |
| 06. Sporting Equipment | | |
| | 0601 | ball |
| | 0609 | other sporting projectile eg javelin, puck, discus |
| | 0629 | bat, racquet, hockey stick etc |
| | * | field equipment eg goal post, corner post, base, stumps |
| | * | surrounding equipment eg fencing, signs, spectator seating, PA system |
| | * | other object/structure on or near playing area |
| | 0699 | other or unspecified sporting equipment |
| 08. Natural object or animal | | |
| | 0801 | tree (includes branch, stick, twig) |
| | 0802 | plant (excludes tree [0801]) |
| | 0811 | climatic factor (eg wind, rain, snow, sunshine) |
| | 0821 | natural surface (includes irregularity such as pothole) |
| | 0832 | dog |
| | 0833 | horse |
| | 0899 | other or unspecified natural object or animal |
| 09. Food, drink, personal use item | | |
| | 0903 | alcohol (beverage) |
| | 0921 | footwear (includes sporting or industrial shoe or boot) |
| 11. Structure or fitting | | |
| | 1124 | floor |

| | | |
|--------------------------------------|------|---|
| | * | floor - wooden |
| | * | floor - concrete |
| | * | floor - synthetic surface (grass, rubber matting) |
| | * | floor - tennis etc hard court surfaces |
| * Outdoor playing environment | | |
| | * | surface - turf (uneven, long grass, pot holes) |
| | * | surface - sand (compacted, wet, unraked) |
| | * | bitumen, concrete (poor condition, holes, loose stones) |
| | * | clay, crusher dust etc |
| 13. Miscellaneous | | |
| | 1302 | hypodermic needle, syringe |
| * Other: environmental | | |
| | * | heat: solar, humidity |
| | * | cold: snow, blizzard, ice |
| | * | wet and slippery ground conditions |
| | * | hard and compacted ground conditions |
| | * | windy, storm |
| | * | lightning |

Equipment used with intent to protect against injury

- Definition** equipment used or designed to protect participant or spectators from injury.
- Context** this will generally be protective equipment such as padding, braces and guards, but may include vehicle safety devices, or barriers constructed to separate the activity from the spectator
- Guidelines** choose the item or items from the list that were used on the body part injured, or may relate to the cause of injury. For example, a mouthguard can protect the teeth and gums, but can also reduce the forces transmitted to the head and reduce concussion.

Specific questions may be phrased on the data collection form such as:

- Was protective equipment worn on the body part injured, or related to the injury (eg mouthguard can lessen concussion from a blow to the jaw)? If yes, specify _____
- Were the required protective devices, such as goal post padding or netting behind batter and catcher, in use and of required standards? Specify _____

Comment: Protective devices, personal or environmental, are important factors in creating a safer environment for sport. This question is designed to ascertain the use of protective equipment and the relationship to injury. This can be a valuable question for assessing the effectiveness of protective equipment of reducing or preventing injury.

Personal Protective Devices and Equipment

1. braces, guards, orthoses
2. rigid taping of joints
3. padding of joints and bony prominences
4. thermal devices (thermoskin, wetsuit)
5. splints
6. box (cricket, hockey etc)
7. gloves
8. mouthguard
9. eye goggles (squash, cycling, swimming)
10. helmet
11. face mask
12. footwear (safety design eg hard toes, cleat design, high tops, orthotics)
13. flotation device
14. vehicle restraints

Environmental Protective Devices

1. goal post padding, corner markers etc
2. protective padding, (high jump pits, judo mats)
3. barriers between area of activity and spectators and surrounds
4. safety restraints (ropes, harnesses etc)

Mechanism of injury

(Source: NDS-IS v2.1, additions to list are in italics)

- Definition** The way in which the injury was sustained ie what hurt the person. For example if a player is tackled and collides with the knee of another player with their head, it is the collision with the knee that is the injury mechanism, not the tackle.
- Guidelines** Select the category which best describes the main mechanism of injury, ie the last step in the chain of events which causes the injury. Where two or more categories are judged to be equally appropriate, select the one that comes first in the code list.
- Comment:** A new category of ‘non acute/overuse’ has been included to identify an injury that may not have a well defined injury initiating event but presents for treatment due to a gradual worsening of the condition. These types of injury are usually overuse injuries where several factors combine in effect to cause an injury event, for example, anterior shin pain in runners, shoulder tendinitis in swimmers and patella tendinitis in basketballers and volleyballers.

Fall

- 01 fall or stumble on same level
- 02 fall, slip or trip on same/uneven level
- 03 fall on or from stairs
- 04 fall/jump/awkward landing from lesser height (< 1m)
- 05 fall/jump/awkward landing from greater height (=> 1m)
- 08 other specified fall
- 09 unspecified

Struck, hit by contact with other object, person or animal

- 10 contact with moving object (bicycle, javelin, racquet, ball)
 - 10.1 object is another participant’s equipment (racquet, bat, vehicle etc)
 - 10.9 other moving object
- 11 contact with static object (fence, equipment, posts)
 - 11.1 object is another participant’s equipment
 - 11.9 other static object
- 12 contact with person (umpire, player, spectator)
 - 12.1 moving person
 - 12.2 stationary person
 - 12.3 person, unknown whether moving
- 13 contact with animal (horse, cattle)
- 18 other specified contact
- 19 unspecified contact

Crushing, piercing, abrading

- 20 pinching, crushing
- 21 cutting, tearing
- 22 puncture
- 23 bite/sting by animal/human/insect
- 24 abrading, rubbing, friction (eg foot on boot, sliding across ground)
- 28 other specified crushing/piercing
- 29 unspecified crushing/piercing

Suffocation

- 40 strangulation
- 41 obstruction of airways

- 42 drowning and near drowning
- 43 compression of chest
- 44 asphyxia due to smoke, or oxygen depletion
- 48 other specified suffocation
- 49 unspecified suffocation

Chemical Effect

- 50 corrosion by solid substances
- 51 corrosion by liquid substances
- 52 corrosion by gaseous substances
- 53 corrosion unspecified
- 54 poisoning by solid substances
- 55 poisoning by liquid substances
- 56 poisoning by gaseous substances
- 57 poisoning unspecified
- 58 other chemical effect
- 59 unspecified chemical effect

Thermal effect

- 60 hot liquids of steam
- 61 hot objects
- 62 open fires, flames
- 63 *whole body heating (eg hyperthermia)*
- 64 *part of body cooling (eg frostbite)*
- 65 *whole body cooling (eg hypothermia)*
- 66 contact cooling
- 67 cold unspecified
- 68 other specified thermal effect
- 69 unspecified thermal effect

Electric, radiation effect

- 70 electric current
- 71 welding light
- 72 sun light
- 78 other specified electric/radiation effect
- 79 unspecified electric/radiation effect

Gradual or chronic over-exertion of body or part of body

- 82 *repetitive trauma, overuse*
- 85 *unspecified gradual or chronic over-exertion*

Acute over-exertion of body or part of body

- 86 *sudden or rapid change of speed (includes accelerating, decelerating by own effort)*
- 87 *sudden or rapid change of direction (includes pivoting, twisting)*
- 89 unspecified acute over-exertion of body part or part of body

Other and unspecified mechanism of injury

- 90 acoustic energy, loud noise
- 98 other specified mechanism of injury
- 99 other unspecified

Narrative of mechanism of injury

(Source NDSIS v2.1)

- Definition** A text description of the injury event.
- Context** This information may be used to provide additional information to what is recorded from tick box options. It can also help to cross check accuracy of data in limited option categories.
- Guide for use** Write a brief description, 8 words minimum, of how the injury occurred. It should indicate what went wrong (the breakdown of the event), the mechanism by which this led to injury, and the object(s), substance(s) or other environmental factors most important in the event. The type of place at which the event occurred and the activity of the person when injured should also be indicated, as should use (or presence) or non-use (or absence) of relevant protective devices.
- Comment:** This item is very useful for club or facility injury records. The information is easily collated and able to used for injury prevention measures.
- Examples**
1. Playing soccer in an interschool competition match. The grass pitch was wet. Player slipped while trying to get possession of the ball, striking his mouth against that player's shoulder. Player was not wearing a mouthguard (they were not required by the coach). Player was wearing ordinary soccer boots.

Main elements of information in the example

| | |
|--------------------------|---|
| Specific location | soccer pitch |
| Specific activity | playing school competition soccer |
| What went wrong? | slipped on wet grass during difficult manoeuvre |
| Mechanism of injury | struck another person |
| Specific object, product | not specified |
| Use of safety devices | not wearing mouthguard, wearing soccer boots |

2. Player jumped to block spike, landed on opposing players foot, rolled over ankle. No ankle brace or tape.
3. Player attempting to kick for goal, opposing player tackled from side at knee level, player collapsed. Penalty called.
4. Indoor rock climbing, person experienced pain which has been worsening over last 2 weeks in tendons of right hand fingers and wrist when using small grips.

| |
|--|
| Describe exactly how the injury occurred _____ |
| _____ |
| _____ |
| _____ |
| _____ |

Injury Site

Body Region and Body Chart

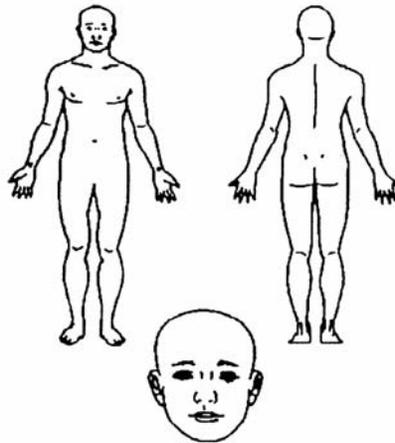
(Source NDSIS v2.1)

Definition body site of injury

Context depending on the detail required for the surveillance, the site of injury can be defined into joints or areas such as face or knee. If a specific structure is required, then further categories are given

Guidelines select the body region by circling or indicating on the body chart the site of injury. Alternatively, the text option can be used. Select the region first and then the specific structure.

If a patient should present complaining of pain in the posterior thigh which is diagnosed as lumbar spine in origin (sciatica), then this should be coded as body part of symptoms as thigh, but the diagnosis will reveal that it is of lumbar origin. This will apply also for upper limb pain that is related to the cervical spine.



Body region list

1. Head (excludes face[2])
2. Face (excludes eye [22])
3. Neck
4. Thorax
5. Abdomen
6. Lower back (includes loin)
7. Pelvis (includes perineum, anogenital area, buttocks)
8. Shoulder
9. Upper Arm
10. Elbow
11. Forearm
12. Wrist
13. Hand (includes fingers)
14. Hip
15. Thigh
16. Knee
17. Lower leg
18. Ankle
19. Foot (includes toes)
20. Unspecified bodily location
21. Multiple injuries (involving more than one bodily location)
22. Body location not required

Specific Structure Injured

1. Head (excludes face)

- .1 ears
- .2 skull
- .3 hair/scalp
- .4 other

2. Face (excludes eye)

- .1 nose
- .2 mouth
- .3 cheek
- .4 jaw
- .5 teeth
- .6 gums
- .7 face non-specified

3. Neck

- .1 cervical vertebrae
- .2 soft tissue - muscles
- .3 soft tissue - joint capsule and ligaments
- .4 skin
- .5 trachea
- .6 oesophagus
- .7 nerves
- .8 blood vessels
- .9 other, not specified

4. Thorax

- .1 thoracic spine vertebrae
- .2 soft tissues - posterior muscles
- .3 soft tissues - anterior and lateral muscles
- .4 soft tissues - ligaments and tendons
- .5 ribs
- .6 internal organs (lungs, heart)
- .7 sternum
- .8 skin
- .9 other, not specified

5. Abdomen

- .1 internal organs
- .2 abdominal muscles
- .3 skin
- .4 blood vessels
- .5 other, not specified

6. Lower Back

- .1 lumbar spine vertebrae
- .2 soft tissues - posterior muscles
- .3 soft tissues - ligaments and tendons

- .4 other, not specified

7. Pelvis

- .1 hip bones (iliac, pubic, sacrum)
- .2 buttock muscles
- .3 groin muscles
- .4 soft tissues - ligaments and tendons
- .5 nerves
- .6 blood vessels
- .7 other, not specified

8. Shoulder

- .1 gleno-humeral joint
- .2 AC joint
- .3 SC joint
- .4 anterior soft tissues (joint capsule, tendons and ligaments)
- .5 posterior soft tissues (joint capsule, tendons and ligaments)
- .6 superior soft tissues
- .7 inferior soft tissues
- .8 skin
- .9 blood vessels
- .10 other, not specified

9. Upper Arm

- .1 anterior muscles and soft tissues
- .2 posterior muscles and soft tissues
- .3 skin
- .4 blood vessels
- .5 other, not specified

10. Elbow

- .1 radio-humeral joint
- .2 ulnar-humeral joint
- .3 superior radio-ulnar joint
- .4 nerves
- .5 medial soft tissues
- .6 lateral soft tissues
- .7 skin
- .8 blood vessels
- .9 other, not specified

11. Forearm

- .1 radius
- .2 ulna
- .3 medial soft tissues'
- .4 lateral soft tissues
- .5 skin
- .6 blood vessels

.7 other, not specified

12. Wrist

- .1 inferior radio-ulnar joint
- .2 wrist joints
- .3 soft tissues (ligaments, tendons etc)
- .4 nerves
- .5 blood vessels
- .6 skin
- .7 other, not specified

13. Hand and Fingers

- .1 bones (metacarpals, phalanges)
- .2 CMC, MCP and IP joints
- .3 soft tissues (ligaments, tendons etc)
- .4 skin
- .5 blood vessels
- .6 other, not specified

14. Hip

- .1 hip (ilio-femoral) joint
- .2 lateral hip muscles (TFL)
- .3 anterior hip muscles (iliopsoas etc)
- .4 blood vessels
- .5 nerves
- .6 other, not specified

15. Thigh

- .1 femur
- .2 anterior muscles (quads)
- .3 posterior muscles (hamstrings)
- .4 medial muscles (long adductors)
- .5 skin
- .6 blood vessels
- .7 other, not specified

16. Knee

- .1 tibio-femoral joint
- .2 patello-femoral joint
- .3 superior tib-fib joint
- .4 soft tissue - cartilage (meniscus)

.5 soft tissue - ligaments, tendon or joint capsule

.6 blood vessels

.7 skin

.8 other, not specified

17. Lower Leg

.1 tibia

.2 fibula

.3 anterior compartment muscles

.4 posterior compartment muscles

.5 calf muscles (gastrocnemius and soleus)

.6 skin

.7 blood vessels

.8 other, not specified

18. Ankle

.1 talo-crural joint

.2 inferior tib-fib joint

.3 soft tissue - ligaments and joint capsule

.4 soft tissue posterior tendons (achilles)

.5 soft tissue anterior/lateral tendons (tibialis anterior, peroneii, extensor hallucis)

.6 blood vessels

.7 nerves

.8 skin

.9 other, not specified

19. Foot and Toes

.1 tarsal bones

.2 metatarsal bones and phalanges

.3 soft tissue - plantar fascia and muscles

.4 MTP joints (hallux valgus)

.5 ligaments, tendons

.6 skin

.7 blood vessels

.8 other, not specified

Nature of injury - pathology

(Source NDSIS v2.1, additional items shown in italics)

Definition: the type of injury pathology. Severity of injury is also related to this category as fractures and eye injuries will generally be more severe than blisters and abrasions.

Guidelines: choose the most appropriate type/s of pathology at the time of presentation. The body part and pathology of the injury are the first two elements of the Orchard Coding System. This information gives a general description of the injury type, but the specific injury diagnosis may be necessary for clinical and hospital injury surveillance. There is the potential for there to be more than one injury type, particularly if there are multiple injuries, or for one injury that includes a fracture and dislocation. It is important to allow the choice of more than one pathology in the reporting form as well as in the data base.

Coding Options

1. Superficial (includes bruise, blister, graze; excl. superficial eye injury [13])
 - 1.1 Blister
 - 1.2 Superficial swelling, inflammation
2. Open wound (excludes eye injury [13])
3. Fracture (excludes fractured tooth [21])
 - 3.1 Stress fracture
4. Dislocation (includes ruptured disc, cartilage.)
5. Sprain or strain
 - 5.1 sprain
 - 5.2 strain
6. Injury to nerve (includes spinal cord; excludes intracranial injury [20])
7. Injury to blood vessel
8. Injury to muscle or tendon
 - 8.1 overuse or stress injury to muscle or tendon
9. Crushing injury
10. Traumatic amputation (includes partial)
11. Injury to internal organ
12. Burn or corrosion (excl. eye [13])
13. Eye injury (excl. foreign body in external eye [14.1]; includes burn)
14. Foreign body
 - 14.1 Foreign body in external eye
 - 14.2 Foreign body in ear canal
 - 14.3 Foreign body in nose
 - 14.4 Foreign body in respiratory tract (excludes foreign body in nose [14.3])
 - 14.5 Foreign body in alimentary tract
 - 14.6 Foreign body in genito-urinary tract
 - 14.7 Foreign body in soft tissue
 - 14.9 Foreign body, other/unspecified
20. Intracranial injury (includes concussion)
21. Dental injury (includes fractured tooth)
22. Drowning or immersion
23. Asphyxia or other threat to breathing (excl. drowning [22])
24. Electrical injury
25. Poisoning or toxic effect (excludes venomous bite [26])
26. Effect of venom; any insect bite
27. Other specified nature of injury
 - 27.1 Hyperthermia

- 28. Injury of unspecified nature
- 29. Multiple injuries of more than one 'nature'
- 30. No injury detected
- 31. Symptoms (not injury)
 - 31.1 Cramp
 - 31.2 Fatigue
 - 31.3 Other symptoms

Provisional Diagnosis

Definition the diagnosis at the time of recording the injury. This diagnosis may change once further information is available on the injury from further diagnostic tests and response to treatment

Diagnosis Text

Free text is used to describe or to give a specific diagnosis for an injury. This could be limited to a list of diagnoses in a selection box, so that several options of spelling eg tendonitis and tendinitis are not recorded as different diagnoses.

The use of diagnosis as text is useful as a back up when there may be a mistake in the recording of the body part or nature of the injury. The text description will help to verify the accuracy of the information.

Injury Diagnosis

| |
|--|
| |
|--|

Treatment Factors

Definition of Treatment

Treatment consists of any action that is taken by attending personnel, to address the needs of someone who is injured or is believed to be injured. This includes such things as initial assessment on the field or in a first aid area, RICER (rest, ice, compression, elevation and referral), dressings, manual therapy, splinting and bracing and massage. Information on the management and rehabilitation of the injury may be kept and this will include presentations at places such as a hospital, sports medicine clinic, physiotherapist, podiatrist or massage therapist. This information is important for medico-legal reasons as well.

The injury details need only be recorded once at the initial presentation for treatment. When ongoing treatment is provided, the reason for presentation is 'ongoing treatment' and the treatment modalities only are recorded for that presentation. Insurance records will generally be a compilation of treatment presentations. Complete injury and treatment records can provide valuable information on the severity of injury, cost of injury and injury outcomes.

Date of presentation

This item records the date of treatment for the injury. In many cases, it will be the same as the date of injury (particularly for acute and severe injuries). This may not necessarily be so, however, if the injured person delays seeking treatment for their injury.

For data consistency, it should be checked that the Date of Presentation is not recorded as occurring before the Date of Injury.

DD/MM/YYYY

Time of presentation for treatment

The time at which the injured person received treatment for, or assessment of, their injury should be recorded by using a 24 hour clock.

This variable is likely to be of most relevance to a medical coverage setting or sporting event setting. In some settings, where the Time of Injury is also recorded, the difference between these two variables can be used to determine the time lag between injury and administration of treatment.

For data consistency, it should be checked that the Time of Presentation is not recorded as occurring before the Time of Injury.

HrHr/MinMin am/pm

Reason for presentation

Definition defines the context for why the person is presenting with an injury. An **injury case** for the purpose of surveillance is defined to be one that arises out of a distinct injury event. The injury may then be classified into a new, recurrent or exacerbated injury.

- A **new injury** is the first ever episode of an injury of this type to this body part/structure. For example, a player's first sprained ankles is recorded as a new injury.
- A **recurrent injury** is a second or subsequent episode, with an 'injury free' period between episodes. 'Injury free' refers to a period where there are no residual signs or symptoms of the original injury and could be weeks, months or years. Recurrent injuries can include ankle sprains, back pain, and finger dislocations.
- An **exacerbated injury** is a recent worsening of an unresolved injury. For example, a player can incur a grade 1 sprain of the medial ligament of the knee and return to play before complete rehabilitation and injure the ligament further and increase the injury to a grade 2 or 3 injury.
- The **ongoing treatment** option should be used during medical coverage for multi-sport events or games over several days when ongoing treatment is provided for participants over the duration of the games. It should also be used to indicate ongoing management of an injury in a clinic setting.

Guidelines select the most appropriate classification of the injury as it relates to the reason for presentation

- | |
|--|
| <ol style="list-style-type: none">1. new injury2. recurrent injury3. exacerbated injury4. ongoing treatment (clinic or games setting)5. other _____6. unknown |
|--|

Treatment

Definition: the type of treatment provided at the initial injury event or as ongoing management of the injury.

Guidelines: choose from the list the treatment or treatments that best describe the immediate or ongoing management of the injured person. More than one treatment may be chosen and an injury surveillance form should allow multiple treatments to be recorded.

1. none needed
2. none given, referred elsewhere
3. crutches
4. medication
5. RICER (rest, ice, compression, elevation, referral)
6. ICE (ice, compression, elevation)
7. heat
8. massage
9. strapping/taping
10. manual therapy/manipulation
11. medical assessment
12. wound management (eg suturing, dressing)
13. joint treatment
14. bracing, splints, plaster
15. immobilisation - by other means than in 15
16. surgery
17. tooth replacement (at time of injury)
18. tooth retrieved, taken with patient to dentist
19. electrotherapy
20. other
99. unknown

Advice given to injured person

Definition immediate advice given to injured person

Context the items in this category can also be used in determining the perceived severity of injury.

Guidelines select the most category of advice given to participant at the time of injury/injury recording

1. immediate return to unrestricted competition or activity
2. able to return to activity with restriction (eg runner for batsmen, NWB activity for athlete with stress fracture)
3. unable to return at present time
4. other _____

Referral

Definition indicates if injured person is referred for further assessment, to whom and how urgently they are advised to seek further assessment or treatment

Context this item will also relate to the severity of injury. Suspected serious injuries will be referred for further evaluation or specialist treatment.

Guidelines Several questions can be phrased on the injury form with there being options for selection.

1. Did you or will you need to refer the injured person for further assessment or treatment?
 Yes No

2. How soon does the person require further assessment or treatment?

1. immediately
2. within the hour
3. within the next 1-4 hours
4. within the day
5. next day
6. within the next 1-4 days
7. within the week
8. within the month

3. Where or to whom is the injured person referred?

1. to other sports medicine professional (excluding doctor)
2. doctor (incl sports physician, surgeon)
3. diagnostic service (eg xray, ultrasound)
4. hospital emergency department
5. self (for further treatment or assessment)
6. other _____

Treating Person

Definition: the person or persons providing treatment or ongoing management of the injured person

Guidelines: choose from the list for the most appropriate title of the person that provided the treatment. If more than one person provides assistance, for example where a sports trainer initially assessed the injured person and then a doctor consults, the first treating person is recorded as the sports trainer, and the doctor as the second.

If the initial treating person has more than one qualification, choose the highest relevant qualification.

1. first aider
2. sports first aider/ sports trainer
3. nurse
4. physiotherapist
5. podiatrist
6. massage therapist
7. doctor/general practitioner (incl sports physician)
8. chiropractor
9. dentist/dental technician
10. optometrist/optamologist
11. orthopaedic surgeon
12. other surgeon
13. coach/umpire
14. self
15. other player
16. parent
99. other _____

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APPENDICES

Appendix A: Orchard Sports Injury Classification System (OSICS)

The Orchard Sports Injury Classification System (OSICS) had been developed for the coding of injuries in football surveys. The range of diagnosis is broad enough for use in most sports, as long as coding is made by practitioners who are familiar with sporting injuries. Contained within the OSICS code of three alphanumeric characters are the relevant body area (first character) and type of pathology (second character). Please note that OSICS is only a list of common diagnoses and must be used in conjunction with a larger database structure for a complete injury survey. Copyright is owned by Dr John Orchard, but use of the system for research is free and encouraged by the author.

Explanation of Codes

| | |
|--|---|
| <p>First Character (body area)</p> <p>Head and neck</p> <p>H - head N - neck</p> <p>Upper Limb</p> <p>S - shoulder U - upper arm E - elbow R - forearm W - wrist P - hand</p> <p>Trunk</p> <p>C - chest O - abdomen D - thoracic back L - lumbar back</p> <p>Lower Limb</p> <p>B - buttock G - groin T - thigh K - knee Q - lower limb A - ankle/heel F - foot</p> <p>General</p> <p>X - multiple areas M - medical problem Z - area not specified</p> <p>Second Character (Type of Pathology)</p> <p>Bone</p> <p>- F - fracture (not stress or avulsion) - G - avulsion or chip fracture</p> <p>CODE Diagnosis</p> | <p>- S - stress fracture - Q - old fracture mal or non-union</p> <p>Joint</p> <p>- D - dislocation - U - recurrent instability/ subluxation - C - articular/ chondral damage - J - minor joint trauma +/-synovitis - P - atraumatic arthritis/ effusion/ joint pain/ chronic synovitis/ gout/ other - A - chronic degenerative arthritis - L - ligament tear or sprain</p> <p>Soft Tissue</p> <p>- M - muscle tear or strain - Y - muscle spasm/ cramps/ soreness/ trigger points - T - tendonitis/ bursitis - R - complete rupture of tendon - H - haematoma/bruising/cork - K - laceration/skin condition</p> <p>Other</p> <p>- B - developmental anomaly - I - infection - E - tumours - O - visceral damage/trauma/surgery - N - neural condition/nerve damage - V - vascular condition - X - systemic disease process - Z - undiagnosed</p> <p>Third Character</p> <p>-1 to -7 common diagnoses -8 to be used when making a diagnosis not included in common diagnosis -9 to be used when specific diagnosis is not known or supplied -A to -Z special diagnoses used for individual centre research or expansion</p> <p>CODE Diagnosis</p> |
|--|---|

| <u>CODE</u> | <u>Diagnosis</u> | <u>CODE</u> | <u>Diagnosis</u> | <u>CODE</u> | <u>Diagnosis</u> |
|--------------------|--|--------------------|--|--------------------|---|
| HF1 | # nose | SG1 | Avulsion # shoulder | UH1 | rupture |
| HF2 | # skull | SS1 | Stress # coracoid process | UH1 | Upper arm haematoma |
| HF3 | # mandible | SD1 | Dislocated shoulder | UK1 | Upper arm laceration/abrasion |
| HF4 | # facial bone (s) | SD2 | Acromioclavicular joint dislocation (gr 3) | EF1 | Supracondylar # humerus |
| HG1 | Avulsed /# tooth | SU1 | Shoulder subluxation / chronic instability | EF2 | # humerus condyle (s) |
| HD1 | Dislocated temporomandibular joint | SC1 | Shoulder chondral lesion (eg SLAP) | EF3 | # head of radius or olecranon |
| HJ1 | Sprained temporomandibular joint | SJ1 | Shoulder joint sprain | EG1 | Elbow avulsion # |
| HY1 | Facial muscle trigger points | SJ2 | Acromioclavicular joint sprain | ED1 | Dislocated elbow |
| HH1 | Head/ Facial haematoma | SP1 | Adhesive capsulitis or frozen/ stiff shoulder | ED2 | Dislocation head of radius (including pulled elbow) |
| HK1 | Scalp laceration/ abrasion | SA1 | Shoulder joint degenerative arthritis | EU1 | Elbow valgus instability |
| HK2 | Facial laceration/ abrasion | SA2 | Acromioclavicular arthritis/ distal clavicular osteolysis | EC1 | Chondral lesion elbow (+/- loose bodies) |
| HI1 | Otitis external | SL1 | Shoulder ligament sprain/ tear | EJ1 | Sprained/ jarred elbow |
| HI2 | Cellulitis/ skin infection, face | SM1 | Muscle strain, shoulder region | EP1 | Elbow atraumatic synovitis |
| HO1 | Eye injury/ trauma | SY1 | Shoulder trigger points/ posterior muscle soreness | EA1 | Elbow joint degenerative arthritis |
| HO2 | Perforated eardrum | ST1 | Rotator cuff tendinitis/ subacromial bursitis/ impingement | EL1 | Elbow medial collateral ligament strain or tear |
| HN1 | Concussion | ST2 | Biceps tendinitis | ET1 | Tennis elbow (lateral epicondylitis) |
| HN2 | Intracranial bleed | SR1 | Rotator cuff tendon rupture/ large tear | ET2 | Golfer's elbow (medial epicondylitis) |
| HN3 | Chronic brain injury | SR2 | Rupture long head of biceps tendon | ET3 | Olecranon bursitis/ apophysitis/ triceps tendinitis |
| HN4 | Cranial nerve injury | SH1 | Shoulder haematoma | ET4 | Elbow joint impingement |
| HV1 | Epistaxis (nosebleed) | SK1 | Shoulder laceration/ abrasion | EH1 | Elbow haematoma |
| HZ1 | Headache/ pain undiagnosed | SB1 | Cervical rib | EK1 | Elbow laceration/ abrasion |
| NF1 | Stable cervical # | SE1 | Tumour, shoulder region | EI1 | Elbow infection |
| NF2 | Unstable cervical # | SN1 | Brachial plexus traction injury/ burner/ stinger | EN1 | Ulnar nerve neuropathy, elbow |
| NG1 | Avulsion # cervical spine (eg spinous process) | SN2 | Axillary nerve palsy | EN2 | Other nerve entrapment, elbow |
| NC1 | Cervical disc prolapse | SN3 | Nontraumatic brachial plexus lesion (including thoracic outlet syndrome) | EZ1 | Elbow pain, undiagnosed |
| NC2 | Cervical disc degeneration | SV1 | Axillary vessel thrombosis/ insufficiency | RF1 | # radius +/- # ulna |
| NU8 | Recurrent vertebral subluxation | SN4 | Suprascapular nerve entrapment or palsy | RS1 | Stress # radius or ulna |
| NJ1 | Whiplash/ Neck sprain | SZ1 | Shoulder pain undiagnosed | RM1 | Forearm muscle strain |
| NP1 | Cervical facet joint pain | UF1 | # shaft of humerus | RY1 | Forearm muscle trigger points |
| NA1 | Cervical facet joint degenerative arthritis | UM1 | Upper arm muscle strain | RY2 | Forearm compartment syndrome |
| NM1 | Neck muscle strain | UY1 | Upper arm muscle soreness/ trigger points | RT1 | Extensor tenosynovitis/ intersection syndrome |
| NY1 | Neck muscle trigger points/ spasm/ torticollis | UR1 | Pectoralis major tendon | RH1 | Forearm haematoma |
| NH1 | Neck haematoma | | | RK1 | Forearm laceration/ abrasion |
| NK1 | Neck laceration/ abrasion | | | RK2 | Forearm skin lesion |
| NB1 | Cervical developmental anomaly | | | RB1 | Radio-ulnar variance |
| NO1 | Laryngeal trauma | | | WF1 | # scaphoid |
| NN1 | Cervical nerve root compression/ stretch | | | WF2 | # other carpal bone |
| NN2 | Neck spinal injury | | | WF3 | Intra-articular # radius |
| NN3 | Cervical spinal canal stenosis | | | WG1 | Wrist avulsion # |
| NN4 | Spinal cord concussion | | | WS1 | Radial epiphysis lesion or |
| NZ1 | Neck pain undiagnosed | | | | |
| SF1 | # clavicle | | | | |
| SF2 | # scapula | | | | |
| SF3 | # neck of humerus | | | | |

| <u>CODE</u> | <u>Diagnosis</u> | <u>CODE</u> | <u>Diagnosis</u> | <u>CODE</u> | <u>Diagnosis</u> |
|--------------------|--|--------------------|---|--------------------|---|
| | carpal stress # | PR1 | Ruptured finger tendon (including mallet finger) | DH1 | Thoracic back haematoma |
| WQ1 | Non-union # scaphoid | PH1 | Hand haematoma | DK2 | Upper back skin lesions |
| WD1 | Dislocated carpus | PH2 | Subungual haematoma/ fingernail problem | DB1 | Thoracic scoliosis |
| WU1 | Carpal instability | PK1 | Hand/ finger laceration/ abrasion | DE1 | Tumour thoracic spine |
| WU2 | Distal radioulnar joint instability | PK2 | Hand/ finger blisters/ contact dermatitis/ callus | DZ1 | Thoracic pain undiagnosed |
| WC1 | Wrist fibrocartilage tear | PK3 | Hand wart or other skin lesion | LF1 | # lumbar vertebrae |
| WJ1 | Sprained/ jarred wrist joint | PI1 | Hand/ finger infection | LG1 | # lumbar transverse or spinous process |
| WJ2 | Distal radioulnar joint sprain | CF1 | # rib (s) | LS1 | Stress # pars interarticularis |
| WP1 | Wrist joint synovitis (including impingement syndrome) | CF2 | # sternum | LQ1 | Nonunion lumbar fracture |
| WA1 | Wrist osteoarthritis (including avascular necrosis) | CS1 | Stress # rib (s) | LC1 | Disc prolapse/ disruption |
| WL1 | Carpal ligament tear | CC1 | Costal cartilage/ costochondral joint injury | LC2 | Disc degeneration |
| WT1 | Extensor tenosynovitis/ de Quervain's disease | CJ1 | Sternoclavicular joint injury | LJ1 | Lumbar facet joint strain/ jar |
| WT2 | Wrist ganglion | CM1 | Chest muscle strain | LP1 | Chronic lumbar facet joint pain (including referred) |
| WT3 | Flexor tenosynovitis | CY1 | Chest muscle trigger points | LA1 | Lumbar facet joint degenerative arthritis |
| WR1 | Tendon rupture, wrist | CH1 | Bruised ribs/ chest wall (excl sternum) | LL1 | Lumbar region ligament sprain |
| WH1 | Wrist haematoma | CH2 | Bruised sternum | LM1 | Lumbar muscle strain |
| WK1 | Wrist laceration/ abrasion | CO1 | Pneumo/ haemothorax | LY1 | Lumbar trigger points or muscle spasm |
| WN1 | Wrist nerve compression (including carpal tunnel syndrome) | CZ1 | Chest pain undiagnosed | LH1 | Lumbar haematoma |
| WV1 | Aneurysm of vessel near wrist | OM1 | Abdominal muscle strain | LK1 | Lumbar laceration/ abrasion |
| WZ1 | Wrist pain undiagnosed | OMR | Proximal rectus abdominus strain | LB1 | Spondylolysis/ listhesis |
| PF1 | Bennet's #/ dislocation | OMO | Abdominal oblique muscle strain | LB2 | Lumbar scoliosis |
| PF2 | # metacarpal | OY1 | Abdominal muscle trigger points or spasm or winding | LB3 | Other lumbar anomaly (eg spina bifida occulta) |
| PF3 | # phalanx | OT1 | Rectus abdominus tendinitis | LE1 | Tumour, lumbar spine |
| PG1 | Avulsion # phalanx | OH1 | Abdominal haematoma | LN1 | Lumbar spinal injury |
| PQ1 | Malunion finger # | OO1 | Abdominal trauma to internal organs | LN2 | Lumbosacral nerve root impingement |
| PD1 | Dislocation metacarpophalangeal or interphalangeal joint | OZ1 | Abdominal pain undiagnosed | LN3 | Lumbar spinal canal stenosis |
| PU1 | Chronic instability of finger or thumb | DF1 | # thoracic vertebrae | LN4 | Lumbosacral nerve stretch/ traction injury |
| PJ1 | sprain metacarpophalangeal or interphalangeal joint | DG1 | # thoracic transverse or spinous process | LZ1 | Lumbar pain undiagnosed |
| PP1 | Finger joint chronic synovitis | DC1 | Thoracic disc prolapse | BF1 | # sacrum/ coccyx |
| PP2 | Hand reflex sympathetic dystrophy | DJ1 | Thoracic joint facet sprain | BG1 | Avulsion # ischial tuberosity |
| PA1 | Finger degenerative arthritis | DP1 | Chronic facet joint pain/ stiffness | BP1 | Sacroiliac joint pain (including spondyloarthropathies) |
| PL1 | Sprain ulnar collateral ligament thumb (skier's thumb) | DA1 | Thoracic facet joint degenerative arthritis | BP2 | Sacrococcygeal joint pain |
| PL2 | Other hand or finger ligament tear | DM1 | Thoracic extensor muscle strain | BM1 | Gluteal muscle strain/ tear |
| PT1 | Trigger finger | DY1 | Thoracic back trigger points | BMM | Adductor Magnus strain |
| PT2 | Hand tendinitis | DT1 | Scheuermann's disease | BMG | Gluteal muscle strain |
| | | | | BY1 | Gluteal muscle or piriformis trigger points |
| | | | | BYM | Adductor magnus trigger points |
| | | | | BYG | Gluteal trigger points |

| <u>CODE</u> | <u>Diagnosis</u> | <u>CODE</u> | <u>Diagnosis</u> | <u>CODE</u> | <u>Diagnosis</u> |
|--------------------|---|--------------------|--|--------------------|---|
| BYP | Piriformis trigger points | GK1 | Groin laceration or abrasion | KC4 | Knee osteochondritis (+/- loose bodies) |
| BT1 | Ischial bursitis | GB1 | Congenital dislocation of hip | KC8 | Knee joint cartilage damage (unspecified) |
| BT2 | Gluteal tendinitis/ enthesiopathy | GI1 | Groin rash/ fungal infection | KJ1 | Knee joint sprain/ jar |
| BH1 | Buttock haematoma | GI2 | Hip joint infection | KP1 | Patellofemoral joint pain |
| BK1 | Buttock laceration/ abrasion | GO1 | Damage to pelvic organ | KP2 | Knee joint rheumatological condition/ atraumatic synovitis |
| BI1 | Ischial abscess | GN1 | Nerve entrapment, groin region | KP3 | Knee synovial plica |
| BN1 | Piriformis syndrome (with sciatic nerve impingement) | GZ1 | Groin pain undiagnosed | KA1 | Knee joint degenerative arthritis |
| BZ1 | Buttock pain undiagnosed | TF1 | # shaft of femur | KL1 | Anterior cruciate ligament strain/ tear/ rupture |
| GF1 | # neck of femur | TS1 | Stress # shaft of femur | KL2 | Posterior cruciate ligament strain/ tear/ rupture |
| GF2 | # pelvic ring | TM1 | Hamstring strain/ tear | KL3 | Knee medial collateral ligament strain/ tear/ rupture (including pelligrini steida) |
| GF3 | # ilium | TM2 | Quadriceps strain/ tear | KL4 | Knee lateral collateral ligament strain/ tear/ rupture |
| GG1 | Pelvic avulsion # (iliac spines and pubic rami) | TM3 | Adductor muscle strain/ tear (including sartorius) | KL5 | Knee arcuate ligament/ posterolateral complex strain/ tear |
| GS1 | Osteitis pubis | TMB | Biceps femoris strain | KT1 | Iliotibial band syndrome |
| GS2 | Stress # neck of femur | TMT | Distal medial hamstring strain | KT2 | Patellar tendinitis +/- bursitis including SLJ syndrome |
| GS3 | Pelvic bone stress # | TMS | Proximal (medial) hamstring strain | KT3 | Hamstring tendinitis/ bursitis |
| GD1 | Dislocated hip joint | TMR | Rectus femoris strain | KT4 | Osgood-Schlatter's syndrome/ tibial tuberosity pathology |
| GC1 | Hip chondral lesion | TMV | Vastus muscle strain | KT5 | Popliteus tendinitis/ strain |
| GJ1 | Hip joint sprain/ jar | TMA | Distal adductor strain | KT6 | Prepatellar bursitis |
| GP1 | Hip joint synovitis | TY1 | Hamstring spasm/ cramps/ trigger points | KT7 | Quadriceps tendinitis or suprapatellar bursitis |
| GA1 | Hip joint osteoarthritis/ avascular necrosis | TY2 | Quadriceps spasm/ cramps/ trigger points/ wasting | KTB | Lateral hamstring insertion tendinitis |
| GA2 | Slipped capital femoral epiphysis | TY3 | Posterior thigh compartment syndrome | KTS | Medial hamstring insertion tendinitis |
| GA3 | Perthe's syndrome | TYL | Lateral hamstring trigger points | KTL | Lateral gastrocnemius tendinitis |
| GM1 | Hip flexor (including psoas) muscle strain/ tear | TYM | Medial hamstring trigger points | KTM | Medial gastrocnemius tendinitis |
| GMA | Proximal adductor strain | TYR | Rectus femoris trigger points | KR1 | Ruptured patellar tendon |
| GMP | Iliopsoas muscle strain | TYV | Vastus trigger points | KH1 | Knee haematoma (extra-articular) |
| GMR | Distal rectus abdominus strain | TH1 | Haematoma of thigh/ hamstrings +/- myositis | KH2 | Infrapatellar fat pad haematoma/ bursitis |
| GM8 | Groin muscle strain (unspecified) | TK1 | Thigh laceration/ abrasion | KK1 | Lacerated knee |
| GY1 | Groin soreness/ trigger points | TE1 | Tumour, thigh region | KB1 | Bipartite patella |
| GYA | Proximal adductor trigger points | TZ1 | Thigh pain undiagnosed | KB2 | Discoid meniscus |
| GYP | Iliopsoas trigger points | KF1 | # patella | | |
| GYR | Rectus abdominus trigger points | KF2 | Knee # intra-articular | | |
| GT1 | Adductor tendinitis/ tear | KS1 | Stress # patella | | |
| GT2 | Hernia/ inguinal canal/ conjoint tendon tear | KD1 | Dislocated patella | | |
| GT3 | Iliopsoas tendinitis/ bursitis | KD2 | Dislocated knee | | |
| GT4 | Trochanteric bursitis | KU1 | Knee joint chronic instability | | |
| GUH | Posterior inguinal canal deficiency | KU2 | Patella instability | | |
| GH1 | Haematoma, hip region | KC1 | Knee articular cartilage damage | | |
| GH2 | Testicular/ scrotal haematoma | KC2 | Medial meniscus tear | | |
| | | KC3 | Lateral meniscus tear | | |

| CODE | Diagnosis | CODE | Diagnosis | CODE | Diagnosis |
|-------------|---|-------------|--|-------------|--|
| KI1 | Infected knee joint | AS1 | Stress # calcaneus or Talus | FS2 | Stress # metatarsal cuboid) |
| KE1 | Tumour, knee region | AD1 | Dislocated ankle | FQ1 | Non/ Mal - union foot # |
| KO1 | Complication of knee surgery | AU1 | Ankle instability | FD1 | Dislocated toe |
| KZ1 | Knee pain undiagnosed | ACI | Ankle osteochondral lesion (including talar dome) +/- loose body | FD2 | Dislocated joint (s) of foot (including Lisfranc injury) |
| KZ2 | Knee joint haemarthrosis caused by internal derangement | AJ1 | Ankle jarring or capsule sprain | FC1 | Fit osteochondrosis (including Kohler's and Frieberg's) |
| QF1 | # tibia +/- fibula | AJ2 | Inferior tibiofibular syndesmosis sprain | FJ1 | Sprain foot joint |
| QF2 | # fibula | AP1 | Ankle joint synovitis (including meniscoid lesion) | FJ2 | Sprained toe/ turf toe |
| QS1 | stress # tibia | AP2 | Ankle Reflex Sympathetic Dystrophy | FP1 | Sesamoiditis/ 1st metatarsophalangeal joint pain |
| QS2 | stress # fibula | AP3 | Sinus tarsi syndrome (subtalar joint synovitis) | FP2 | Tarsal joint pain/ synovitis |
| QD1 | Dislocated superior tibiofibular joint | AA1 | Ankle joint degenerative arthritis | FP3 | Metatarsalgia |
| QJ1 | Sprained superior tibiofibular joint | AL1 | Sprain lateral collateral ligament ankle | FP4 | Gout (foot) |
| QP1 | Baker's cyst (+/- rupture) | AL2 | Sprain medial collateral (deltoid) ligament ankle | FP5 | Foot Reflex Sympathetic Dystrophy |
| QM1 | Calf muscle strain | AT1 | Achilles tendinitis/ retrocalcaneal bursitis | FA1 | 1st Metatarsophalangeal joint degenerative arthritis |
| QMS | Soleus muscle strain | AT2 | Sever's disease | FA2 | Other foot degenerative arthritis |
| QML | Lateral gastrocnemius strain | AT3 | Ankle posterior impingement (including Os trigonum) | FL1 | Foot ligament sprain (including spring ligament) |
| QMM | Medial gastrocnemius strain | AT4 | Ankle anterior impingement +/- osteophytes | FM1 | Foot muscle strain |
| QB1 | Accessory soleus muscle | AT5 | Ankle extensor tendinitis (including Tibialis Anterior) | FY1 | Foot muscle spasm/ cramp/ trigger points |
| QY1 | Calf muscle cramps/ spasm/ trigger points | AT6 | Peroneal tendinitis or subluxation or dislocation | FT1 | Plantar fasciitis/ strain/ calcaneal spur |
| QY2 | Compartment syndrome | AT7 | Tibialis posterior or flexor hallucis tendinitis (ankle) | FT2 | Foot extensor tendinitis |
| QY3 | Lower leg delayed onset muscle soreness | AR1 | Achilles tendon rupture | FT6 | Cuboid syndrome or foot peroneal tendinitis |
| QYS | Soleus trigger points | AH1 | Ankle haematoma | FT7 | Tibialis posterior insertion tendinitis |
| QYL | Lateral gastrocnemius trigger points | AK1 | Ankle laceration | FR1 | Ruptured tibialis posterior tendinitis |
| QYM | Medial gastrocnemius trigger points | AI1 | Ankle infection | FH1 | Foot haematoma |
| QT1 | Medial tibial stress syndrome | AE1 | Osteoid osteoma (ankle) | FH2 | Toenail problem/ haematoma |
| QH1 | Bruised shin | AN1 | Tarsal tunnel syndrome | FH3 | Heel fat pad bruise |
| QH2 | Calf haematoma | AN2 | Medial calcaneal nerve entrapment | FK1 | Foot laceration |
| QK1 | Lacerated shin | AZ1 | Ankle pain undiagnosed | FK2 | Foot blistering/ callus/ ulcer |
| QK2 | Lacerated calf | FF1 | # tarsal bone (other than calcaneus or talus) | FK3 | Plantar wart |
| QI1 | Lower leg soft tissue infection | FF2 | # metatarsal (s) | FB1 | Tarsal coalition |
| QE1 | Tumour, lower leg | FF3 | # phalanx (foot) | FB2 | Symptomatic accessory bone of foot |
| QN1 | Common peroneal nerve palsy (foot drop) | FG1 | Foot avulsion # | FB3 | Foot deformity (including claw, hammer toes, bunions) |
| QV1 | Deep venous thrombosis | FS1 | Stress # midtarsal bone (navicular, cuneiforms, | F11 | Athlete's foot/ tinea |
| QV2 | Calf/ ankle oedema | | | F12 | Foot cellulitis/ infected ulcer |
| QV3 | Varicose veins | | | | |
| QV4 | Popliteal artery entrapment or arterial insufficiency | | | | |
| QZ1 | Lower leg pain undiagnosed | | | | |
| AF1 | Potts # | | | | |
| AF2 | # talus or calcaneus | | | | |
| AG1 | Chip/ Avulsion # ankle | | | | |

CODE Diagnosis

FE1 Osteoid osteoma (foot)
FN1 Morton's neuroma or
Joplin's neuritis
FZ1 Foot pain undiagnosed
XU1 Generalised joint
hypermobility
XP1 Widespread
rheumatological
condition
XY1 Fibromyalgia/ multiple
trigger points
XY2 Generalised muscle
spasticity/ joint
hypomobility
XK1 Rash or other
dermatological condition
XB1 Congenital disease
affecting musculoskeletal
system
XB2 Leg length discrepancy
MI1 Otorespiratory infection
(including tonsillitis, otitis
media)
MI2 Gastrointestinal infection
(including food
poisoning)
MI4 Systemic non-specific
virus
MI5 Virus proven by serology
(eg. Epstein, Hepatitis B)
MI6 Genitourinary infection
MI8 Infection, other
ME1 Non-musculoskeletal
tumour (eg lymphoma)
MO1 Appendicitis
MO2 Urological including
haematuria, varicocele
MO3 Dental, eye, ear, nose or
throat disease
MO8 Other surgical diagnosis
MN1 Neurological including
epilepsy, migraine, coma
MV1 Cardiovascular
MX1 Environmental (including
hypo/ hyper thermia,
barotrauma)
MX2 Condition due to drug use,
overdose, poisoning
MX3 Asthma/ allergy/ hay fever
respiratory
MX5 Gynaecological
MX6 Psychological/ Psychiatric
MX7 Nutritional or
haematological or
enterological or
endocrine

CODE Diagnosis

MX8 Other medical diagnosis
MZ1 Tired athlete undiagnosed
MZ2 Other medical symptoms
or signs, non-specific
ZZ1 Paperwork (certificate,
referral, prescription etc.)
ZZ2 Pre-participation
screening or
precompetition or
insurance
ZZ3 Immunisation or
preparation for overseas
travel
ZZ4 Advice regarding
equipment (eg footwear)

Appendix B - Sports injury definitions

What is a Sports Injury?

Currently, there is no universally accepted or uniform definition of a sports injury (Finch, 1997). Existing definitions have evolved from the purpose or intent of data collection, whether it be for a statistical definition for a large sporting event or a technical definition for a research project.

The term 'sports injury' refers to all types of damage to the body that occurs as a result of competing, training and/or participating in a physical activity (SportSafe Australia: A National Sport Safety Framework, 1997).

In the context of this report, the terms 'sport' and 'sport injury' are taken to apply broadly across each all levels of participation. This definition includes sports related illnesses such as heat stress, sudden death and overtraining, as well as injuries related to occupational pursuits such as training activities for military and emergency services personnel (eg police, fire brigade, etc) and activities of coaches, officials and fitness trainers.

Examples of 'Sports Injury' Definitions

- ⌘ “a reportable injury is one that limits athletic performance for at least the day after the day of onset” (National Athletics Injury Recording System (NAIRS), Clark 1970)
- ⌘ “any injury as a result of participation in sport with one or more of the following consequences (van Vulpen 1989):
 - reduction in the amount or level of sports activity
 - need for (medical) advice or treatment
 - diverse social or economic effects.”
- ⌘ “Any injury which caused a player to miss playing time during a match or be unable to be selected in a match or participate in a training session.” (Orchard, 1993)
- ⌘ A sports injury is an incident that occurs as a result of increased physical activity that is not occupationally related for amateurs, but includes activities of professional athletes” (Harvey, 1997)
- ⌘ “The term “sports injury” refers to all types of damage to the body that occurs as a result of competing, training and/or participating in a physical activity which is largely within the sports arena. This definition encompasses injuries that are incurred during participation in sporting activities across a number of different levels (ASIPT, 1997):
 - formal professional sport
 - formal non-professional sport
 - informal sporting activity
 - school sport
 - general recreation activity
 - fitness activities
 - adventure sports and activities

Appendix C - Injury severity definitions

Severity Definitions

A number of other possible definitions of a sports injury, or an assessment of its severity, can be made (van Mechelen 1997).

Nature of Injury

The nature of injury determines the type of assistance sought and the place of treatment. Abrasions or cuts may be treated by a sports trainer at the side of the field, whereas fractures would be referred to hospital and a medical officer.

Duration and Nature of Treatment

The types and frequency of treatment are strongly related to the injury severity. Surgery and extensive rehabilitation indicates a more severe injury than one that is self treated or which requires only several visits to a physiotherapist.

Sports Time Lost

Time lost from sport has more serious economic consequences for professional athletes, but there is the potential loss of health and psychosocial benefits from exercise for all participants. Examples of severity measures relating to time lost from sport include:

1. minor (1-7 days lost), moderately serious (8-21 days lost) and serious (over 21 days lost or permanent damage) (Schlatmann et al 1986)
2. minor (absence from sport < 1 week), moderate (absence from sport 1-3 weeks) and severe (absence from sport > 4 weeks) (Sandelin et al 1987)
3. Time lost from training (Van Galen and Diederiks 1990)
4. minor (no further treatment required), moderate (some further treatment required) and severe injury (referral to hospital) (Finch 1995)

Working Time Lost

Working time lost gives an indication of the financial consequences of sports injury to society. This should also include time lost from study for full time students.

Permanent Damage

The majority of sport participants recover from injury without permanent disability, but serious injuries such as fractures, and ligament, eye and spinal injuries can result in permanent damage. A participant may have to modify their level of activity, choose an alternative sport or cease activity entirely. The injury may also impact on the individuals capacity for work..

Costs of Sports Injury

The cost of injury includes the financial implications of the previous 5 headings. These costs can be categorised into direct and indirect costs. Direct costs include the cost of medical treatment, rehabilitation, medications, splints and braces, xrays, hospital costs etc. Indirect costs relate to the expenditure incurred due to working time lost and expertise due to death and handicap.

Appendix D - Major Injury Factors NDS-IS v2c

Definition: Types of objects and substances involved in the occurrence of injury.

| Group Name | Code | Title | |
|---|---------------------------------|--|---|
| 01. Infant or child's product | 0101 | baby pram, pusher, etc | |
| | 0102 | baby walker | |
| | 0103 | high chair | |
| | 0104 | cot | |
| | 0109 | other product intended for infant/child care | |
| | 0121 | tree house, play house | |
| | 0122 | tricycle (child's) or other ride on toy (excludes bicycle [0549]) | |
| | 0129 | other toy | |
| | 0141 | flying fox | |
| | 0142 | monkey bar or other playground climbing apparatus | |
| | 0143 | slide, sliding board | |
| | 0144 | swing, swing set | |
| | 0149 | other playground equipment | |
| | 0199 | other or unspecified infant or child's product | |
| | 02. Furnishing | 0201 | bed (excludes bunk bed [0202], cot [0104]) |
| 0202 | | bunk bed | |
| 0219 | | cabinet, rack, room divider, shelf | |
| 0229 | | chair, stool (excludes step, stool [0711]) | |
| 0239 | | sofa, couch, lounge, divan etc | |
| 0249 | | table, desk, bench, etc | |
| 0259 | | rug, mat, loose carpet | |
| 0299 | | other or unspecified furnishing | |
| 03. Appliance | | 0301 | electric kettle or jug |
| | | 0302 | cooking appliance 9includes stove, oven, cook top, BBQ) |
| | 0319 | heating appliance (includes space heater, electric radiator, slow combustion heater) | |
| | 0329 | refrigerator, freezer | |
| | 0339 | iron, other heated clothes pressing appliance | |
| | 0349 | washing machine | |
| | 0399 | other or unspecified appliance | |
| | 04. Utensil or container | 0409 | knife |
| 0419 | | cutlery, food preparation utensil (excludes knife [0409]) | |
| 0421 | | drinking glass | |
| 0439 | | clothesline, clothes drying rack, clothes horse | |
| 0459 | | waste container, rubbish basket, refuse bin | |
| 0491 | | grocery or shopping trolley | |
| 0499 | | other or unspecified utensil or container | |
| 05. Transport (includes mobile machinery | | 0509 | passenger car or station wagon, people mover |
| | | 0511 | ag-bike |
| | 0519 | motorcycle or sidecar, other or unspecified | |
| | 0521 | truck or goods van (3 tonnes or more) | |
| | 0522 | light truck, utility, van (<3 tonnes) | |

| | | |
|-------------------------------------|------|---|
| | 0539 | bus (10 seat or more) |
| | 0549 | bicycle |
| | 0559 | trailer or horse float |
| | 0569 | train or tram |
| | 0571 | tractor |
| | 0572 | harvesting machine |
| | 0573 | auger |
| | 0574 | slasher |
| | 0575 | fork lift or lift truck |
| | 0576 | lawn mower (power or manual) |
| | 0579 | mobile machinery other or unspecified |
| | 0589 | vehicle part, fitting or accessory |
| | 0599 | other or unspecified transport |
| 06. Sporting equipment | | |
| | 0601 | ball |
| | 0609 | other sporting projectile (eg. javelin, discus, puck, shuttlecock) |
| | 0629 | bat, racquet, hockey stick, etc |
| | 0649 | object/structure on or near playing area (eg goal post, boundary fence) |
| | 0699 | other or unspecified sporting equipment |
| 07. Tool | | |
| | 0701 | nail, screw, carpet tack, drawing pin, etc |
| | 0711 | ladder, movable steps (incl. step stool) |
| | 0712 | scaffolding |
| | 0721 | hand tool: hammer (includes sledge, mallet, etc) |
| | 0722 | hand tool: chopping (eg hatchet, axe) |
| | 0723 | hand tool: cutting (eg saw, chisel, plane) |
| | 0724 | hand tool: lifting (eg jack, hoist) |
| | 0731 | power tool: nail gun or stud driver |
| | 0732 | power tool: grinder, buffer, polisher |
| | 0741 | power tool: chain saw |
| | 0742 | power tool: circular saw |
| | 0749 | power tool: other or unspecified |
| | 0751 | shearing plant |
| | 0752 | dairy/milking plant |
| | 0753 | press (excludes printing press [0799]) |
| | 0759 | fixed plant/machinery other or unspecified |
| | 0761 | welding equipment |
| | 0799 | other or unspecified tool |
| 08. Natural object or animal | | |
| | 0801 | tree (includes branch, stick, twig) |
| | 0802 | plant (excludes tree [0801]) |
| | 0811 | climatic factor (eg wind, rain, snow, sun) |
| | 0821 | natural surface (includes irregularity, such as pothole, ditch) |
| | 0831 | bee, wasp |
| | 0832 | dog |
| | 0833 | horse |
| | 0834 | reptile |
| | 0835 | spider |
| | 0836 | cattle |
| | 0837 | sheep |
| | 0899 | other or unspecified natural object or animal |

09. Food, drink, personal use item

| | |
|------|---|
| 0901 | hot oil or fat |
| 0902 | food; cold non-alcoholic beverage |
| 0903 | alcohol (beverage) |
| 0904 | hot beverage (eg tea, coffee, soup) |
| 0921 | footwear (includes sporting or industrial shoe or boot) |
| 0929 | other clothing |
| 0941 | jewellery |
| 0942 | coin |
| 0943 | pen, pencil |
| 0999 | other or unspecified food, drink or personal use item |

10. Chemical substance

| | |
|------|--|
| 1001 | moth repellent (includes naphthalene, camphor) |
| 1002 | petrol, other petroleum distillate (eg kerosene, diesel, fuel oil, white spirit) |
| 1003 | dishwasher detergent |
| 1004 | soap, detergent, cleaning compounds (excludes dishwasher detergent) |
| 1005 | paint, paint thinner (includes turpentine), paint stripper |
| 1006 | bleach, caustic (includes ammonia) |
| 1007 | carbon monoxide |
| 1008 | pesticide, insecticide, herbicide |
| 1049 | other or unspecified chemical substance (excludes drug medication [1099]) |
| 1050 | antihistamine |
| 1051 | aspirin, aspirin compound |
| 1052 | paracetamol, paracetamol compound |
| 1053 | sedative, tranquilliser, psychotropic |
| 1054 | ointment, topical medicine, liniment |
| 1055 | preparation containing iron salt |
| 1099 | other or unspecified drug or medication |

11. Structure or fitting

| | |
|------|---|
| 1101 | toilet bowl, cistern, associated plumbing |
| 1102 | bathtub, shower |
| 1121 | door (includes sill, frame, etc, excludes glass door) |
| 1122 | glass door |
| 1123 | window (includes sill, frame etc) |
| 1124 | floor |
| 1141 | fence, gate |
| 1161 | handrail, railing, banister |
| 1189 | electrical fixture (includes wiring system) |
| 1199 | other or unspecified structure or fixture |

12. Material (not part of structure or of uncertain o

| | |
|------|------------------------------------|
| 1209 | rock, stone, gravel, etc |
| 1219 | brick, concrete, concrete block |
| 1229 | wood: timber, board, splinter, etc |
| 1239 | metal: sheet, part, piece, etc |
| 1249 | glass: sheet, piece, shard etc |
| 1299 | other or unspecified material |

13. Miscellaneous

| | |
|------|--|
| 1301 | pin, needle (excludes hypodermic needle) |
|------|--|

[1302])
1302 hypodermic needle, syringe
1321 hot water
1322 water (excludes hot water [1321])
1331 rope or string
1399 other or unspecified factor

Appendix E - Examples of Sport Specific Data Collection Forms