The Irish Rugby Injury Surveillance Project

School Senior Cup Rugby

2023 - 2024

Season Report

IRFU

UNIVERSITY OF LIMERICK
OLLSCOIL LUIMNIGH

Authored by the Irish Rugby Injury Surveillance (IRIS) Project Steering Group

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Irish Rugby Football Union Foreword

The Irish Rugby Football Union welcome the latest injury surveillance report from the Irish Rugby Injury Surveillance (IRIS) Project. We are encouraged to see the expansion across the school's game and are proud to continue our support to player welfare across all levels of the game. It is important that we have an insight into nature of injury and trends that are occurring in our young players.

These reports played a vital role in our review of injury mechanisms, and our subsequent decision to participate in World Rugby's Global Tackle Height trial. Due to the injury data from the IRIS Project, we are one of a few nations worldwide, that can accurately monitor injury rates before the law change and during the first season of the trial. These data allow us to better understand the impact of lowering the tackle height and improving tackle technique on injury rates, injury severity and injury mechanisms.

The IRFU ENGAGE Readiness and Robustness programme continues to be rolled out across the country, with particular focus now turning to coach engagement within the school's game. The components of this programme also feature in the latest IRFU Guide to Concussion and Graduated Return to Play protocols, released in the 2023/24 season. The proactive approach to concussion management and rehabilitation aims to return players safely and efficiently to rugby performance. The six-stage graded return to aerobic fitness, strength, agility, contact skills and rugby skills aligns to the IRFU ENGAGE Readiness and Robustness programme and tackle technique training.

We commend the IRIS Project on their successful expansion across the schools' game and welcome this season's comprehensive report. Thank you to each and every school, data collector, volunteer, player and researcher that is part of this project. Your continued support is a fundamental component of how we support player health and wellbeing.

Medical Director, IRFU
Dr Rod McLoughlin

Irish Rugby Injury Surveillance Foreword

Comprehensive injury surveillance systems in amateur Rugby Union are needed to enhance player welfare and this innovative project to date has provided essential and accurate data for all those involved in the game to help inform training, recovery, and game policy. The IRIS project has involved the research, design and implementation of an online injury recording platform. This season's report reflects a second full year of injury surveillance after the COVID-19 pandemic in the schoolboy game. The report also involved the continued inclusion of schools from across Munster, Connacht and Leinster.

This report is compiled to give an overview of injury trends in Senior Cup school Rugby across the 2023-2024 season in Ireland. Injury data from 212 matches were analysed, for fifteen school teams representing 481 players. This surveillance would not have been possible without the continued support from dedicated data injury recorders, coaches, doctors, physiotherapists, managers, and ancillary staff within schools: thank you.

The IRIS project includes the addition of amateur men's and women's club Rugby surveillance. IRIS involves research stemming from ongoing injury reduction and sports performance work by University of Limerick academics across a range of sports, as well as our specific expertise in Rugby Union. It has effectively brought together academics with expert practitioner experience from the fields of biomechanics, medicine, biomedical engineering, mathematics and statistics, physiotherapy, sport psychology, and strength and conditioning as well as post-doctoral and doctoral researchers. The holistic approach to injury surveillance and prevention is central to the project.

IRIS Principal Investigators
Associate Professor Tom Comyns, PhD
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1.0 Executive Summary

1.1 Match Injury

Commencing in September 2023, the Irish Rugby Injury Surveillance (IRIS) project collected one full season of injury data across 212 matches from 15 School Senior Cup teams. The matches consisted of friendlies, league games and Cup games.

- There were 15 School Senior Cup teams involved in the IRIS Project for the 2023-2024 season.
- There was a total of 481 School Senior Cup players registered in the IRIS project this season.
- **The overall match time-loss injury incidence rate for School Senior Cup players was 34.7/1,000 player hours.**
  - This is lower than the overall match time-loss injury incidence rate reported for the Schools Senior Cup during the 2022-2023 season (38.5/1,000 player hours).
- A single Senior Cup player would have to play, on average, 25 matches to sustain one injury.

1.2 Training Injury

There was a total of 51 training injuries reported in the School Senior Cup across the season.

1.3 Most Frequent Injury

The head was the most frequently injured body region across the season accounting for 22% of all injuries (a slight increase from 21% in the 2022-2023 season), while injuries to the knee joint represented the most severe (average 116 days absence per injury) and the most burdensome (591 days lost per 1,000 player hours) injury in terms of days absent from play. In the 2022-2023 season, shoulder injuries were most severe (average 72 days absence per injury) and most burdensome (448 days lost per 1,000 player hours).

The most commonly reported match injury diagnoses for the School Senior Cup were concussions (22%) followed by ankle sprains (11%) and shoulder sprains (7%). Reported concussion incidence includes suspected concussions as per IRFU 'Recognise and Remove' protocol. The Graduated Return to Play (GRTP) protocol requires a minimum of 23 days absence from play for players under 20 years of age.

Concussions resulted in an average of 39 days absence from Rugby match or training activities, while ankle sprains resulted in an average of 44 days absence and shoulder sprains resulted in an average of 39 days absence per injury.

1.4 Injury Event

70% of all match injuries occurred during the tackle event. The tackler was at an increased risk of injury (62%), compared to the ball carrier (38%). During the 2022-2023 School Senior Cup season, a slightly lower rate (67%) of injuries occurred during the tackle. The most common mechanism of training injury was non-contact mechanisms (29%), followed by tackling (22%) and being tackled (18%). This was similar to the 2022-2023 season, where non-contact mechanisms (33%), tackling (22%) and being tackled (18%) were most frequent.

1.5 Playing Position

Of all match injuries recorded in the Senior Cup across the season, 62% were to the forwards (position no. 1-8), while 38% were to the backs (position no. 9-15). Openside flankers (no. 7) and loose-head props (no. 1) had the highest proportion of match injuries at 16% and 12% respectively, followed by the inside centre (no. 12) (9%). In the 2022-2023 season, forwards (45%) suffered fewer injuries than backs (55%) and openside flankers (no.7) and scrum halves (no. 9) had the highest proportion of match injuries at 12% respectively.

1.6 Injury Burden

The burden of an injury assesses the incidence of an injury in relation to the severity of the injury (measured as the number of days absent). Concussions carried the highest cumulative match injury burden (291 days lost per 1,000 player hours) and resulted in an average of 39 days absence from Rugby match or training. Knee ACL rupture injuries and other knee ligament injuries accounted for 268- and 243-days absence per 1,000 player hours respectively. In the 2022-2023 season, shoulder dislocations/subluxations carried the highest cumulative match injury burden (291 days lost per 1,000 player hours) and resulted in an average of 108 days absence from Rugby match or training.

2.0 Introduction

2.1 The IRIS Project

The Irish Rugby Injury Surveillance (IRIS) project has developed and implemented the first long-term Rugby specific injury surveillance system within underage and amateur Rugby Union in Ireland. This system monitors the incidence, type, nature and severity of both match and training injuries occurring across the amateur game in Ireland. By monitoring this information, injury trends may emerge which will aid in the continued development and implementation of evidence-based injury reduction strategies in order to minimise injury risk and enhance player welfare.

IRIS Aims:

- To develop and implement an injury surveillance system for underage and amateur Rugby Union in Ireland.
- To monitor the incidence and type of injuries occurring and identify any possible injury risk factors.
- To enhance the health and welfare of Rugby Union players by using this information to assist the IRFU policy regarding injury reduction strategies.

2.2 Injury Definitions

The IRIS project follows the guidelines from the World Rugby 'Consensus statement on injury definitions and data collection procedures for studies of injuries in Rugby Union' [1] and the International Olympic Committee (IOC) consensus statement: methods for recording and reporting of epidemiological data on illness and injury in sport 2020 (including STROBE Extension for Sport Injury and Illness Surveillance (STROBE-SIIS)) [2].

An injury is defined as *"Any physical complaint, which was caused by a transfer of energy that exceeded the body's ability to maintain its structural and/or functional integrity that was sustained by a player during a Rugby match or Rugby training, irrespective of the need for medical attention or time-loss from Rugby activities."*

A recurrent injury is one of the same site and same type as the original injury and occurs within two months of the player returning to match play following the original injury.

A dual injury is one of multiple diagnoses resulting from one injury event. Dual injuries were analysed as one injury event for the purposes of calculating overall incidence and injury severity. However, when analysing injury location and nature dual injuries were separated as per international best practice [1] [2].

Both time-loss and medical attention injuries have been monitored and analysed separately. Medical attention injuries are any injury that resulted in 0-1 days absent from Rugby match or training activities (i.e. slight injuries). Any injury that results in greater than 1 days' absence from match or training activities is classed as a time-loss injury and categorised according to injury severity. Only time-loss injuries were included in injury incidence calculations [1] [2].

Injury severity is calculated as the number of days that elapsed from the date of injury to the date of the player's return to full participation in training and availability for match selection.

Injury severity is classified as; slight (0-1 days), minimal (2-3 days), mild (4-7 days), moderate (8-28 days) and severe (>28 days).

Match injury data are presented as the number of injuries per 1,000 player hours of match exposure. In order to calculate match injury incidence rates, for a team, the following calculation was used:

School Senior Cup Teams match injury incidence rate (IR): [1]

$$IR = \frac{\text{number of injuries}}{\text{number of matches x number of players (15) x match duration (1.17)}} \times 1{,}000$$

Injury definitions are listed in Section 6.0 Glossary of Terms, page 30.

2.3 Recruitment

In the 2023-2024 season, 16 Senior Cup teams were recruited into IRIS. The IRIS project had over 93% compliance for the School Senior Cup. One Senior Cup school team was excluded from data analysis due to poor compliance.

15 teams and 481 Senior Cup players were included in analysis.

Table 1: The IRIS Schools 2023-2024

Division	Number of Schools	Number of Players
School Senior Cup	15	481

Each school nominated an 'injury recorder', who was trained on use of the web-based IRIS system prior to the commencement of each season. Physiotherapists, school nurses or coaches adopted the role of injury recorder. In the majority of schools (87%), coaches acted as injury recorder. Each injury recorder was given a secure and confidential login to their own school team's home-page on the IRIS system. Each team registered all players involved with the Senior Cup teams onto the IRIS system. Beginning with the pre-competitive season (each September), the injury recorder documented all injuries occurring to the Senior Cup team players. Injury specific data such as mechanism, nature, body location, occurrence, diagnosis and return to play date were recoded. Injury severity was calculated using the number of days absent from play.

3.0 Match Injury

3.1 Overall Time-loss Match Injury

Across the season, data from 15 Senior Cup teams across 212 matches were collected. A total of 129 match time-loss injuries (any injury resulting in more than 1 day's absence from Rugby match or training activities) were recorded. Any injuries resulting in 0-1 days' absence from Rugby match or training activities (slight injuries) were considered to be 'medical attention injuries' and are discussed separately in section 3.8. The overall team match time-loss injury incidence rates:

- School Senior Cup – 34.7/1,000 hours.
- This is approximately 2 injuries for every 3 school games.
- A Senior Cup School player would have to play on average 25 matches to sustain one injury.

Table 2 shows the overall team match time-loss injury incidence rate for the School Senior Cup teams.

Table 2: Match time-loss injuries (excluding 'slight' injuries)

Division	No. teams	No. players	No. matches	Exposure hours	No. injuries	IR*
School Senior Cup	15	481	212	3721	129	34.7

*IR – Incidence rate per 1,000 player hours

- 17% of all Senior Cup injuries resulted in a player being sent to the accident and emergency department for management, 2 of these via ambulance transfer.
- 12% of Senior Cup injuries were referred to a GP doctor.
- 50% of Senior Cup injuries were referred to a physiotherapist after the game.
- 14% of Senior Cup injuries required at least 1 day's absence from school.

3.2 Match Injury Classification

The injury diagnosis refers to the specific body location alongside the nature of the injury.

The most common injury diagnoses for the School Senior Cup were concussion (22%), followed by ankle sprains (11%) and shoulder sprains (7%). In the School Senior Cup, there were eight match injuries which had a 'dual' or multiple diagnosis.

Table 3 demonstrates the three most common specific match time-loss injury diagnoses for School Senior Cup teams for the current season (2023-2024) and for comparative seasons (2022-2023, 2019-2020 and 2018-2019)*.

Table 3: Overall most common injury diagnoses for the School Senior Cup; (IR/1,000 player hours, % of injuries)

Schools Senior Cup			
2023-2024	**2022-2023**	**2019-2020**	**2018 - 2019**
Concussion 7.5 (22%)	Concussion 7.5 (19%)	Concussion 9.6 (23%)	Ankle Sprain 11.4 (17%)
Ankle Sprain 3.8 (11%)	Ankle Sprain 3.6 (9%)	Ankle Sprain 4.1 (10%)	Shoulder Dislocation/ Subluxation 7.2 (11%)
Shoulder Sprain 2.4 (7%)	Shoulder Dislocation/ Subluxation 2.7 (7%)	ACJ Sprain 3.2 (7%)	Concussion 6.6 (10%)

* IRIS did not collect full season data during 2020-2021 due to training and match curtailment as a result of the COVID-19 pandemic

The head, followed by the shoulder were the most commonly injured body locations in the School Senior Cup, accounting for 22% and 18% of all injuries respectively in this season. Concussion was the most common diagnosis for the head. Shoulder sprains were the most common injury diagnosis for the shoulder, followed closely by shoulder dislocations/subluxations.

This is similar to the 2022-2023 School Senior Cup season where the head accounted for 21% and the shoulder 16% of all injuries. In the 2019-2020 season, the head accounted for 24% and the shoulder accounted for 17% of all injuries. In the 2018-2019 season, the shoulder followed by the ankle were the most commonly injured body locations, accounting for 26% and 17% of all injuries respectively.

Table 4 shows the most common injury diagnoses for frequently injured body regions.

Table 4: School Senior Cup: Most common injury diagnoses with regards body location. (IR/1,000 player hours, % of injuries)

School Senior Cup 2023-2024	
Location	**Diagnosis**
Head 7.8 (22%)	Concussion 7.5
	Haematoma or laceration 0.3
Shoulder 6.2 (18%)	Ligament sprain 2.4
	Dislocation/subluxation 2.2
	Muscle strain 1.1
	Neurological 0.3
	Other 0.3
Knee 5.1 (15%)	Ligament sprain 3.8
	Meniscus 0.5
	Dislocation/subluxation 0.3
	Haematoma/contusion 0.3
	Muscle strain 0.3
Ankle 4 (12%)	Ligament sprain 3.8
	Fracture 0.3

* Incidence rates are rounded to the nearest one decimal place

3.3 Timing of Match Injury

The highest percentages of injuries for the Senior Cup occurred in the third (30%) and fourth (30%) quarters.

During the 2023-2024 season, the Senior Cup teams saw a decrease in injuries in the second quarter, and similar injury rates in the third and fourth quarters when compared to the 2022-2023 season.

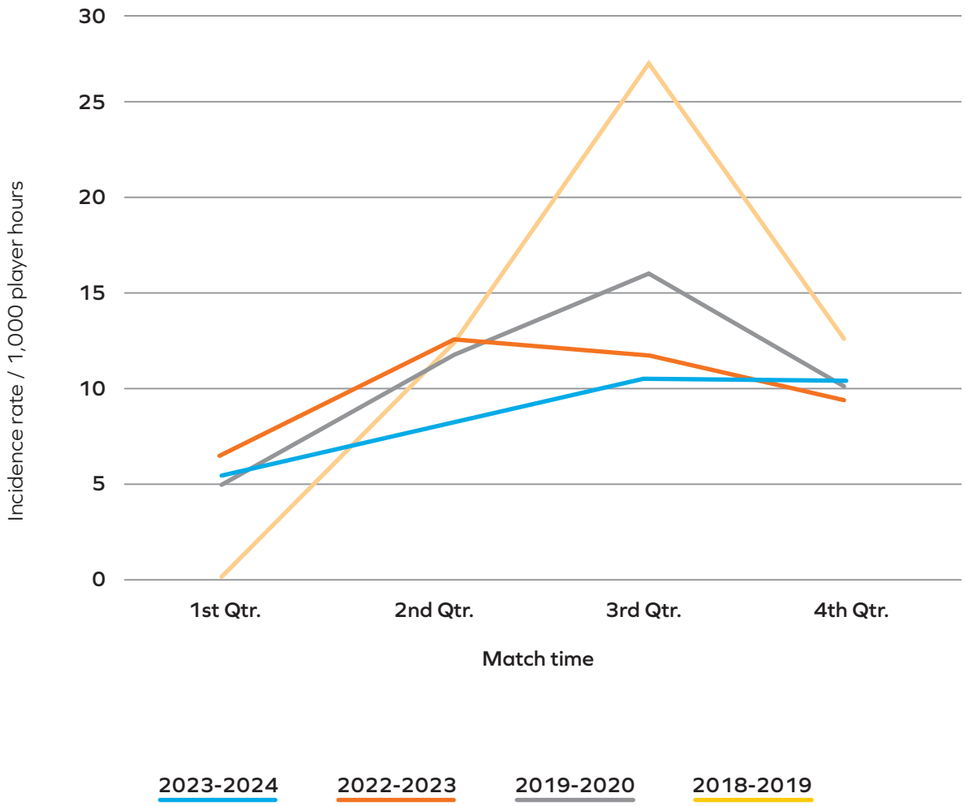

Figure 1: Timing of injury during match play for School Senior Cup teams (IR/1,000 player hours)

3.4 Match Injury Event

Figure 2 shows the event surrounding the occurrence of an injury. The tackle event (70%) accounted for the most common injury event in the School Senior Cup (tackler: 62%, ball carrier: 38%). This is slightly higher than what was recorded in the 2022-2023 season (67%), while the tacklers' rate of injury also increased compared to last season (tackler: 54%, ball-carrier: 46%). However, the 2019-2020 season and 2018-2019 season also varied year on year, with the tackle event contributing 74% and 57% of match injuries in each season respectively.

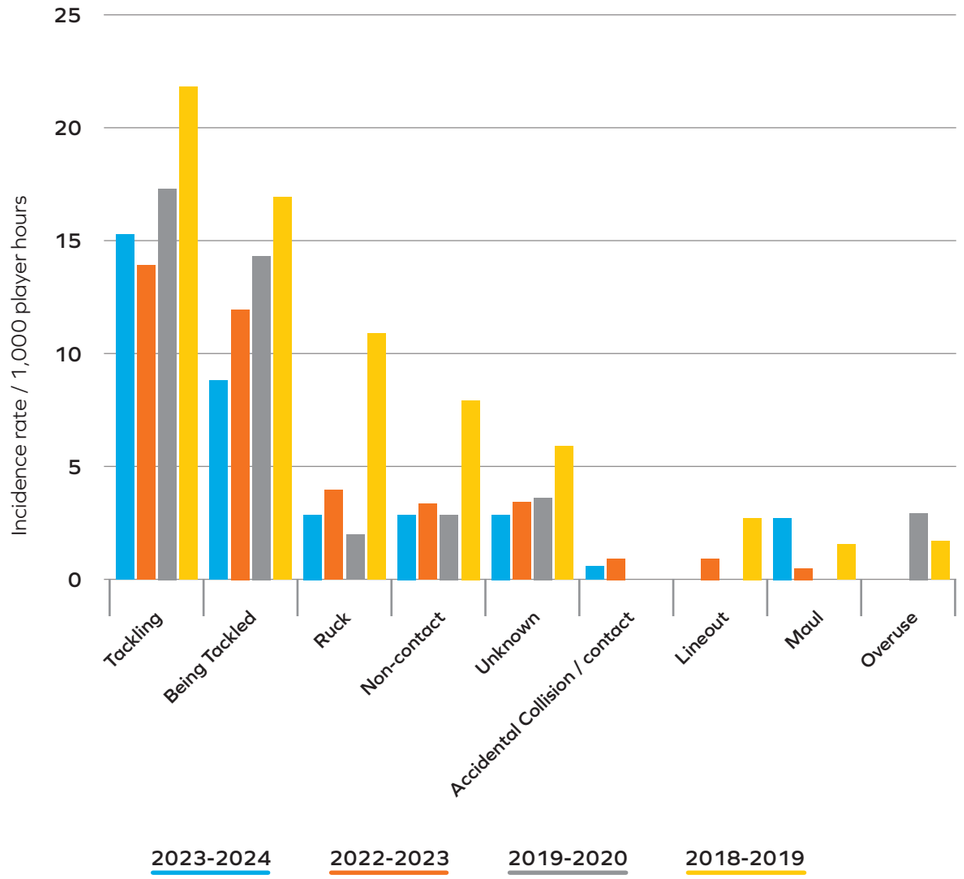

Figure 2: Match injury event (IR/1,000 player hours)

3.5 Nature of Match Injury

The nature of injury refers to the type of injury occurring.

Ligament sprains followed by concussions were the most common injury type for the School Senior Cup teams. 'Other' injuries refer to one incident of muscle spasming resulting in time-loss, and one incident of ocular trauma.

In the 2022-2023 and 2019-2020 seasons, ligament sprains and concussions were also the most common injury type for School Senior Cup teams; however, in the 2018-2019 season, ligament sprains, haematomas/contusions and muscle strains were most common.

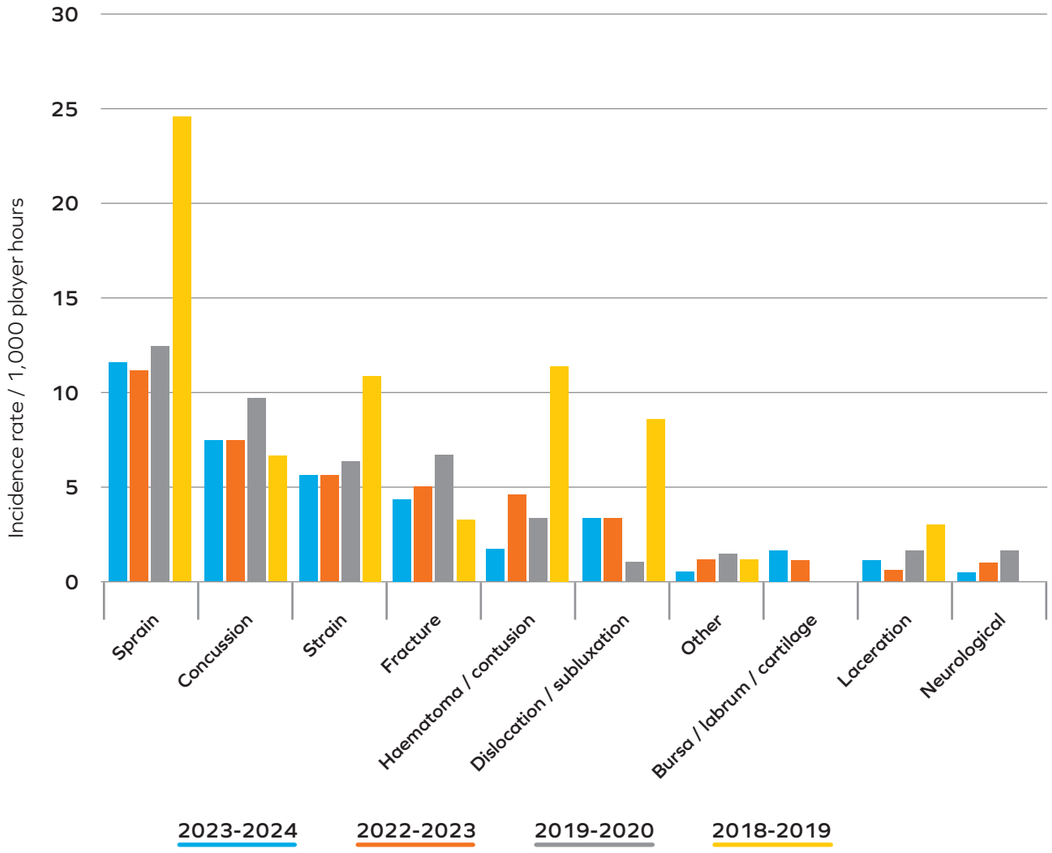

Figure 3: Nature of match injuries (IR/1,000 player hours)

3.6 Body Location of Match Injury

The head was the most commonly injured body region in School Senior Cup games accounting for 22% (7.8/1,000 player hours) of all injuries. The frequency of head injury slightly increased but the incidence slightly decreased from the 2022-2023 season (21%, 8.1/1,000 player hours). Both are lower from the 2019-2020 season (24%, 10/1,000 player hours), while in the 2018-19 season head injuries accounted for 12% of all injuries (8.4/1,000 player hours).

The most common upper limb location of injury was the shoulder accounting for 18% (6.2/1,000 player hours) of all injuries, an increase in frequency from the 2022-2023 season where it accounted for 16% of all injuries (6.3/1,000 player hours), and the 2019-2020 season where it accounted for 17% of all injuries (7.3/1,000 player hours). In the 2018-2019 season, the shoulder accounted for 26% of all injuries (17.4/1,000 player hours).

The most common lower limb location of injury is the knee (15%; 5.1/1,000 player hours) – which is an increase on the 2022-2023 season where it accounted for 10% of all injuries (3.9/1,000 hours) and the 2019-2020 and 2018-2019 seasons where it accounted for 11% (4.6/1,000 hours) and 12% (7.8/1,000 hours) respectively.

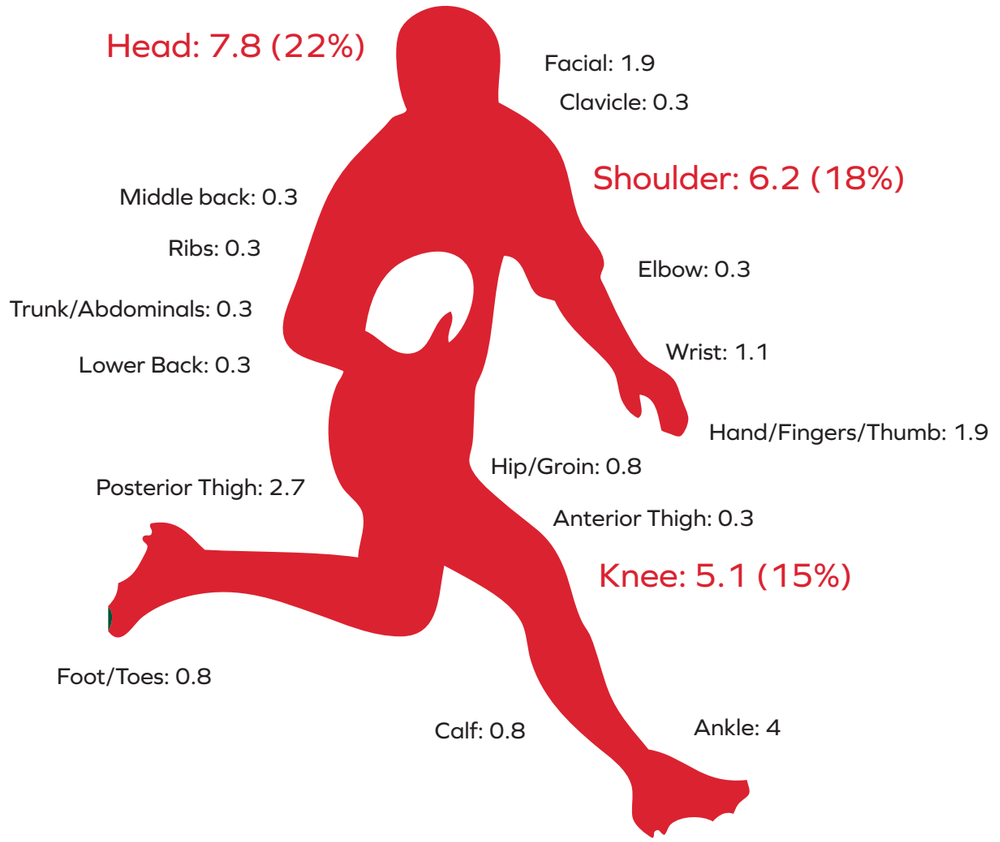

Figure 4: Location of match injury for the School Senior Cup (IR/1,000 player hours)

3.7 Playing Position of Match Injury

Rugby player positions are split into 'forwards' (position no. 1-8) and 'backs' (position no. 9-15). Forwards sustained more injuries with 62%, versus 38% occurring in the backs.

Openside flankers (no. 7) and loose-head props (no. 1) reported the most match injuries at 16% and 12% respectively, followed by the inside centre (9%).

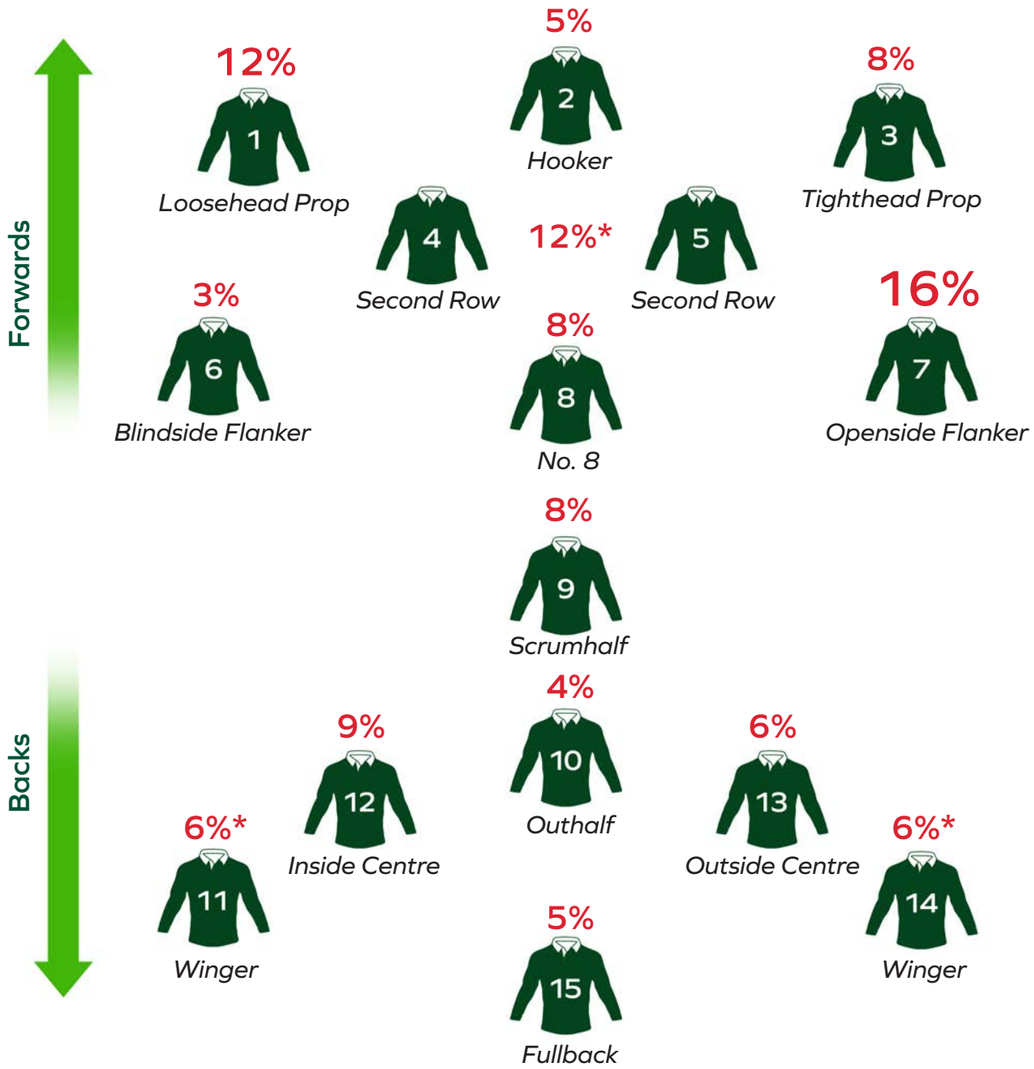

Figure 5:* Percentage of injuries occurring per playing position in the School Senior Cup.

* Second Row and Winger positions denote respective combined percentages for both players in these positions as no differentiation between these positions was applied. The winger % is displayed twice in this graph for illustration purposes but is included once in overall figures. Mathematical rounding applied for illustration purposes.

3.8 Match Injury Severity

Injury severity was calculated as total number of days absent from Rugby match or training and classified according to the World Rugby Consensus guidelines.[1] The majority of injuries were moderate or severe (resulting in eight days or more absence), as shown in Figure 6.

Slight injuries (0-1 days absence) were considered as 'medical attention injuries' and were not included in analysis of time-loss injuries.[1] Slight injuries are discussed in more detail in sub-section 3.10.

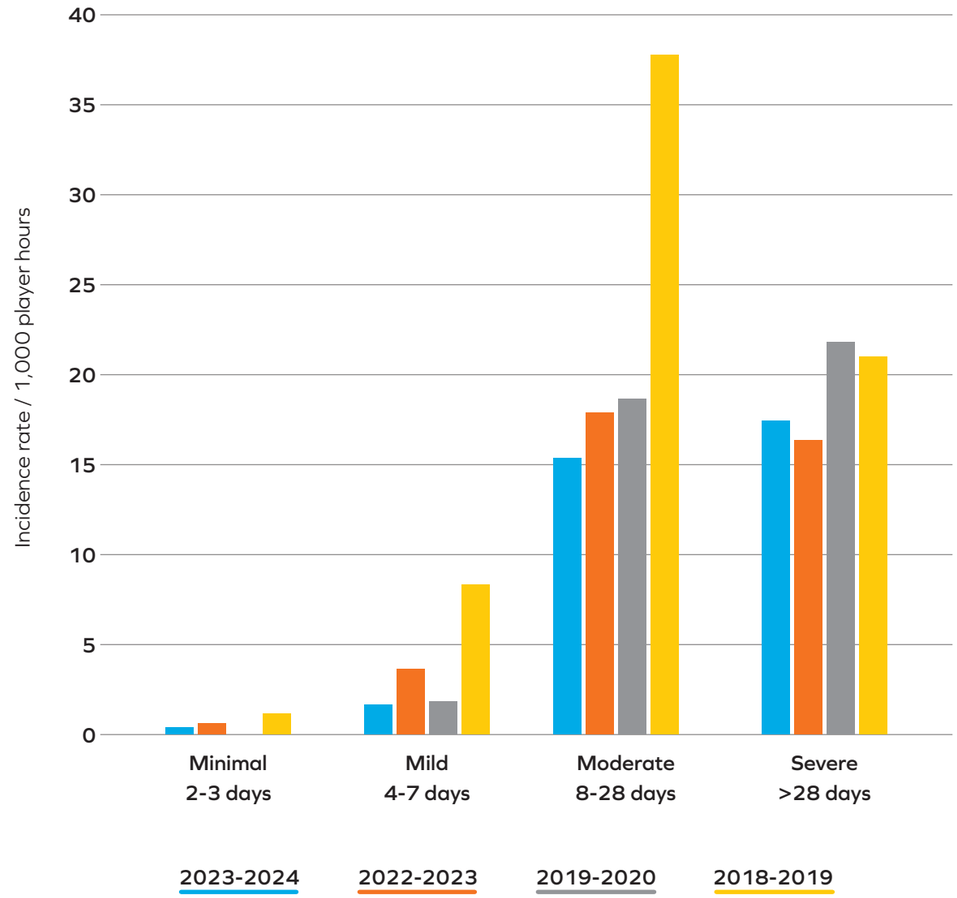

Figure 6: Injury severity of time-loss injuries (IR/1,000 player hours).

3.9 Match Injury Burden

The burden of an injury assesses the incidence rate of an injury in relation to the average severity of the injury ([IR] x [average number of days' absence]).

Concussions carried the highest injury burden in the School Senior Cup; accounting for 22% of all severe match injuries (>28 days absence) and resulted in an average of 39 days absence from Rugby match or training activities.

Table 5: Injury diagnoses, injury burden (days absence/1,000 player hours), average TDO (total days off).

	Diagnoses	Injury Burden	Average Total Days Off
Senior Cup	Concussion	291	39
	Knee ACL rupture	268	335
	Other knee sprain	243	81
	Shoulder dislocation/subluxation	138	64

3.10 Medical Attention Match Injury (slight injury)

Any injuries resulting in 0-1 days absence from Rugby match or training are considered as 'slight' or 'medical attention' injuries and therefore were excluded from the analysis of time-loss injuries, as per international best practice. [1-3]

During the 2023-2024 School season, one medical attention injury was recorded in the Senior Cup. The overall incidence rate for medical attention match injuries for School Senior Cup was 0.3/1,000 player hours.

This medical attention injury in the Senior Cup was diagnosed as turf burn due to the playing surface. This injury occurred during the game's 2nd quarter.

3.11 Other Match-related Injury

One injury occurred during the warm-up in the Senior Cup competitions, and this was not included in the analysis of the time-loss match injury incidence as only injuries occurring during the match play counted as match injuries.

This injury was a concussion, sustained during a tackle, that resulted in 23 days' absence from Rugby activities.

4.0 Training Injury

4.1 Overall Time-loss Training Injury

For the 2023-2024 school season, training injury data are presented below. For operational reasons, as the frequency and duration of training sessions were not recorded for this season, training injury incidence rates were not available. Therefore, the total number of training injuries that occurred are reported.

Any injuries resulting in 0-1 day absence from Rugby match or training activities were considered to be medical attention injuries and were not included in the analysis of time-loss injuries, as per international best practice. [1-3]

The overall number of training injuries for the School Senior Cup teams across the season was 51.

Table 6: Training injuries in the School Senior Cup

	No. Teams	No. Players	No. Injuries
2023-2024	15	481	51
2022-2023	14	481	46
2019-2020	10	270	28
2018-2019	11	305	21

4.2 Training Injury Classification

The injury diagnosis refers to the specific body location and nature of the injury.

The most common injury diagnosis for the School Senior Cup teams was ankle sprains accounting for 20% of all training time-loss injuries, followed by hamstring strains accounting for 16% of all training time-loss injuries. Both ankle sprains and hamstring strains were also frequent in the 2022-2023, 2019-2020 and 2018-2019 seasons.

Table 7 shows the most common specific training time-loss injury diagnoses for the School Senior Cup teams across the season.

Table 7: Overall most common injury diagnoses for the School Senior Cup teams (%frequency).

School Senior Cup			
2023-2024	**2022-2023**	**2019-2020**	**2018-2019**
Ankle Sprain (20%)	Hamstring Strain (15%)	Ankle Sprain (21%)	Hamstring Strain (19%)
Hamstring Strain (16%)	Ankle Sprain (13%)	Hamstring Strain (14%)	Ankle Sprain (14%)
Concussion (14%)	Shoulder Sprain (13%)	ACJ Sprain (11%)	Knee Ligament Sprain (10%) Head Laceration (10%) Calf Strain (10%)

4.3 Body Location of Training Injury

Overall, the ankle was the most commonly injured site in the School Senior Cup training sessions, accounting for 20% of all training time loss injuries.

Figure 7 shows the incidences of injury according to body location for the School Senior Cup teams.

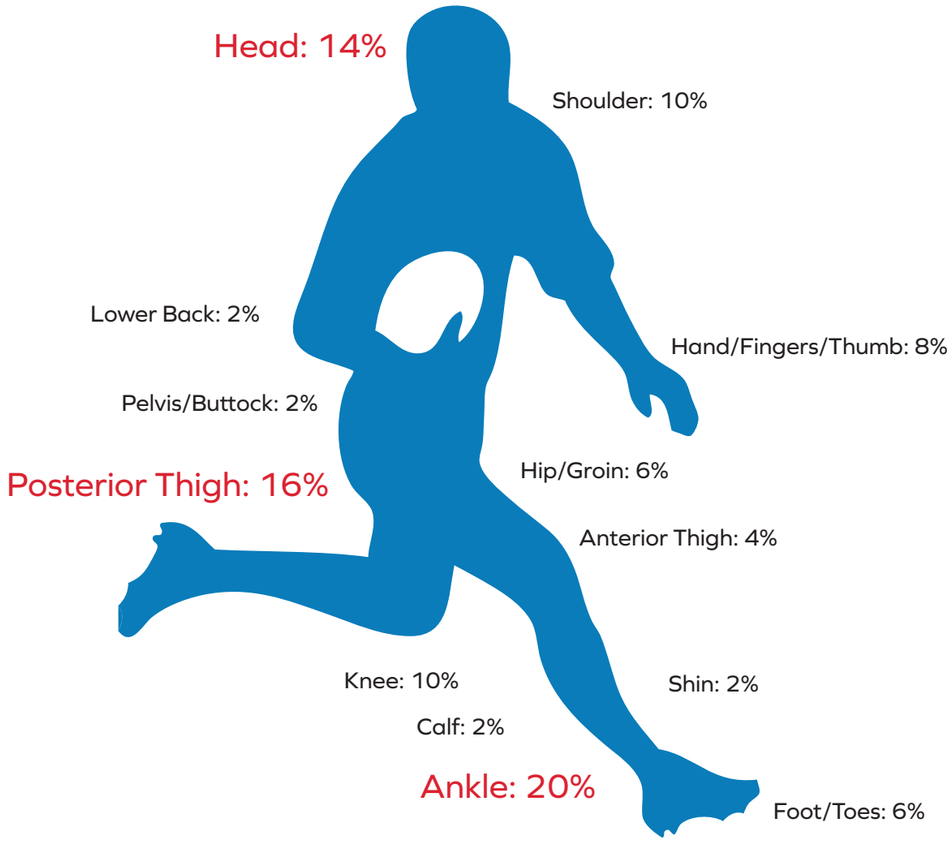

Figure 7: Location of training injuries for the School Senior Cup (% frequency).

4.4 Nature of Training Injury

The nature of injuries refers to the type of injury occurring.

Sprains (referring to ligament injuries) and strains (referring to muscle or tendon injuries) were the most common injury type in the Senior Cup teams across the season.

Figure 8 shows the nature of time loss training injuries for the School Senior Cup teams.

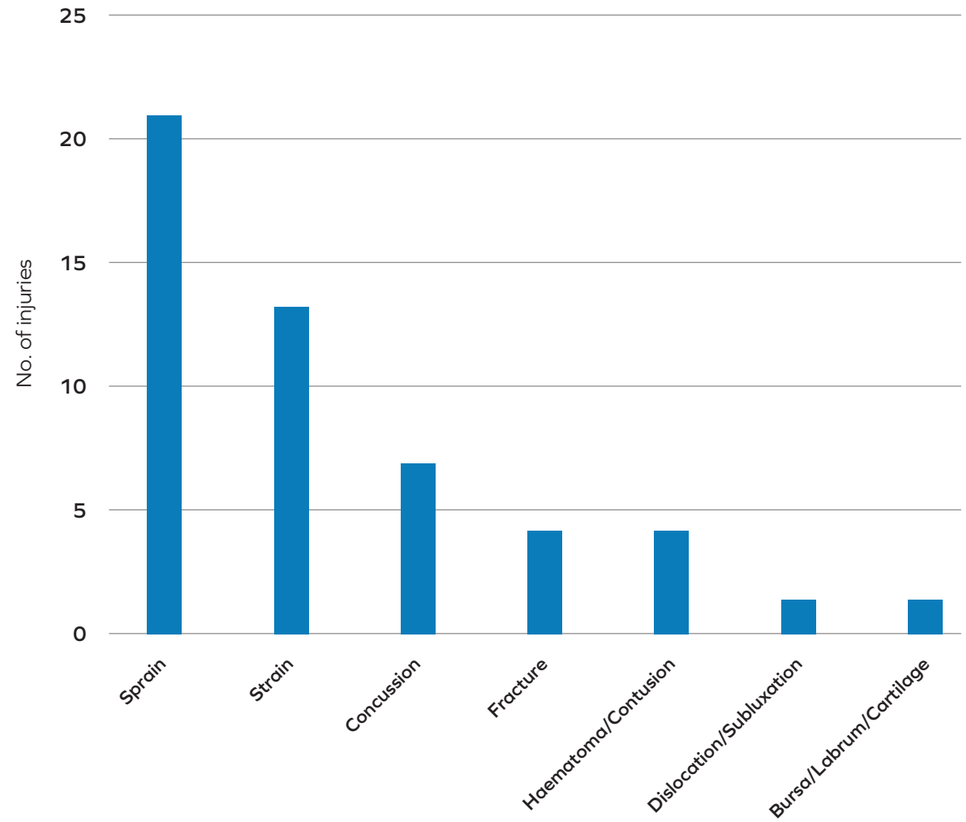

Figure 8: Nature of training injury (number of injuries)

4.5 Training Injury Event

Figure 9 shows the mechanism of injury for the Schools Senior Cup across the season.

Non-contact mechanisms of injury were most frequent (29%), followed by tackling (22%) and being tackled (18%).

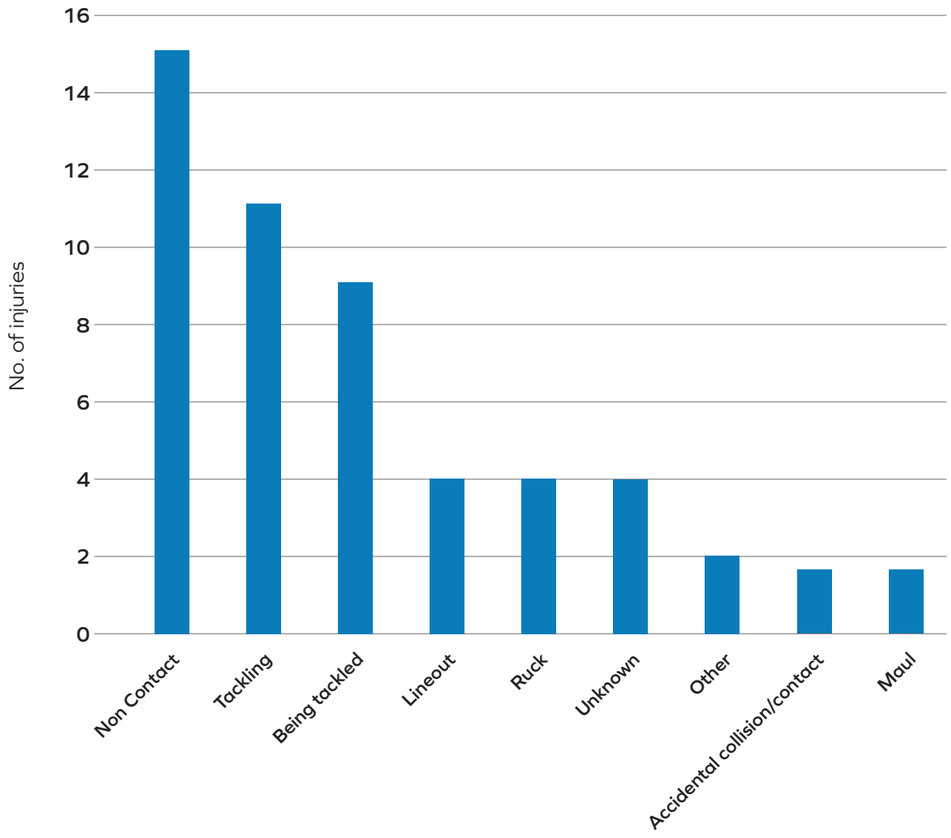

Figure 9: Training injury event (number of injuries)

4.6 Training Injury Severity

Injury severity was calculated as total number of days absent from Rugby match or training and classified according to the World Rugby Consensus guidelines. 49% of training injuries were moderate (8-28 days absence) as shown in Figure 10.

Slight injuries (0-1 days absence) were considered as 'medical attention injuries' and were not included in analysis of time-loss injuries, as per international best practice. [1-3] Slight injuries are discussed in more detail in sub-section 4.7.

The severity of training injuries for the School Senior Cup grade differed from the 2022-2023 season where the majority of time-loss training injuries were severe (>28 days) in terms of time loss from Rugby training or matches.

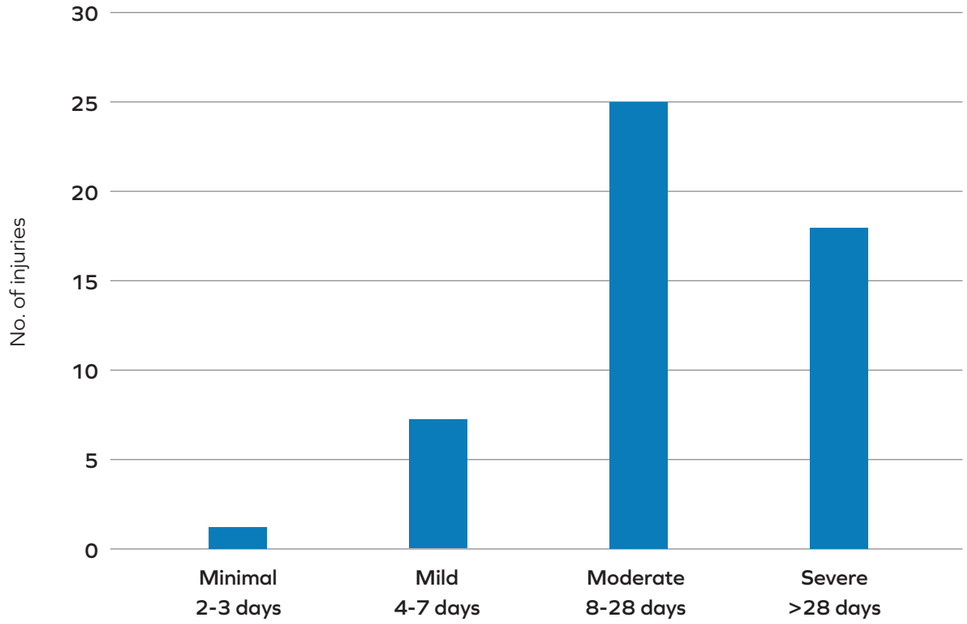

Figure 10: Training injury severity (number of injuries)

The burden of an injury assesses the frequency of an injury in relation to the severity of the injury (measured as the number of days absence). Exposure was not measured in relation to training injuries, therefore 'days lost per 1,000 hours' could not be calculated. However, frequency of training injuries along with average total days off are reported in table 8. Ankle sprains (20%) and hamstring strains (16%) resulted in an average of 23- and 81-days absence from Rugby match and training activities across the season respectively.

Table 8: Frequency of training injuries along with average total days off (TDO)

	Diagnosis	Number of injuries	Average Total Days Off
School Senior Cup	Ankle sprain	10	23
	Hamstring strain	8	81
	Concussion	7	31
	Shoulder sprain	4	25

4.7 Medical Attention Training Injury (slight injury)

Any injury resulting in 0-1 days absent from Rugby match or training is considered a slight, or 'medical attention' injury and therefore were excluded from the analysis of time-loss injuries, as per best international practice. [1-3]

During the season there were zero medical attention training injuries reported in the School Senior Cup training sessions.

5.0 Future Directions of the IRIS Project

Following previous successful seasons of the IRISweb system implementation in schools' Rugby, the 2024-2025 season will expand recruitment to include more nationwide representation of Senior Cup schoolboy teams. The Irish Rugby Football Union has opted in to the World Rugby Tackle Height Law Trial that is running for two years across adult amateur and also age-grade (schools) Rugby from 2023 to 2025 and the IRIS project will help support the research into the impact of this trial across the game.

The IRIS Project began a study in the senior amateur club 2021-2022 season measuring injury epidemiology and programme adherence for an intervention programme called ENGAGE. ENGAGE is a bespoke Rugby Readiness and Robustness programme which aims to improve overall player performance and reduce injury risk. Through a structured and progressive 3-phase programme, ENGAGE prepares players for the immediate training ahead and duration of the competitive matches across the season. IRIS plan to explore this programme in the underage schools' game in future seasons, with a heightened focus on coach support for programme delivery.

The IRIS project has also commenced surveillance into contact-related breast injuries and exercise-induced breast pain in adult female players in Ireland and internationally. This information will help inform all involved in the women's game regarding the prevalence of breast pain and injury and raise knowledge and awareness. In 2024 IRIS also commenced a collaboration with University of Pittsburgh Medical Center (UPMC Ireland) to further explore concussion symptoms, recovery duration and treatment. This collaborative project aligns to the work of IRIS and will over the coming four years enhance our understanding of concussion treatments within the Irish amateur Rugby context.

6.0 Glossary of Terms

Anterior cruciate ligament (ACL) tear refers to a rupture (complete tear) of one of the four main ligaments of the knee joint.

Other knee ligament injuries refer to any other ligament injury of the knee (including the medial and lateral collateral ligaments or posterior cruciate ligament), excluding ACL injuries which are reported separately where possible.

Ankle sprains are ligament tears (sprains) of any ligament in the ankle joint, inclusive of lateral (outside of joint), medial (inside of joint) and syndesmosis sprains (also called high ankle sprains). ATFL sprain (anterior talo-fibular ligament sprain) refers to a tear of the ligament located on the outside of the ankle joint. It is also called an inversion sprain or lateral ligament sprain.

Fracture refers to a partial or complete break in the continuity of bone.

AC sprain refers to a tear of the acromioclavicular joint of the shoulder.

Haematoma/contusion refers to bruising located anywhere in the body.

Hamstring strain refers to a tear in the muscle group located on the posterior aspect (back) of the thigh.

Laceration refers to a cut or tear in the skin.

Shoulder dislocation/subluxation refers to either partial or complete separation of the humerus (upper arm bone) from the glenoid fossa (shoulder socket).

Ocular trauma refers to eye-related injuries.

Turf burns relate to skin abrasions as a result of friction with the pitch surface.

Shoulder sprain refers to a tear in one of the ligaments in the glenohumeral (shoulder) joint.

7.0 Publications and Conferences

7.1 Journal Publications

Bibby K., Kenny I.C., Cahalan R., Purtill H. and Comyns T.M. (2024). Contact Breast Injuries Among Female Athletes – a Systematic Review. Sports Medicine. 54(7), 1921-1930, https://doi.org/10.1007/s40279-024-02027-y

Tondelli, E., Zabalov, S., Kenny, I.C. and Comyns, T.M. (2024). Differences and correlations between horizontal-vertical single-leg jumps performance, dynamic balance and ankle dorsiflexion range of motion in male amateur rugby players according to playing positions. Journal of Bodywork & Movement Therapies. 38, 281-288. DOI: 10.1016/j.jbmt.2024.01.033

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7.2 Conference Communications

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Comyns,T.C., Guilfoyle, L., Dolan, P., Bibby, K., Cahalan, R., Warrington, G., O'Sullivan, K., Glynn, L.G., Lyons, M., Purtill, H., Mulvihill, J.J.E., Campbell, M.J., & Kenny, I.C. (2024) Comparison of Training Injuries in Male Adult Amateur Community Rugby Union and Schoolboy Rugby Union in Ireland. Submitted to the 20th SASMA South African Sports Medicine Association 2024 Conference, 17-19 October, Stellenbosch, South Africa.

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Comyns, T.M. (2024) ENGAGE: Development and implementation of the ENGAGE injury prevention programme with Irish amateur and schoolboy rugby players. Invited talk. Proceedings of the UK Collaborating Centre on Injury and Illness Prevention in Sport (UKCCIIS) International Conference 2024, 8-9 July 2024, Edinburgh, Scotland.

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