UEFA Elite Club Injury Study

2017/18 Season report

Team X

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The UEFA Elite Club Injury Study (ECIS) was initiated by and is funded and supported by UEFA.

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Table of Contents

1 Participating clubs

This season report contains results from July to May of the 2017/18 season for 24 teams that all participated in the group stage of the UEFA Champions League. The following teams have been included: APOEL FC, AS Monaco, AS Roma, Borussia Dortmund, Celtic FC, Chelsea FC, Club Atlético de Madrid, FC Barcelona, FC Basel 1893, FC Bayern München, FC Porto, FC Shakhtar Donetsk, Juventus, Manchester City FC, Manchester United FC, NK Maribor, Paris Saint-Germain, PFC CSKA Moskva, Real Madrid CF, RSC Anderlecht, SL Benfica, Sporting Clube de Portugal, SSC Napoli, Tottenham Hotspur FC.

2 Presentation

The report is divided into nine sections, with data on exposure, general injuries, training injuries, match injuries, severe injuries, muscle injuries, ligament injuries, re-injuries, and squad attendance/availability and absence. These sections contain data of the 2017/18 season from your club in comparison with other participating clubs described as means of the whole season as well as specifically for each month (July-May). Each section also contains historic data which gives you the opportunity to compare the current season with data from your club and other participating clubs in previous seasons. The injury sections are generally split into four sub-sections:

- **Injury patterns:** the relative distribution of injuries of this kind, looking at injury location, type, overuse/trauma, contact/non-contact, severity and re-injury rate.

- **Injury rate:** the number of injuries of this kind relative to exposure time, allowing the individual injury rate to be evaluated. Injury rate is expressed as the number of injuries/1,000 hours of exposure.

- **Days' absence:** the mean number of days lost because of injuries of this kind.

- **Injury burden:** a combined measure of the frequency (injury rate) and severity (days´ absence) of injuries of this kind giving the burden of injury for the player and the consequences for the team. Injury burden is expressed as the number of days of absence/1,000 hours of exposure. Example: Team A with 10 injuries in 5,000 hours, each resulting in an absence of 10 days on average, has an injury burden of 20 days/1,000 hours. Team B with 20 injuries in 5,000 hours, each resulting in an absence of 5 days on average, also has an injury burden of 20 days/1,000 hours.

3 Interpretation of results

When comparing your club's results with those of other participating clubs, please bear the following in mind:

- Because of the limited amounts of data collected over one season, the injury rates presented are sometimes based on just a few actual injuries. This means that some results should be interpreted with caution.

- The overall number of injuries varies between clubs, mainly because of the number of minor injuries. It is therefore important to look not only at the overall injury rate, but also at the data on severe injuries and squad availability, as these variables may have a greater impact on the club.

- In the case of players who were still injured at the end of the season, we have used either the club's estimated return date or an approximation of severity based on the mean absence for this particular injury. Some data on the number of days' absence and injury risk presented in the report could therefore be based on approximate values/estimates.

We hope that you will find this report useful in your daily work treating and preventing injuries at your club. Please do not hesitate to contact FRG if you have any questions about how to interpret the results.

4 Exposure

In total, 160 000 hours of exposure were recorded during the season in the 24 UEFA Champions League teams, with approximately 135 000 training hours (84%) and 25 000 match hours (16%). Team x reported xx hours of total exposure, with xx training hours (xx%) and xx match hours (xx%).

On average, teams reported 214 training sessions and 58 matches over the review period. Since the reporting period differed between teams, we have also calculated a monthly training and match load. On average, teams had 20 training sessions and 5.5 matches each month, giving an average training-to-match exposure ratio of 5.4 hours of training for each hour of match play.

Figure 1. Number of training sessions per month

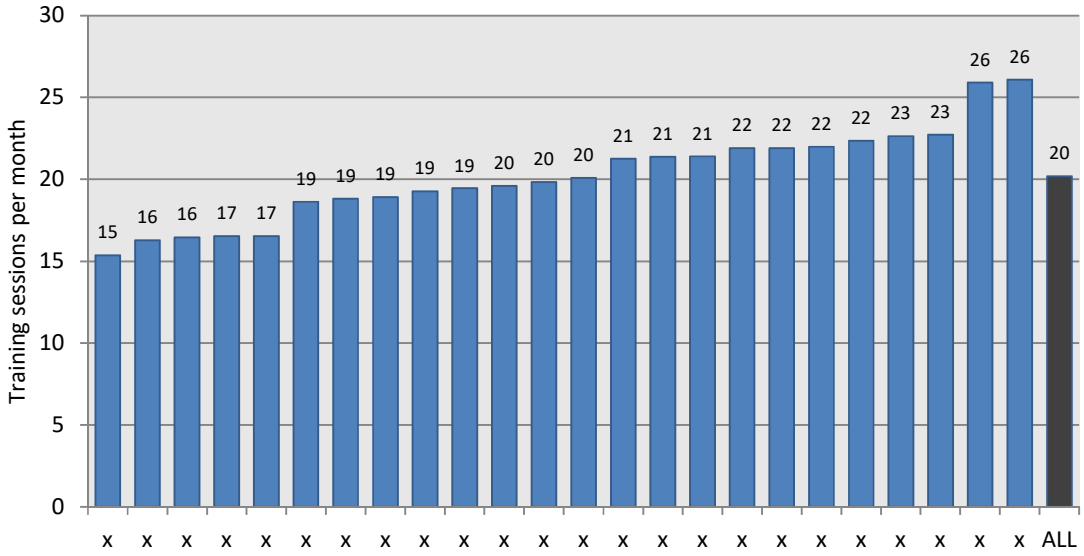


Figure 2. Number of matches per month

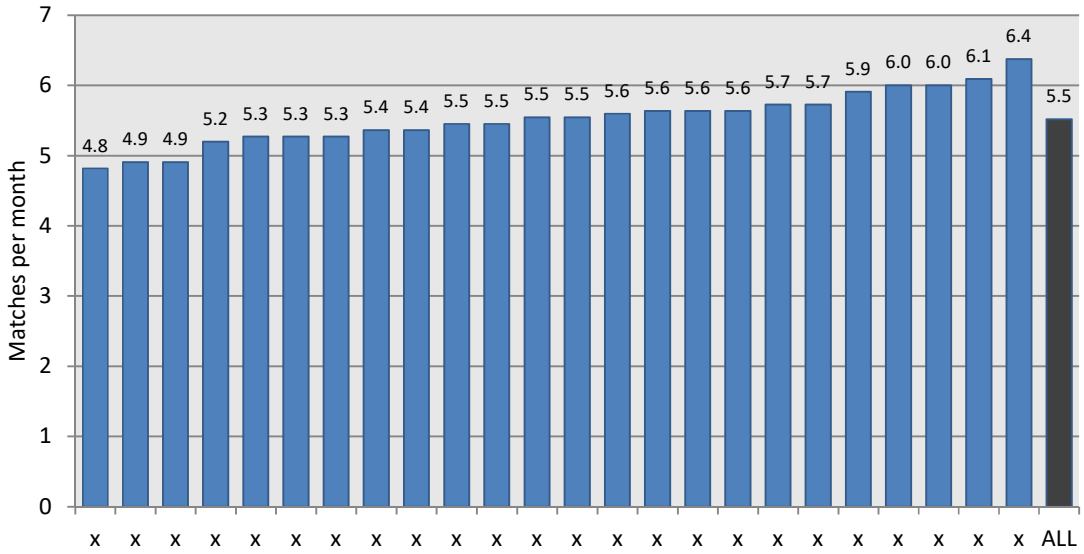


Figure 3. Ratio of training hours to match hours

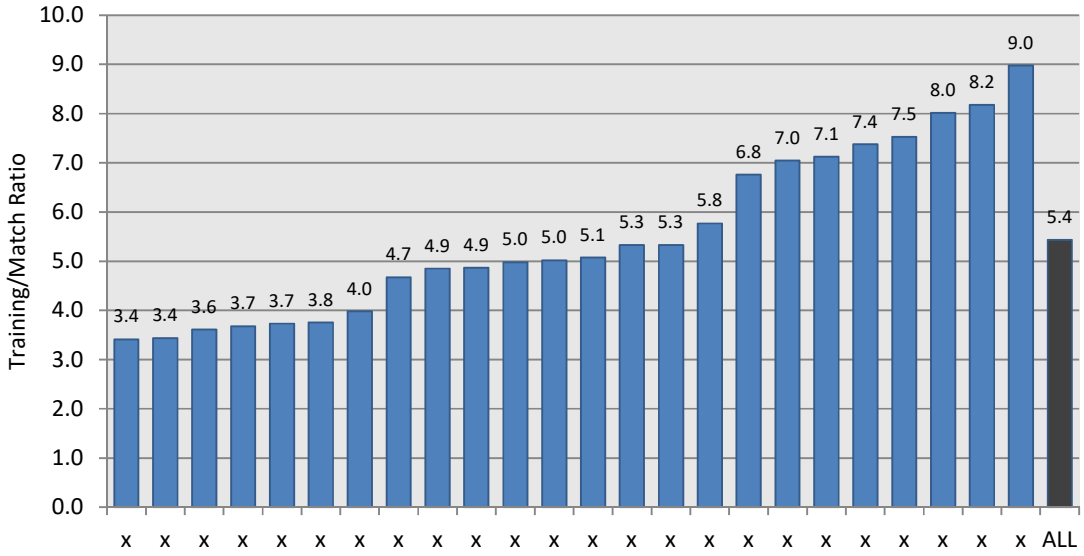
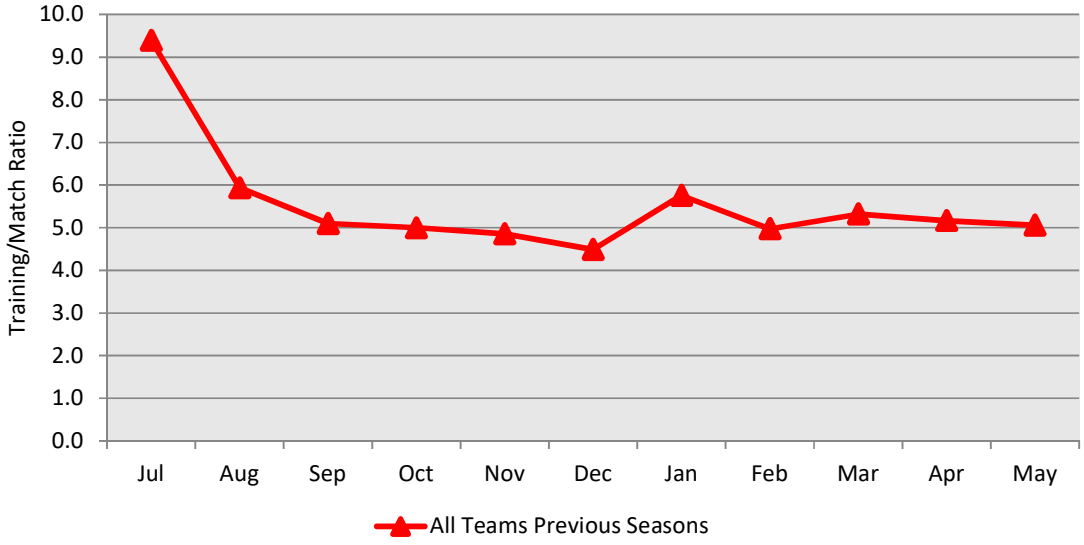


Figure 4. Ratio of training hours to match hours for Team X over the season in comparison to previous seasons



5 General injuries

5.1 General injury patterns

The figures below show the relative distribution (%) of different injuries. In total the 24 UEFA Champions League teams reported 845 injuries, with 341 training injuries (40%) and 504 match injuries (60%). There were 172 severe injuries (20%), 401 muscle injuries (47%) and 132 ligament injuries (16%).

Team x reported xx injuries (xx training injuries; xx match injuries) during the season, including xx severe injuries, xx muscle injuries and xx ligament injuries.

Figure 5. Distribution of injury locations

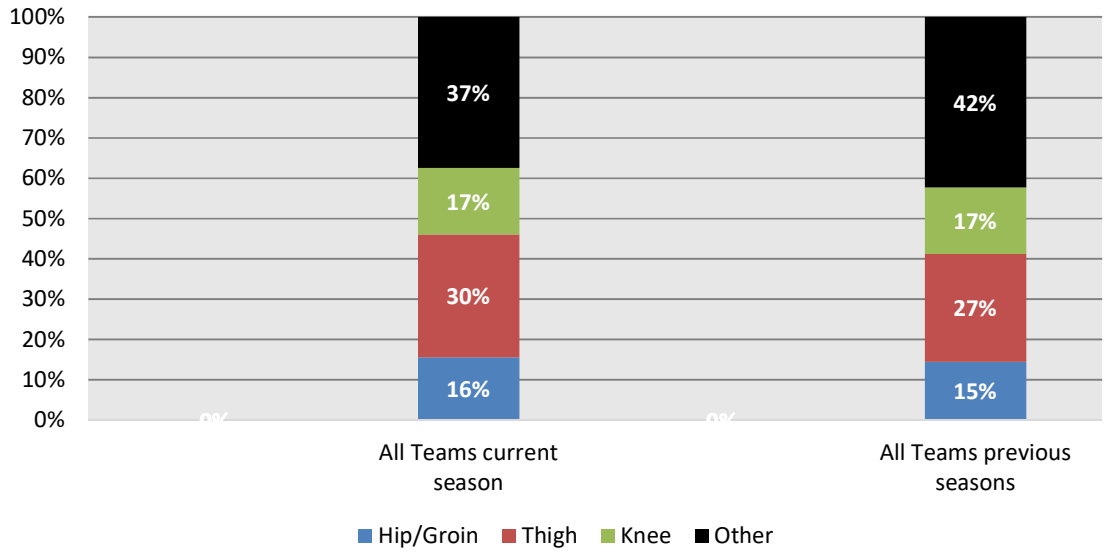


Figure 6. Distribution of injury types

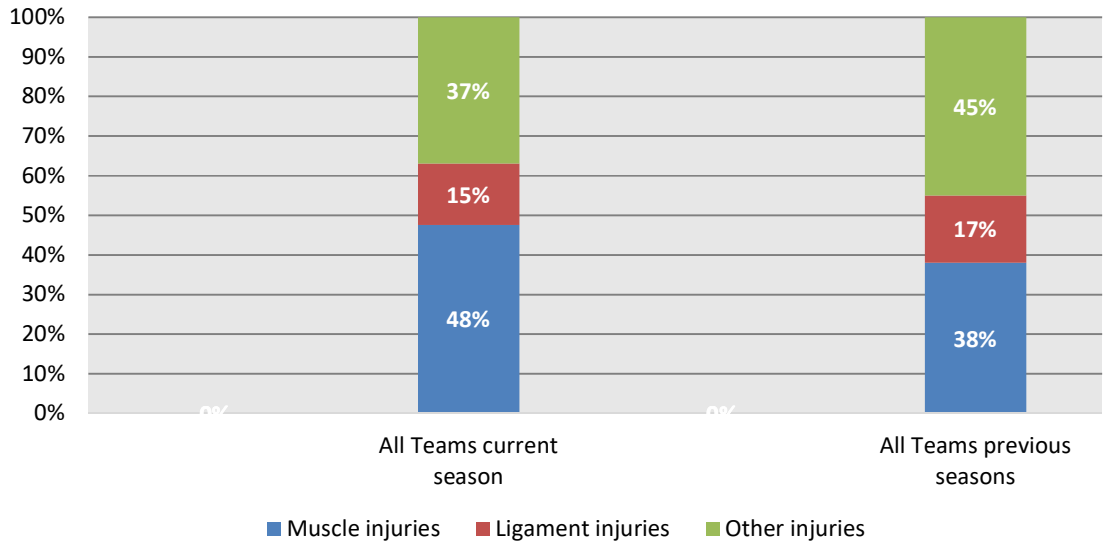


Figure 7. Distribution of overuse/traumatic injuries

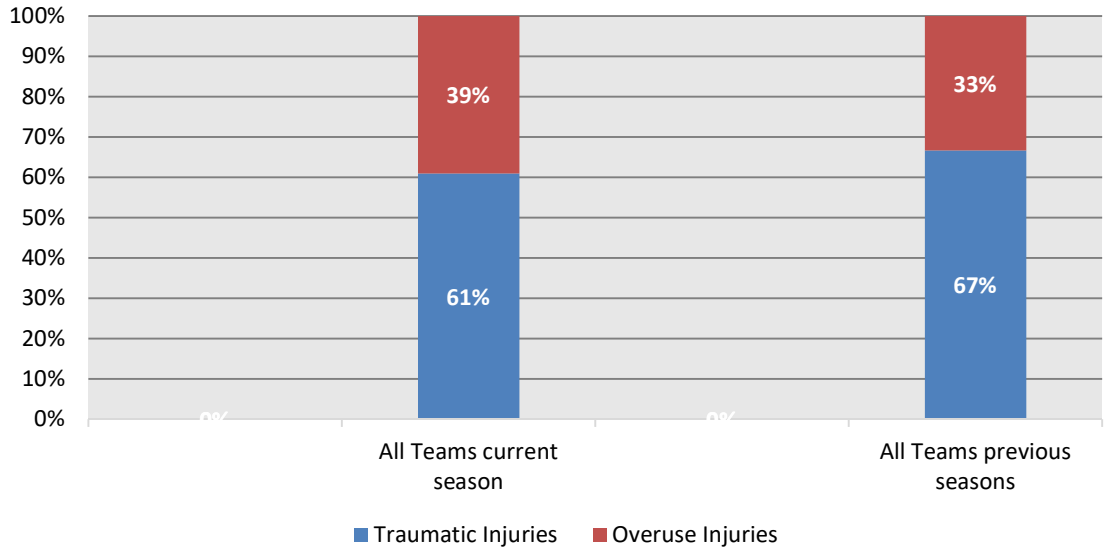


Figure 8. Distribution of contact/non-contact injuries

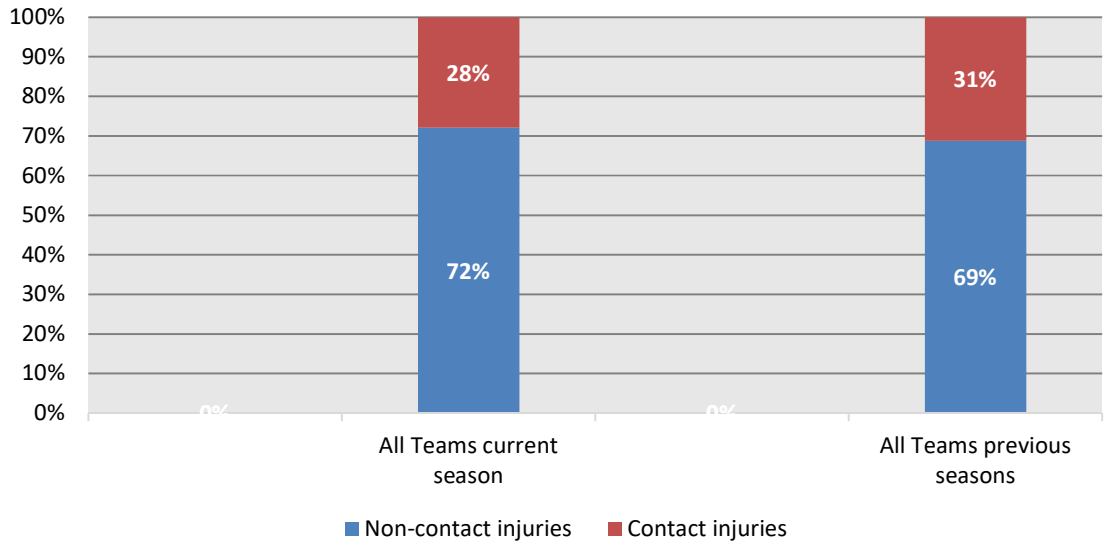


Figure 9. Distribution of injury severities

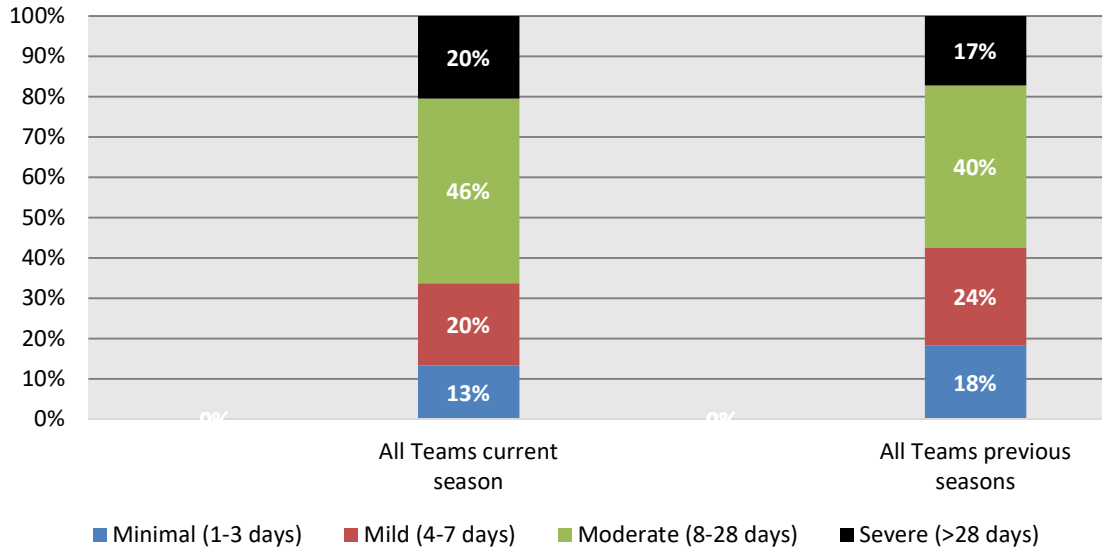
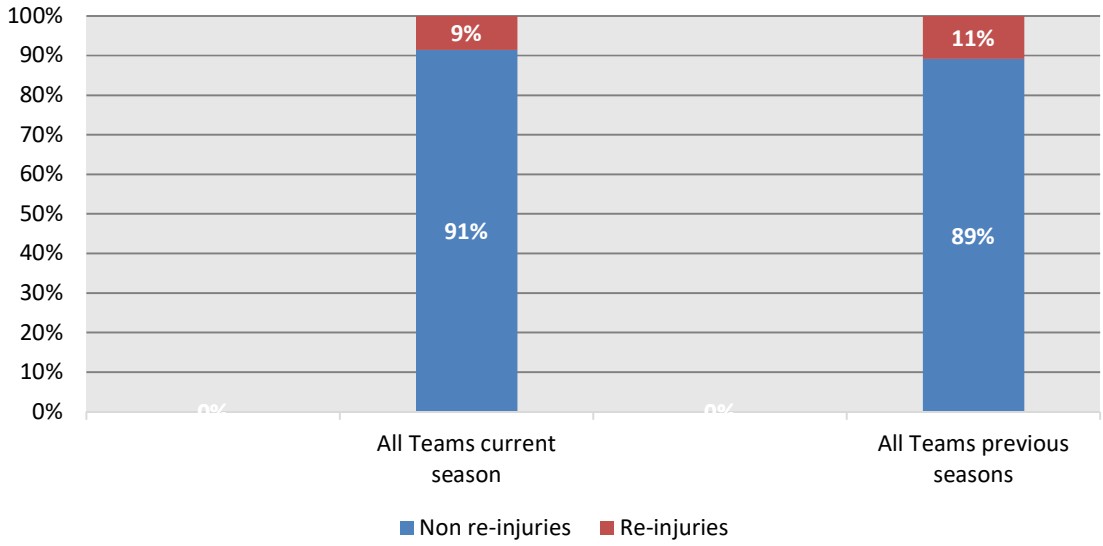


Figure 10. Distribution of re-injuries



6 Training injuries

6.1 Training injury rate

The mean training injury rate for all teams was 2.5 injuries for every 1 000 training hours, with individual rates ranging from 0.6 to 5.1 at the various clubs.

Figure 11. Training injury rate

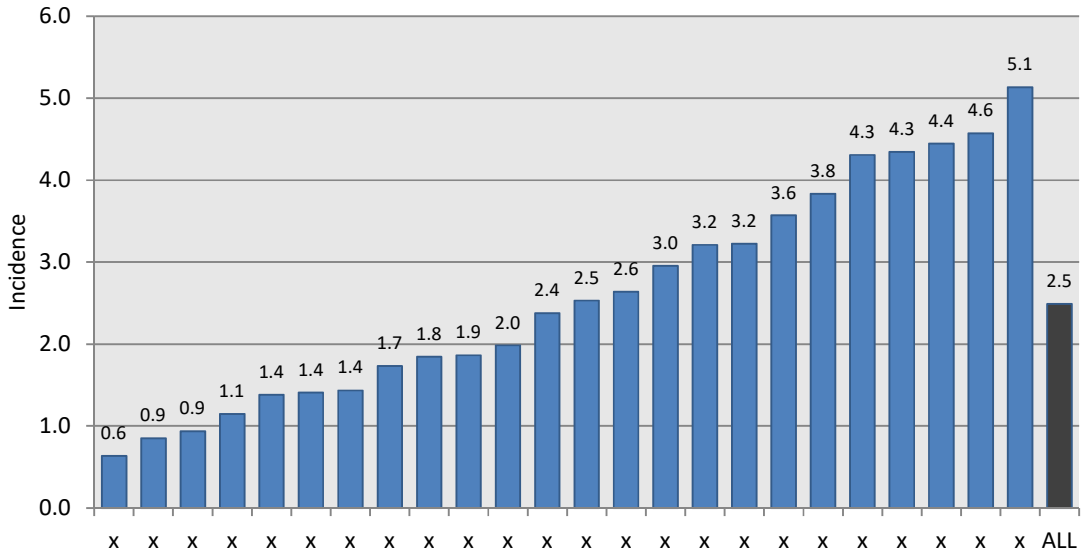


Figure 12. Training injury rates in previous seasons

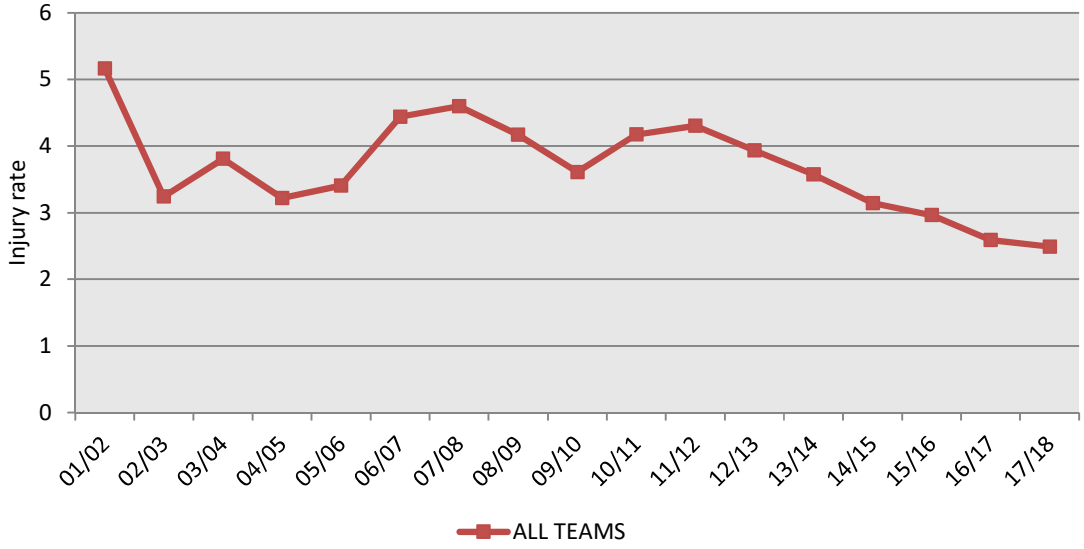
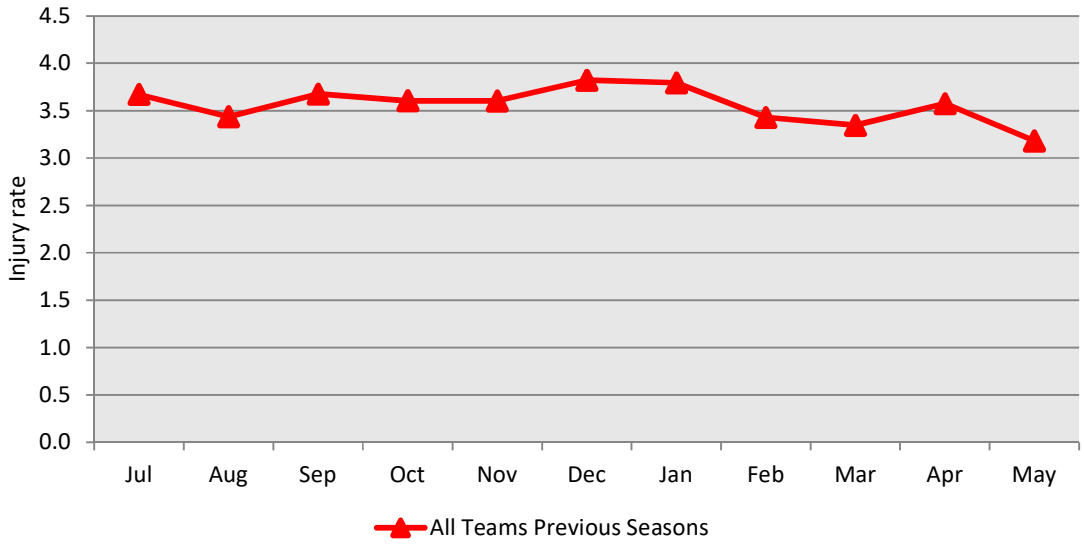


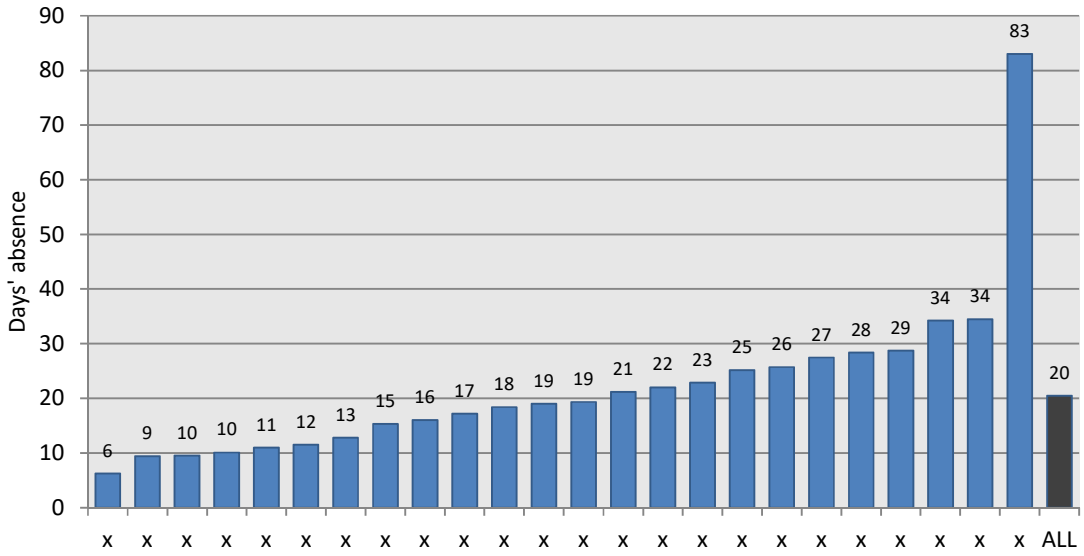
Figure 13. Training injury rates for Team X over the season in comparison to previous seasons



6.2 Days' absence for training injuries

The average absence for training injuries among the teams was 20 days, ranging from 6 to 83 days at the various clubs.

Figure 14. Days' absence for training injuries



6.3 Burden of training injuries

The mean injury burden in training was 51 days' absence/1 000 hours, ranging from 11 to 123 at the various clubs.

Figure 15. Training injury burden

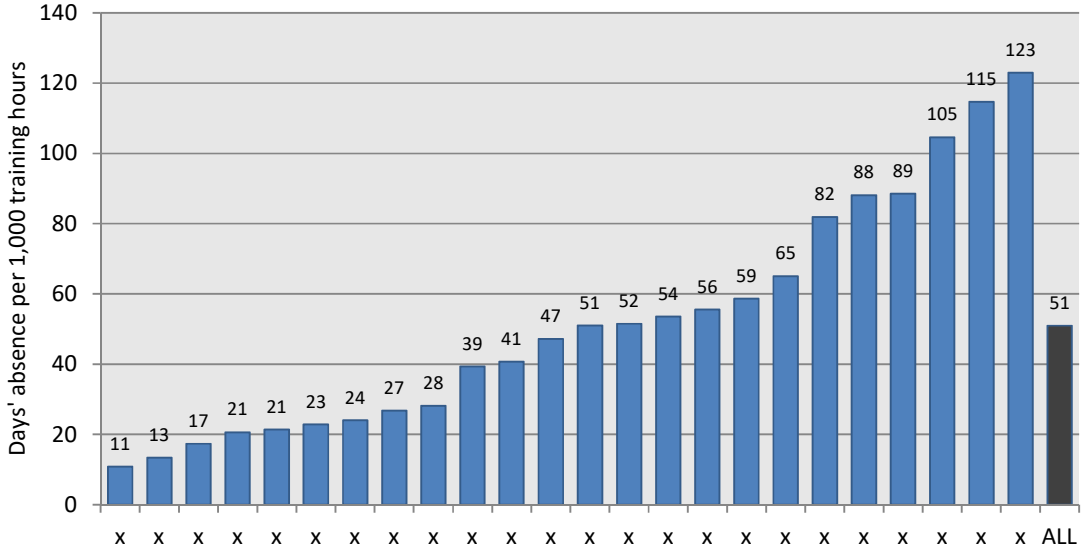


Figure 16. Training injury burden in previous seasons

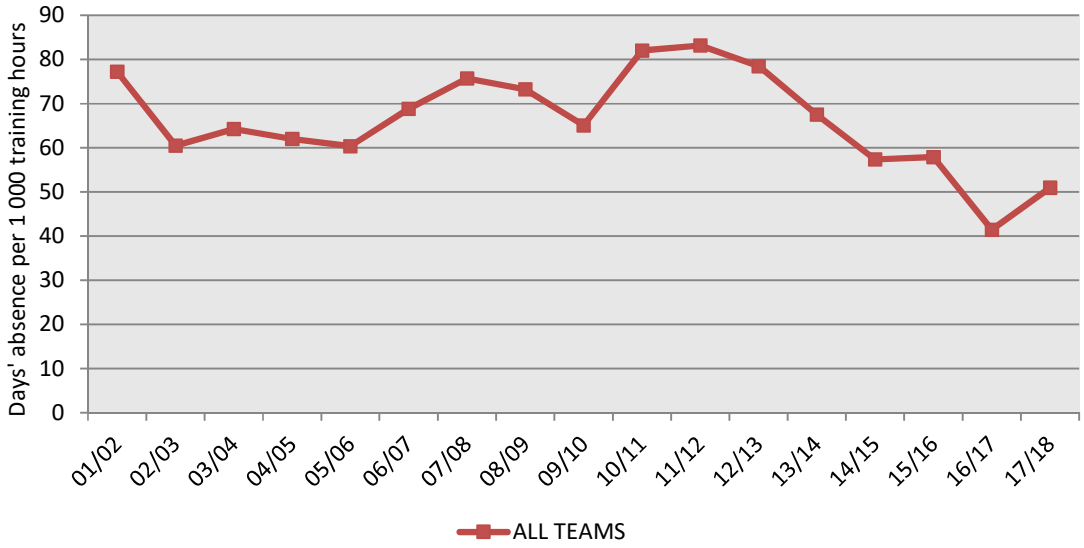
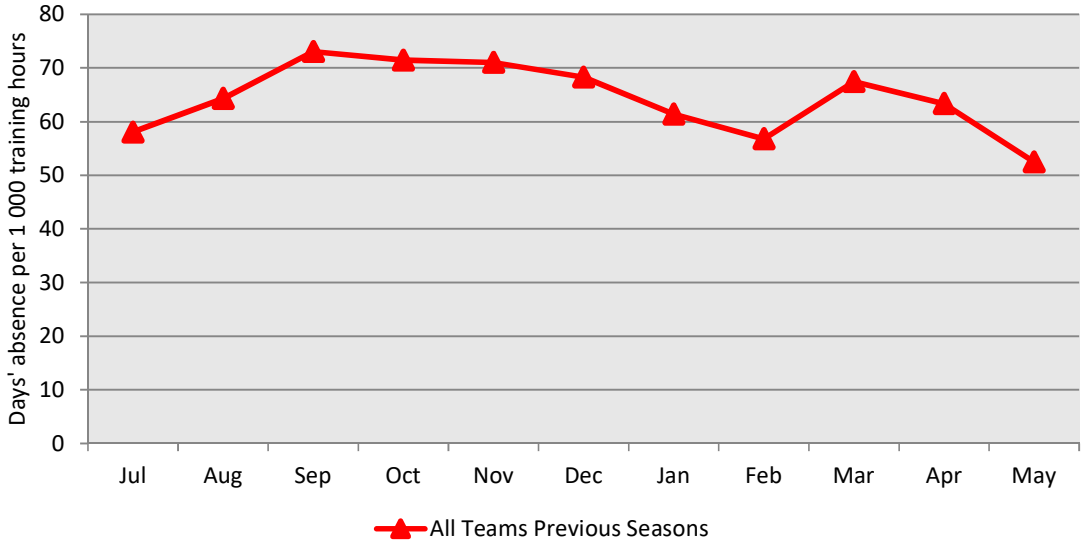


Figure 17. Training injury burden for Team X over the season in comparison to previous seasons



7 Match injuries

7.1 Match injury rate

The mean match injury rate for all teams was 20 injuries for every 1 000 match hours, with individual rates ranging from 4 to 34.

Figure 18. Match injury rate

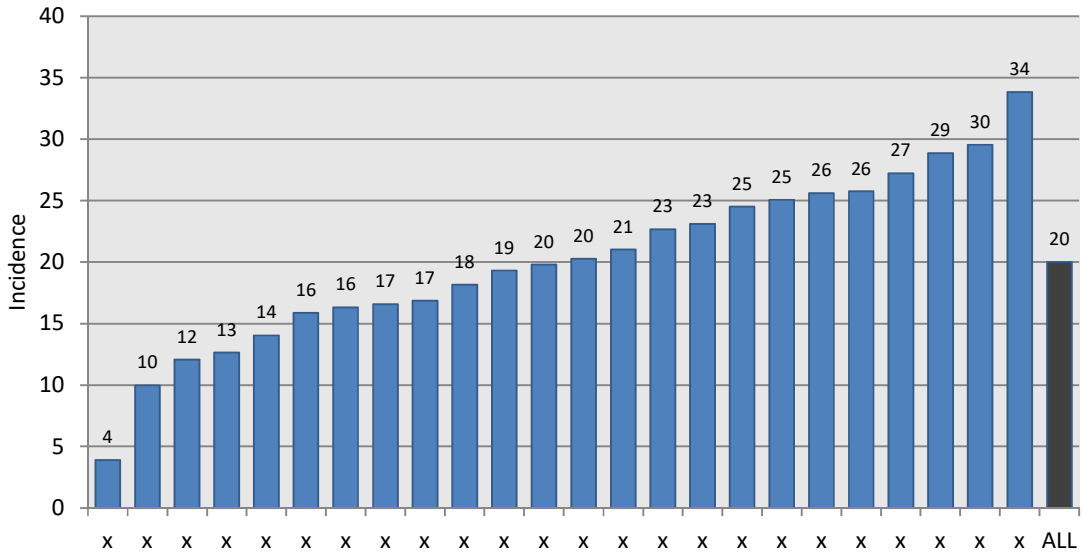


Figure 19. Match injury rates in previous seasons

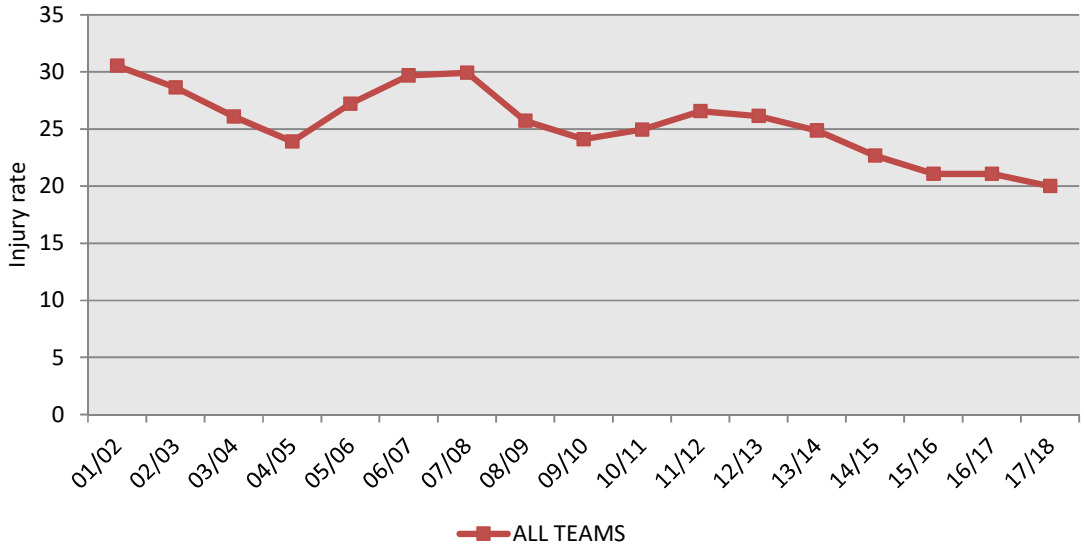
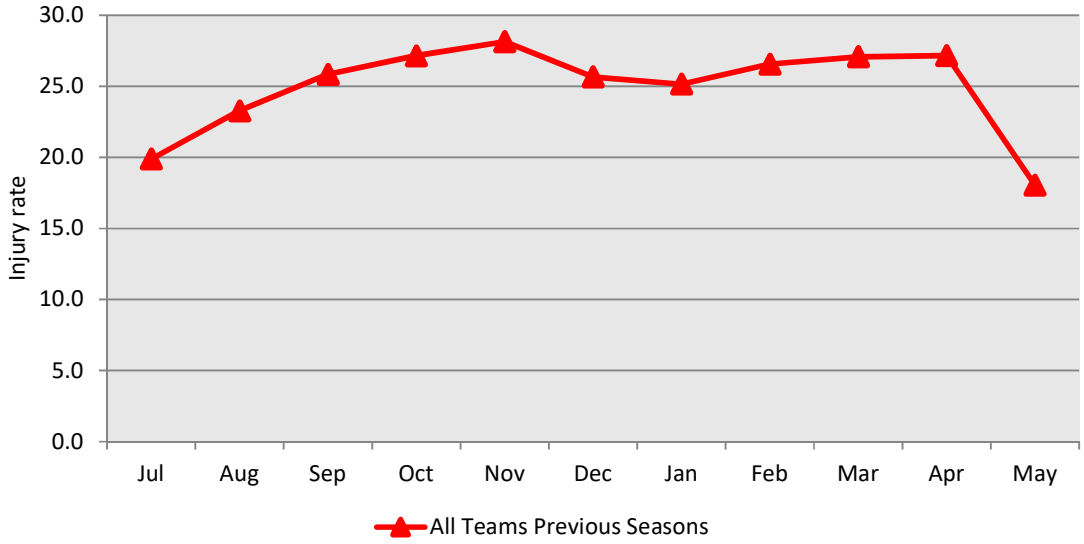


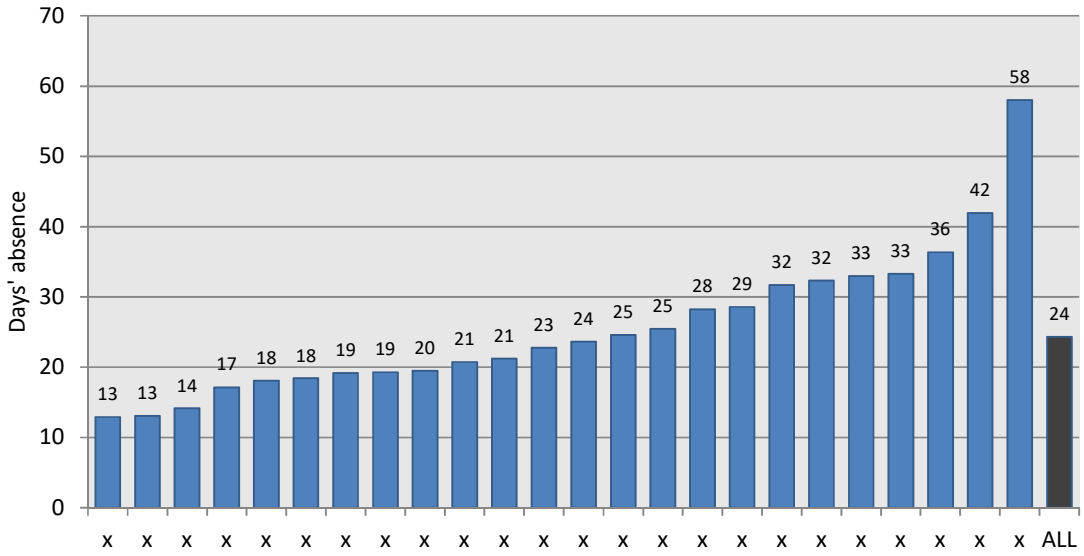
Figure 20. Match injury rate for Team X over the season in comparison to previous seasons



7.2 Days' absence for match injuries

The average absence for match injuries among the teams was 24 days, ranging from 13 to 58 days at the various clubs.

Figure 21. Days' absence for match injuries



7.3 Burden of match injuries

The mean injury burden in match play was 486 days' absence/1 000 hours, ranging from 181 to 966 at the various clubs.

Figure 22. Match injury burden

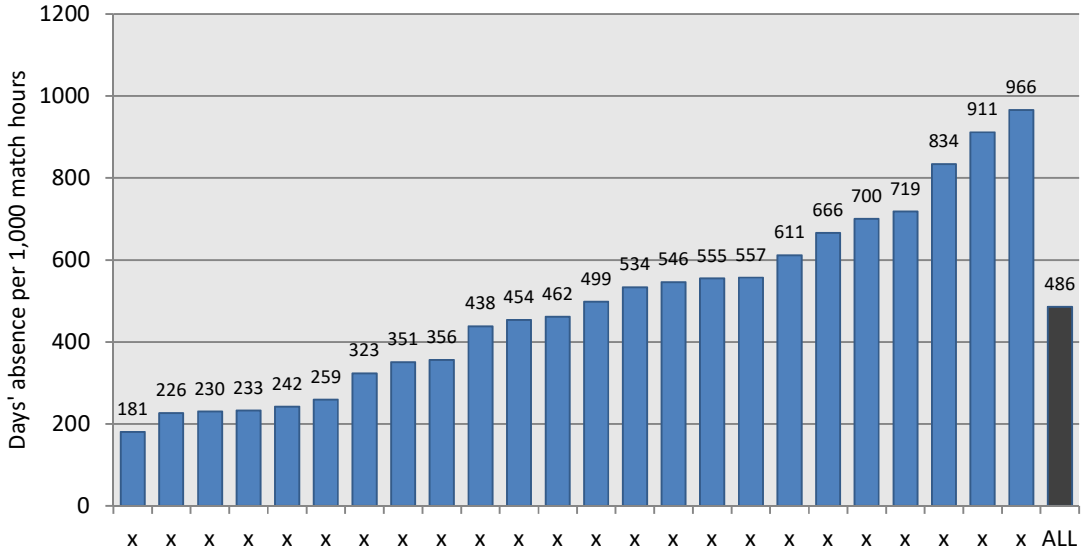


Figure 23. Match injury burden in previous seasons

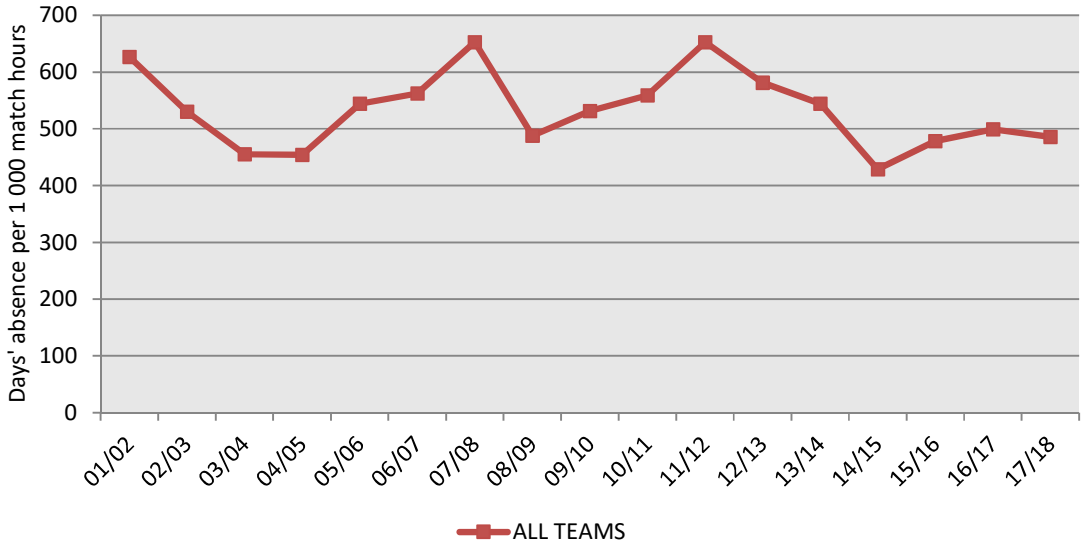
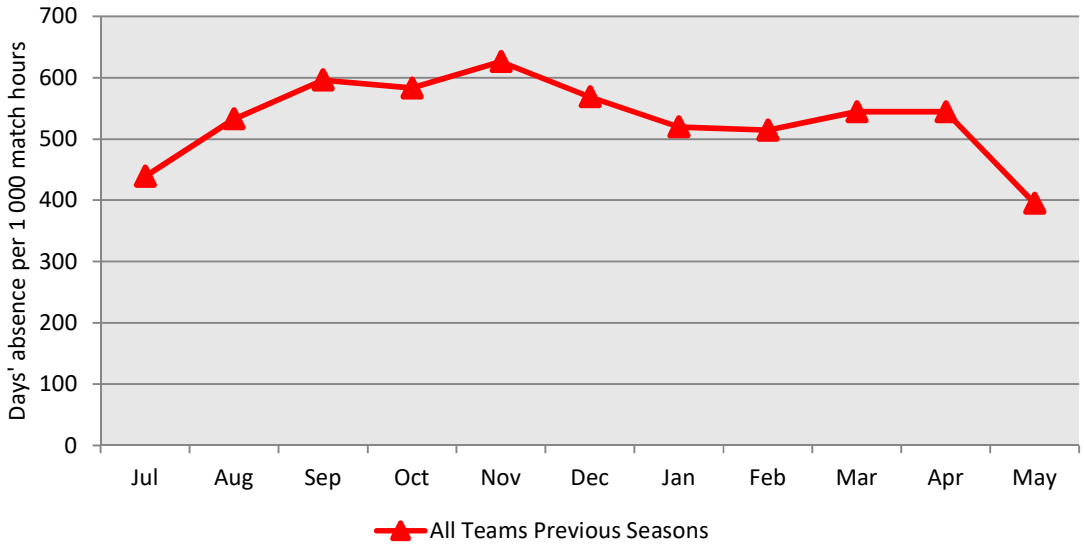


Figure 24. Match injury burden for Team X over the season in comparison to previous seasons



8 Severe injuries

8.1 Severe injury patterns

Injuries resulting in more than four weeks´ absence are classified as severe injuries.

Figure 25. Distribution of severe injury locations

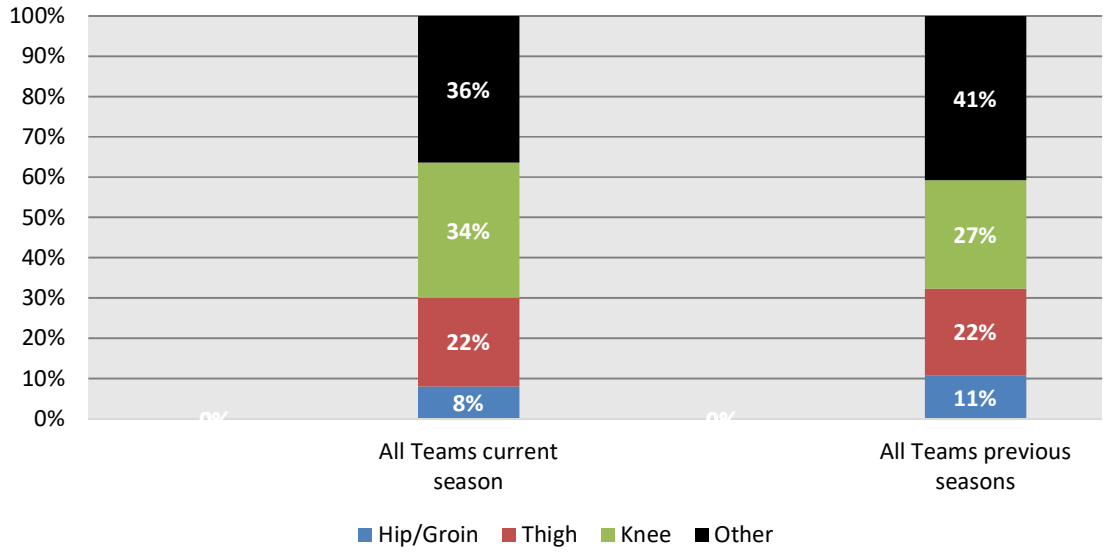
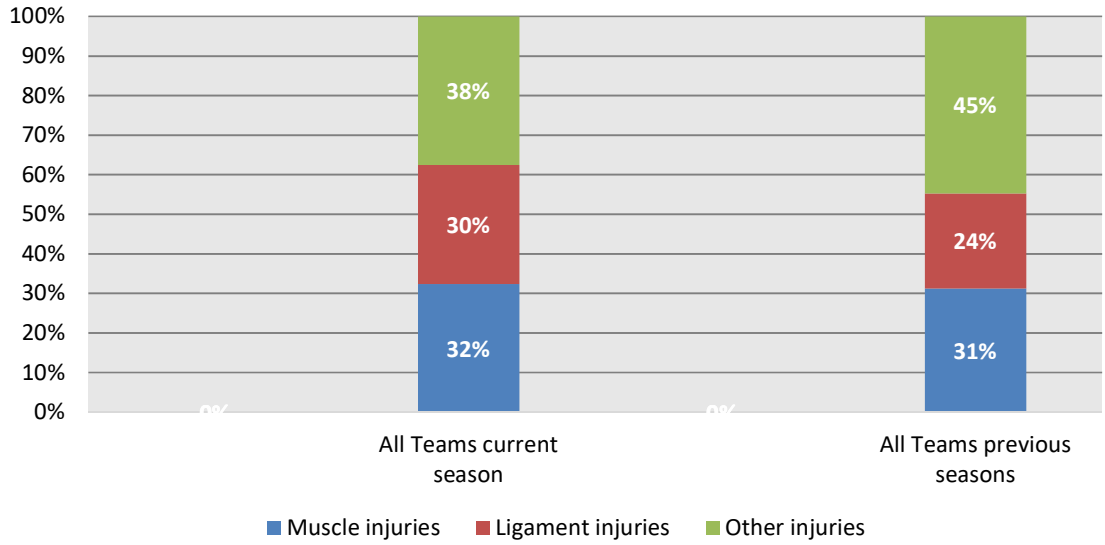


Figure 26. Distribution of severe injury types



8.2 Severe injury rate

The mean severe injury rate for all teams was 1.1 severe injuries for every 1 000 hours, with individual rates ranging from 0.2 to 2.5. Please note that since total absences are unknown where players were still injured at the time of writing, the true figures may differ slightly from those presented here.

Figure 27. Severe injury rate

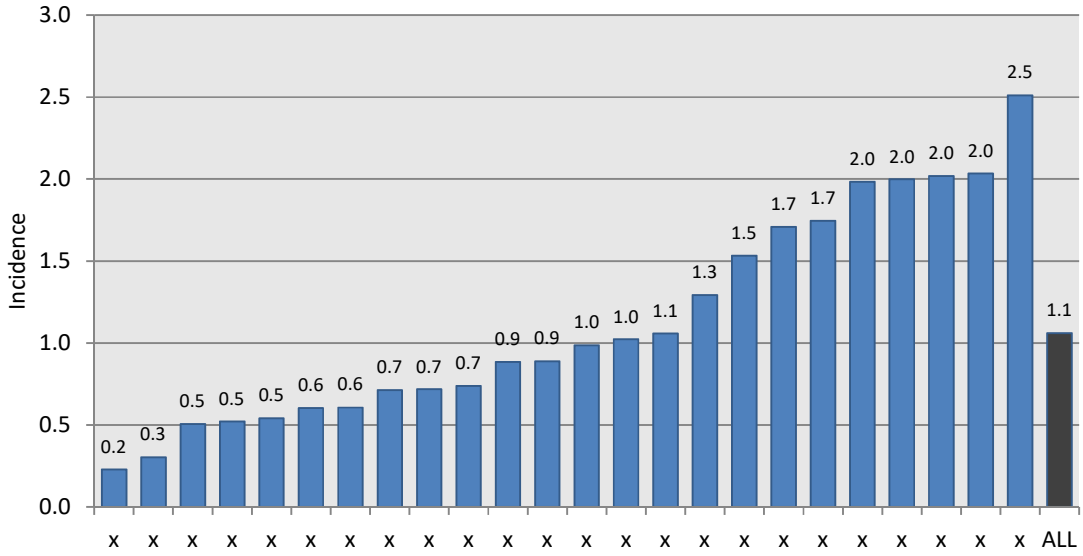


Figure 28. Severe injury rates in previous seasons

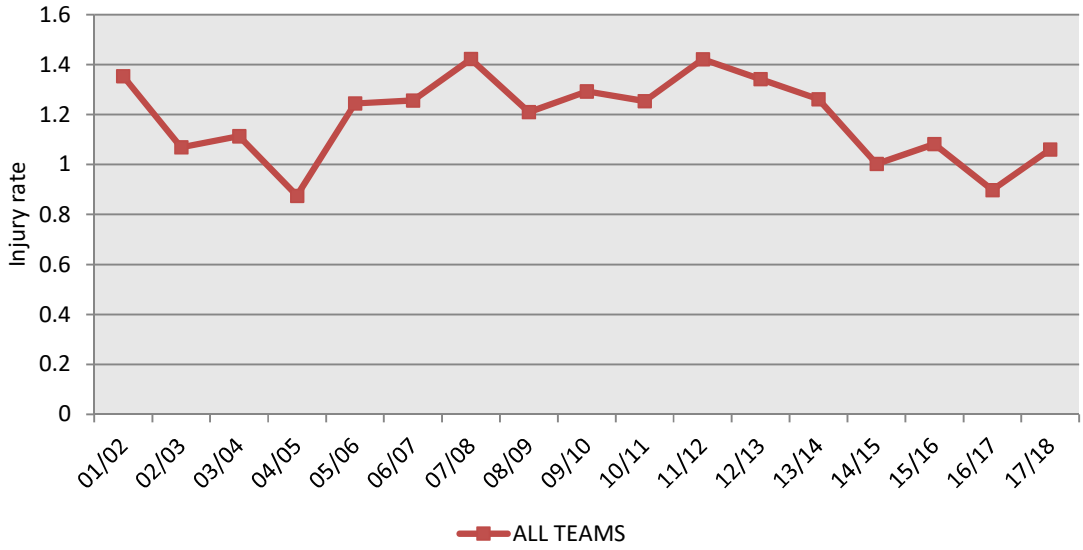
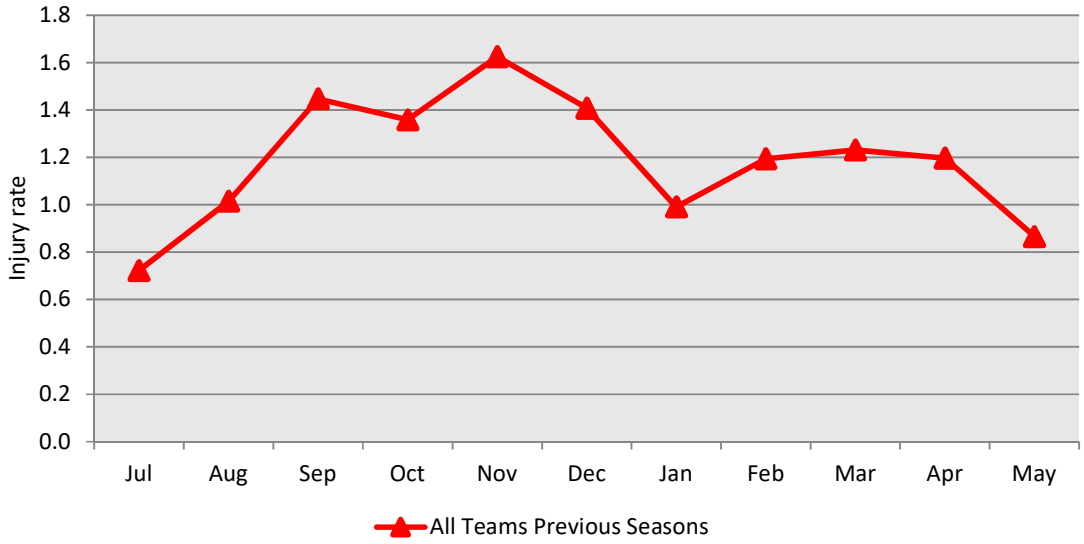


Figure 29. Severe injury rates for Team X over the season in comparison to previous seasons



9 Muscle injuries

9.1 Muscle injury patterns

Figure 30. Distribution of muscle injury locations

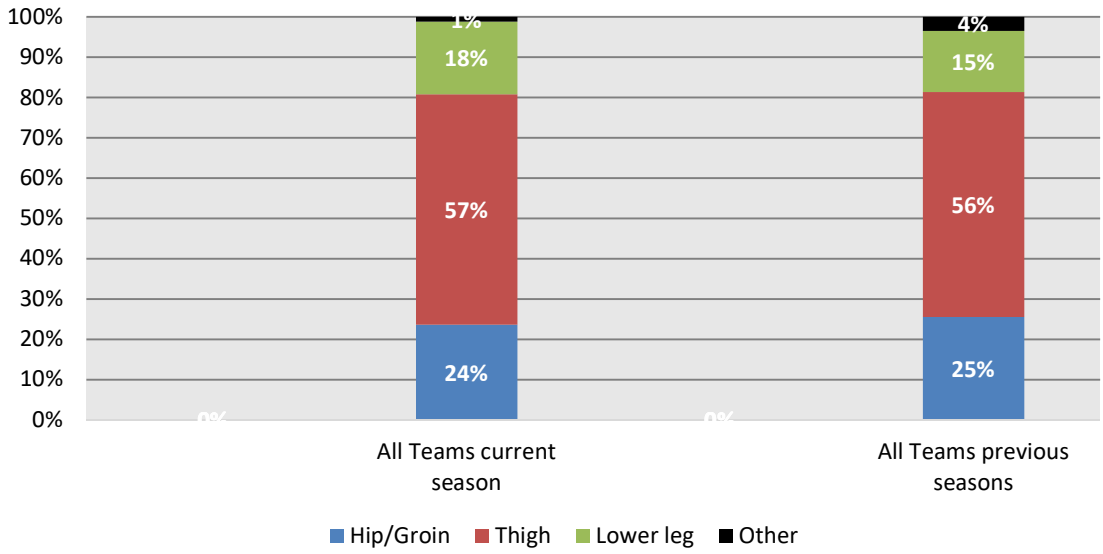


Figure 31. Distribution of muscle injury severities

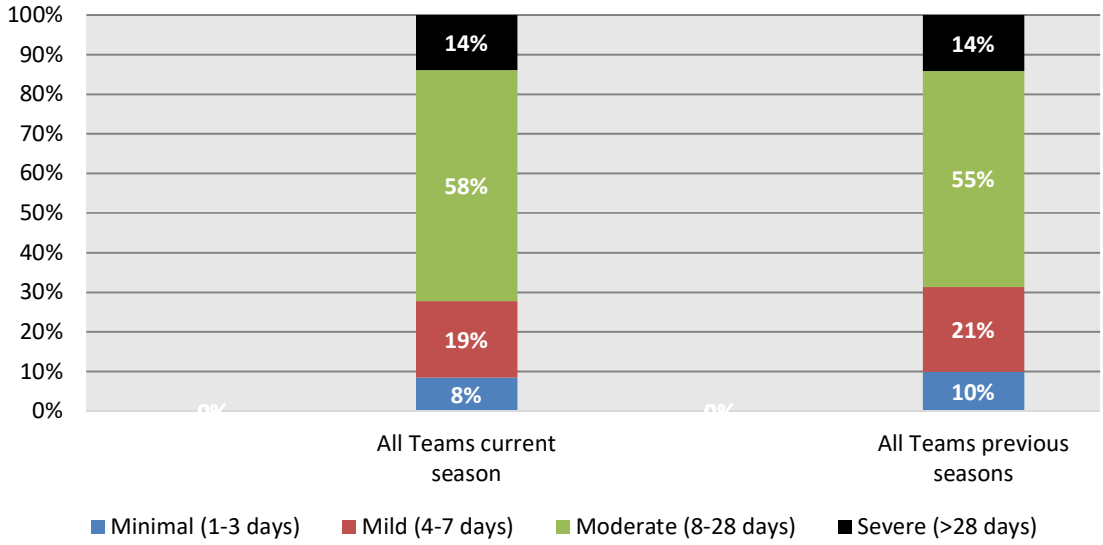
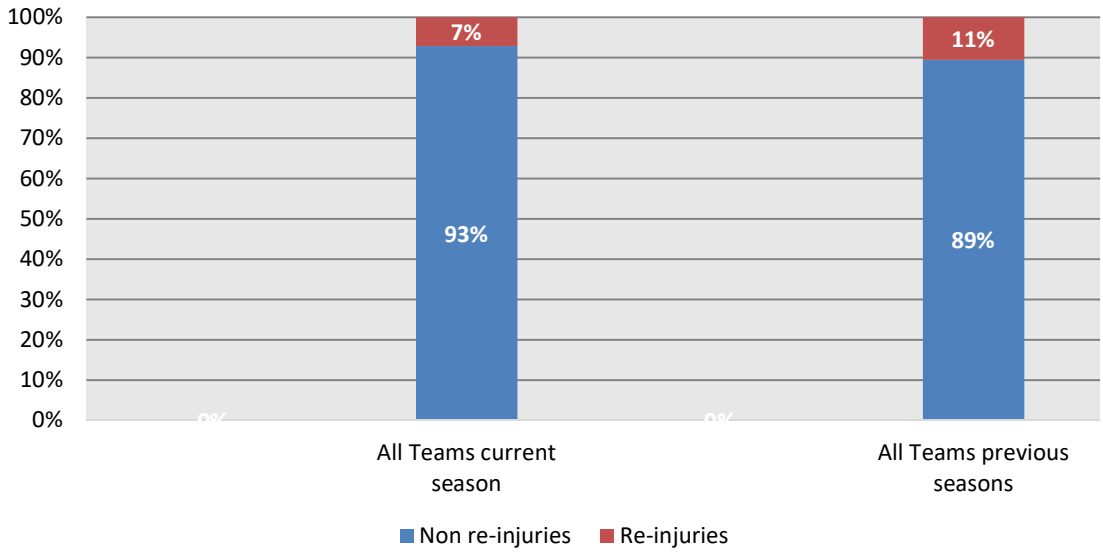


Figure 32. Distribution of re-injuries for muscle injuries



9.2 Muscle injury rate

The mean muscle injury rate for all teams was 2.5 injuries for every 1 000 hours, with individual rates ranging from 0.4 to 4.8.

Figure 33. Muscle injury rate

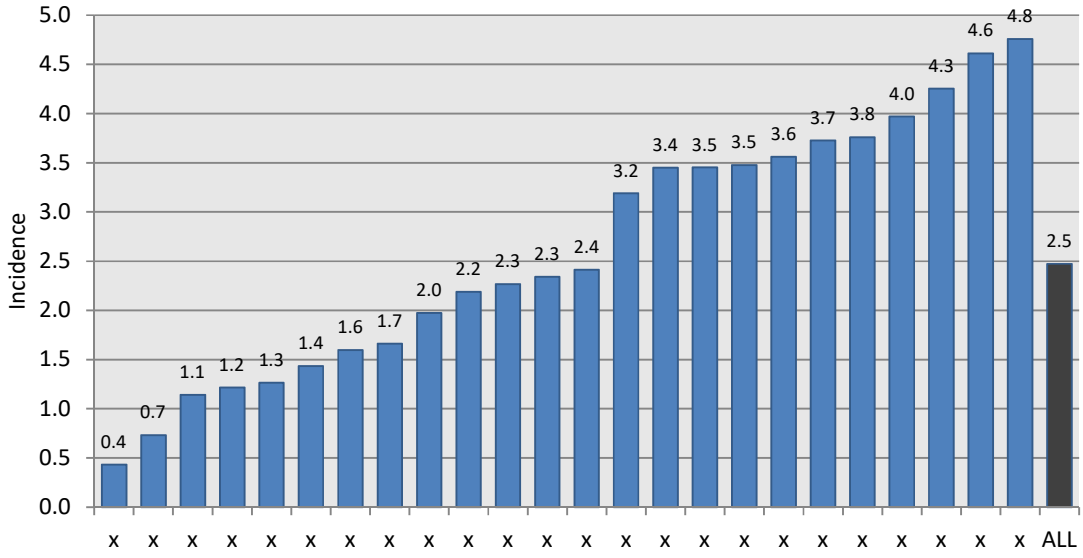


Figure 34. Muscle injury rates in previous seasons

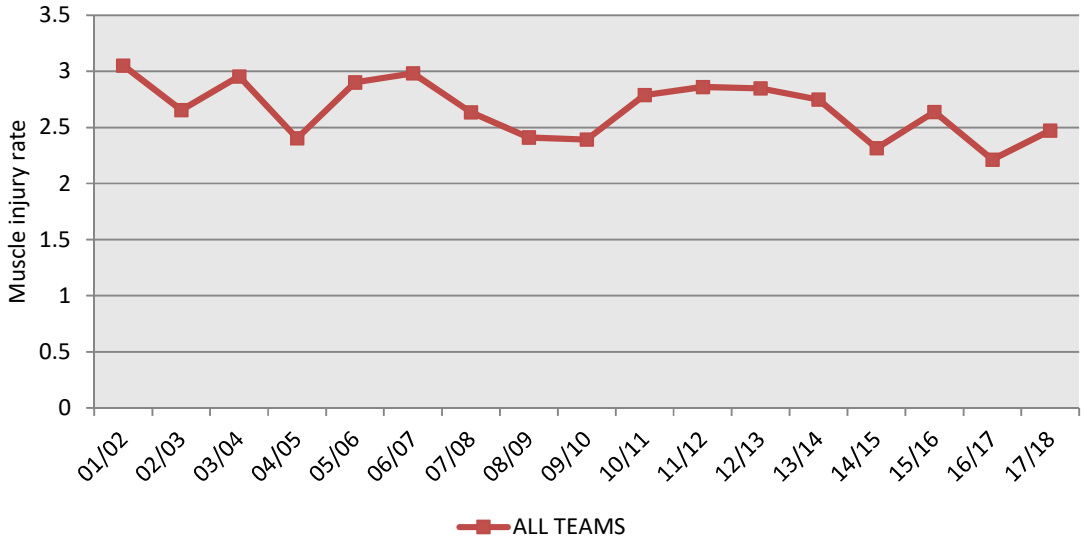
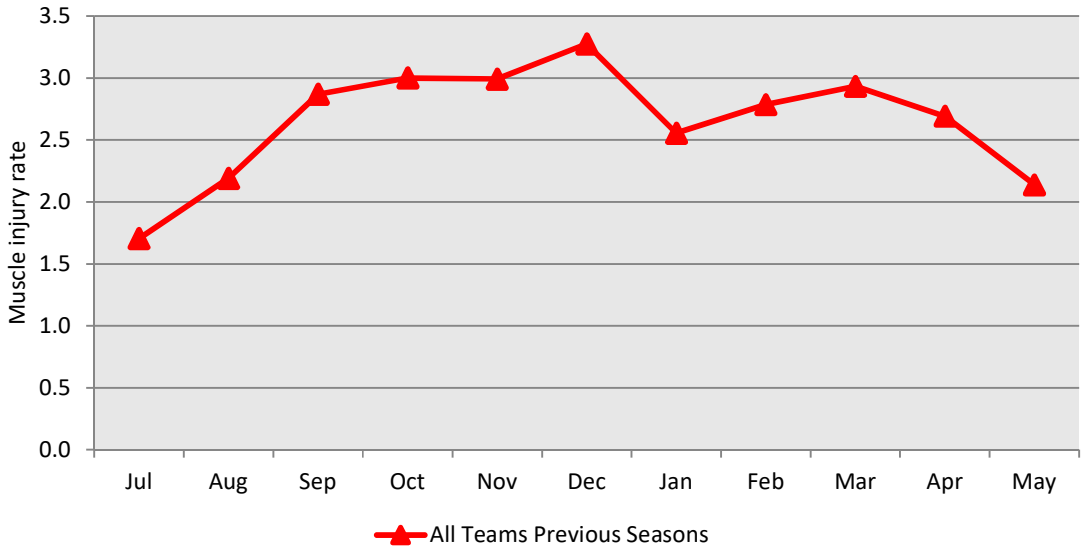


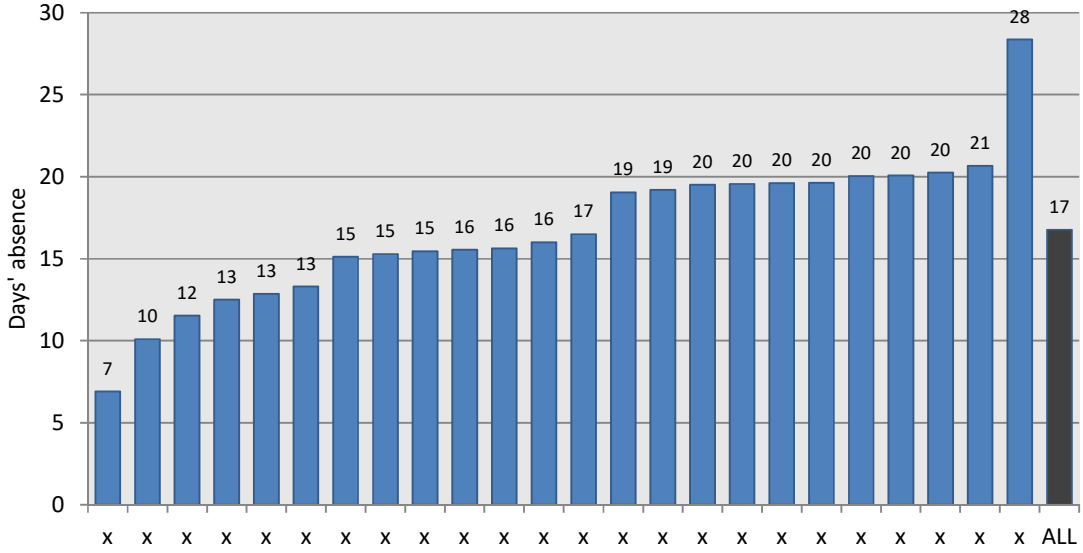
Figure 35. Muscle injury rates for Team X over the season in comparison to previous seasons



9.3 Days' absence for muscle injurie

The average absence for muscle injuries among the teams was 17 days, ranging from 7 to 28 days at the various clubs.

Figure 36. Days' absence for muscle injuries



9.4 Burden of muscle injuries

The mean injury burden for muscle injury was 41 days' absence/1 000 hours, ranging from 9 to 98 at the various clubs.

Figure 37. Muscle injury burden

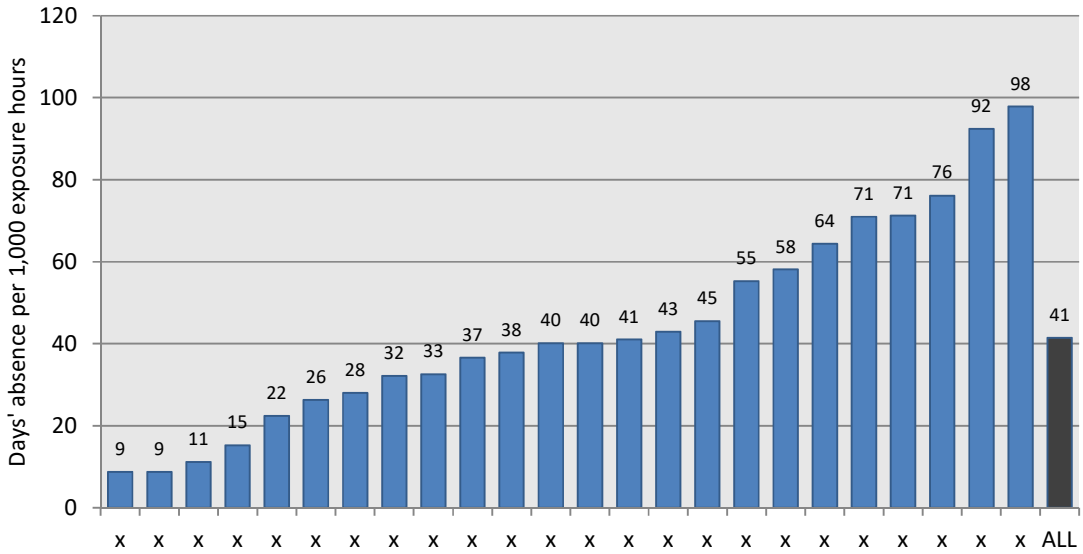


Figure 38. Muscle injury burden in previous seasons

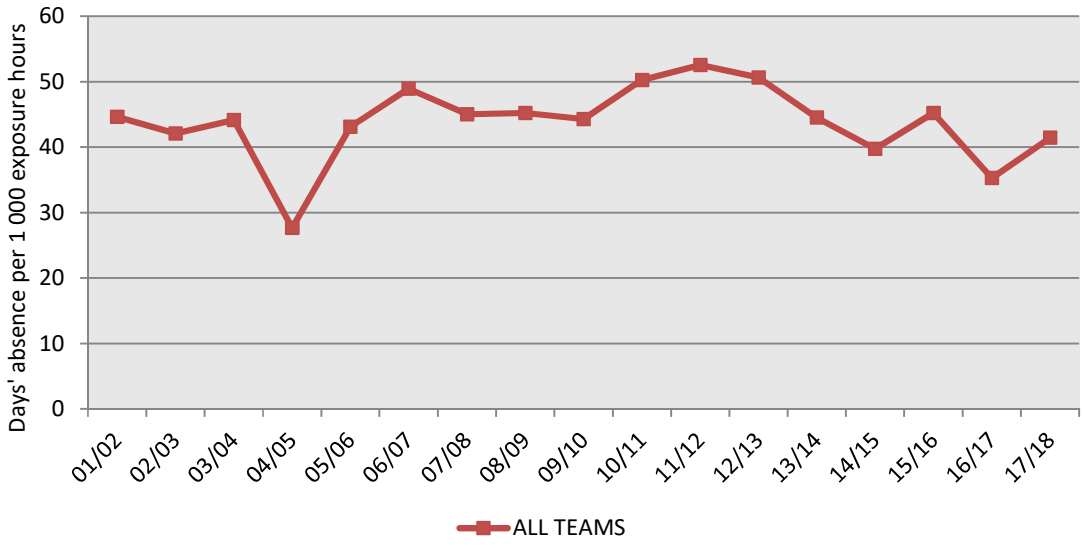
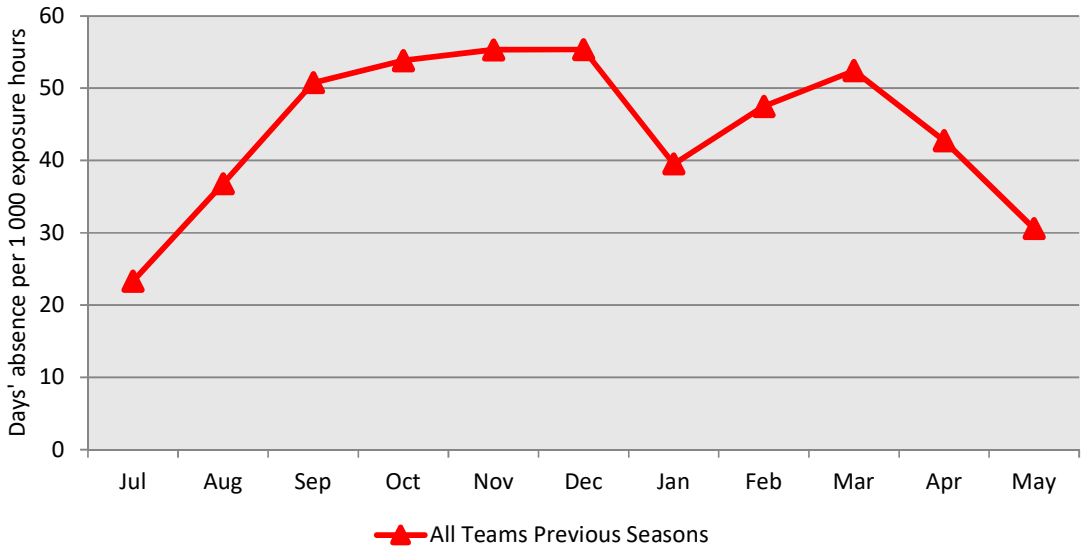


Figure 39. Muscle injury burden for Team X over the season in comparison to previous seasons



10 Ligament injuries

10.1 Ligament injury patterns

Figure 40. Distribution of ligament injury locations

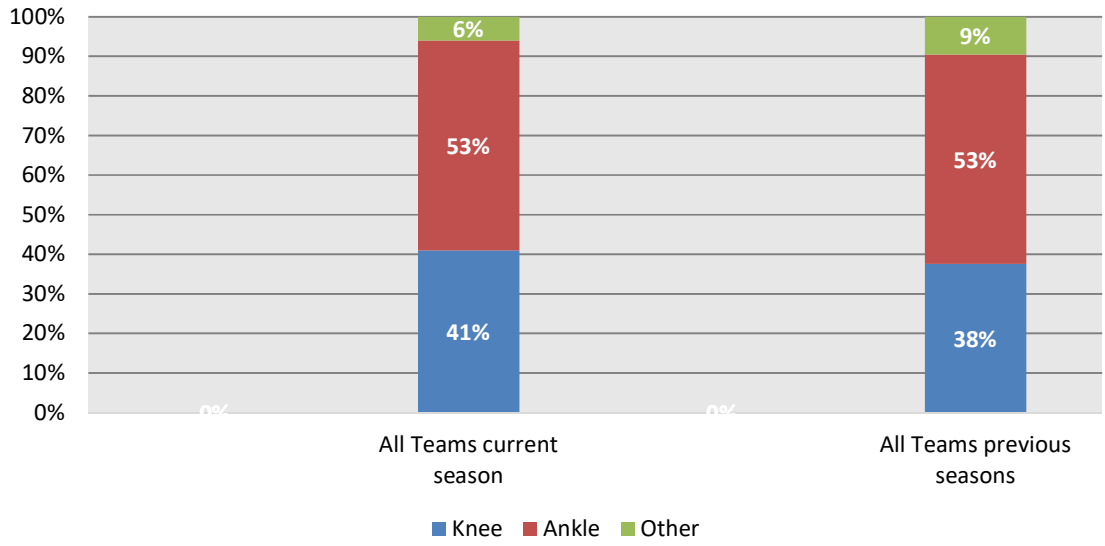


Figure 41. Distribution of ligament injury severities

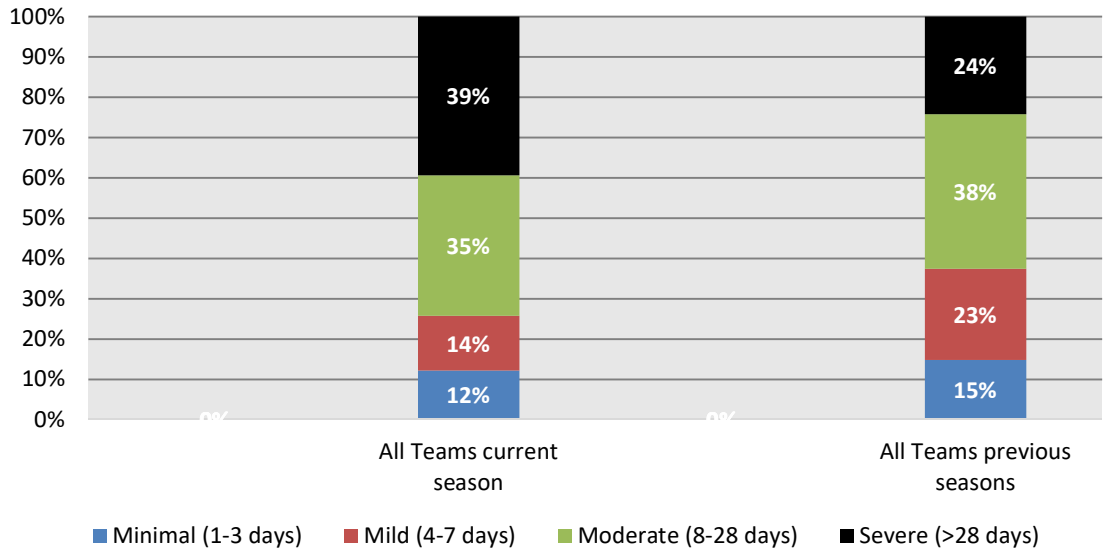
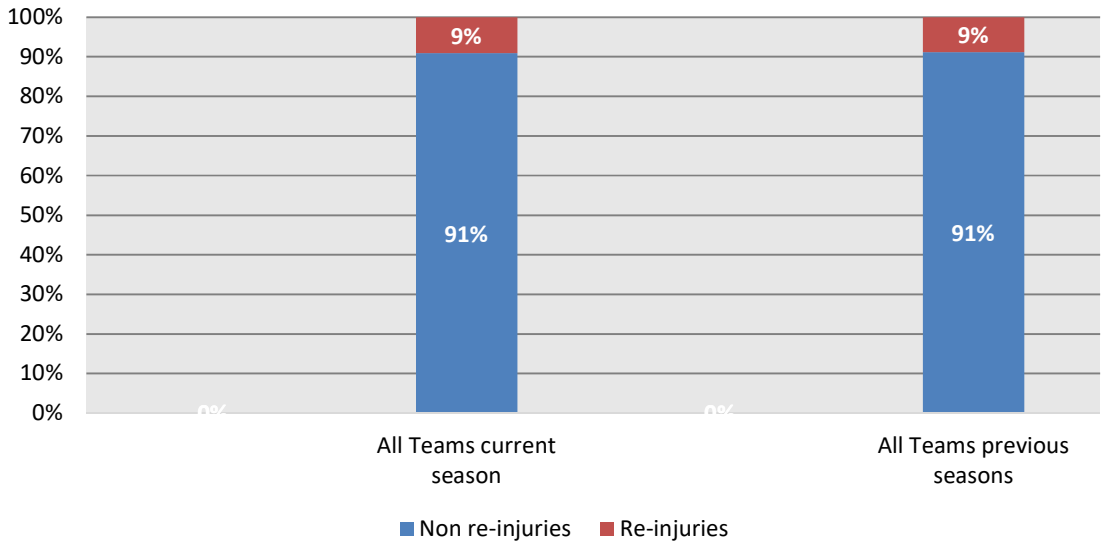


Figure 42. Distribution of re-injuries for ligament injuries



10.2 Ligament injury rate

The mean ligament injury rate for all teams was 0.8 injuries for every 1 000 hours, with individual rates ranging from 0.2 to 1.9 at the various clubs.

Figure 43. Ligament injury rate

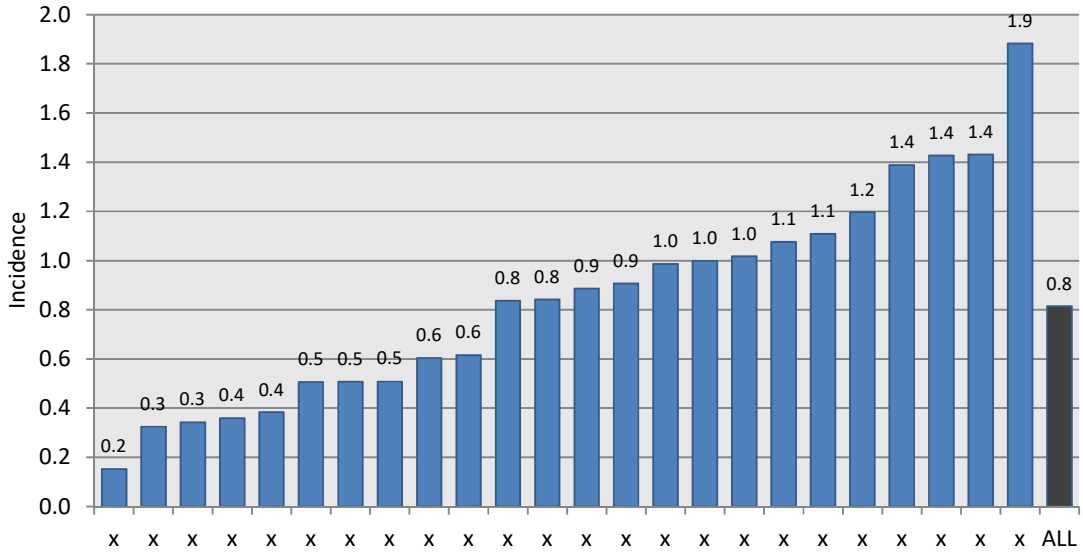


Figure 44. Ligament injury rates in previous seasons

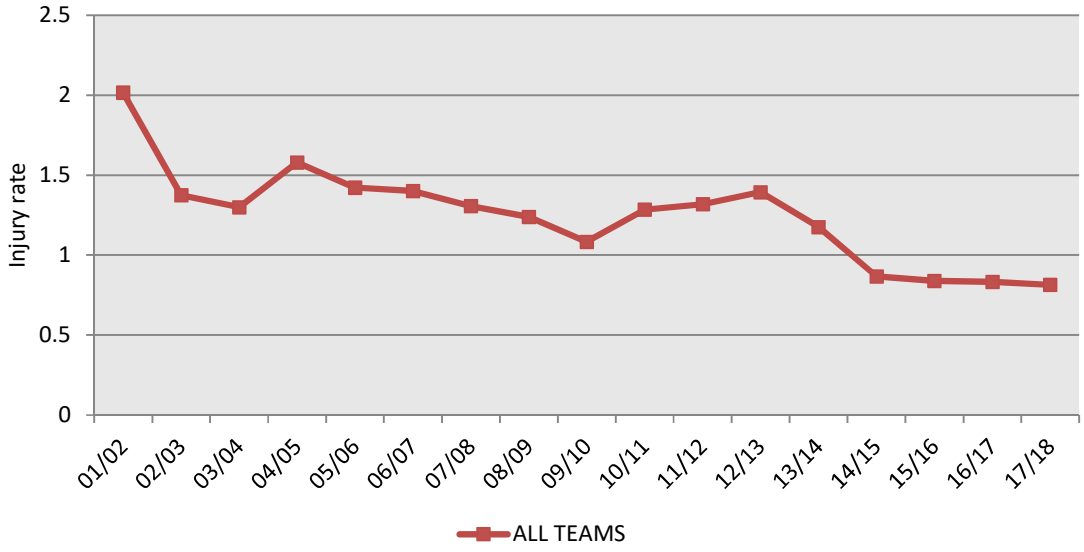
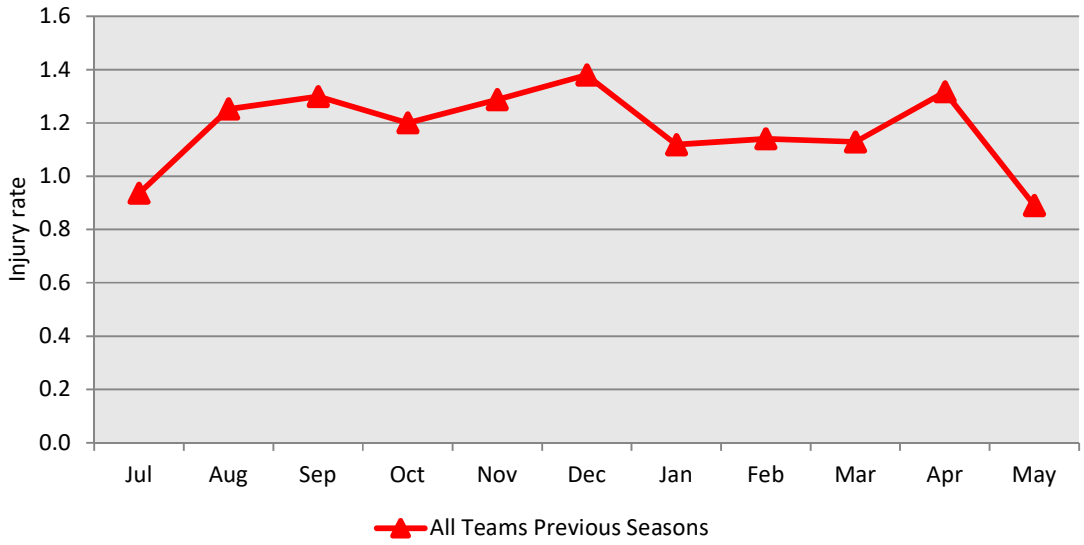


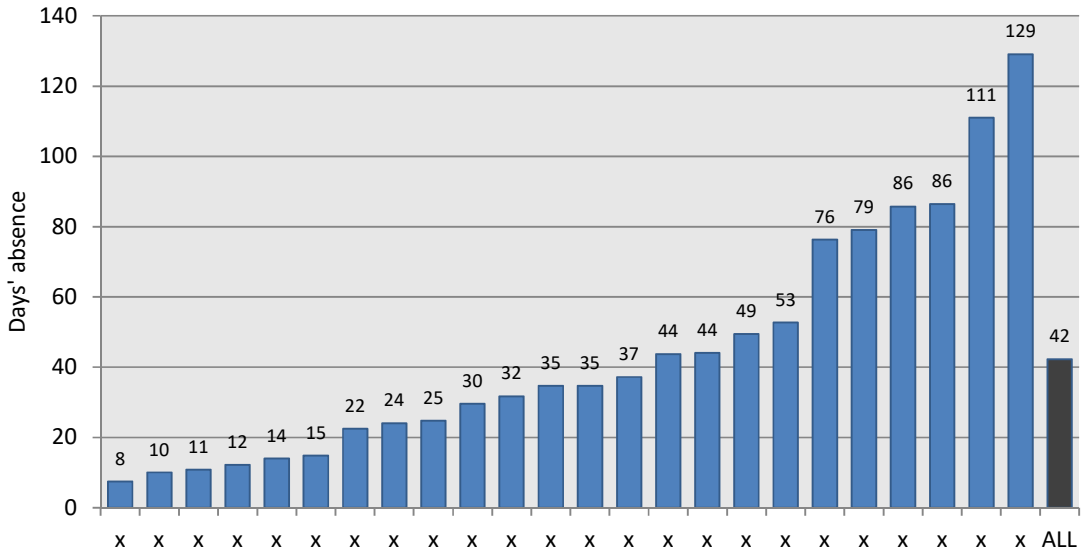
Figure 45. Ligament injury rates for Team X over the season in comparison to previous seasons



10.3 Days' absence for ligament injuries

The average absence for ligament injuries among the teams was 42 days, ranging from 8 to 129 days at the various clubs.

Figure 46. Days' absence for ligament injuries



10.4 Burden of ligament injuries

The mean burden for ligament injury was 34 days' absence/1 000 hours, ranging from 2 to 120 at the various clubs.

Figure 47. Ligament injury burden

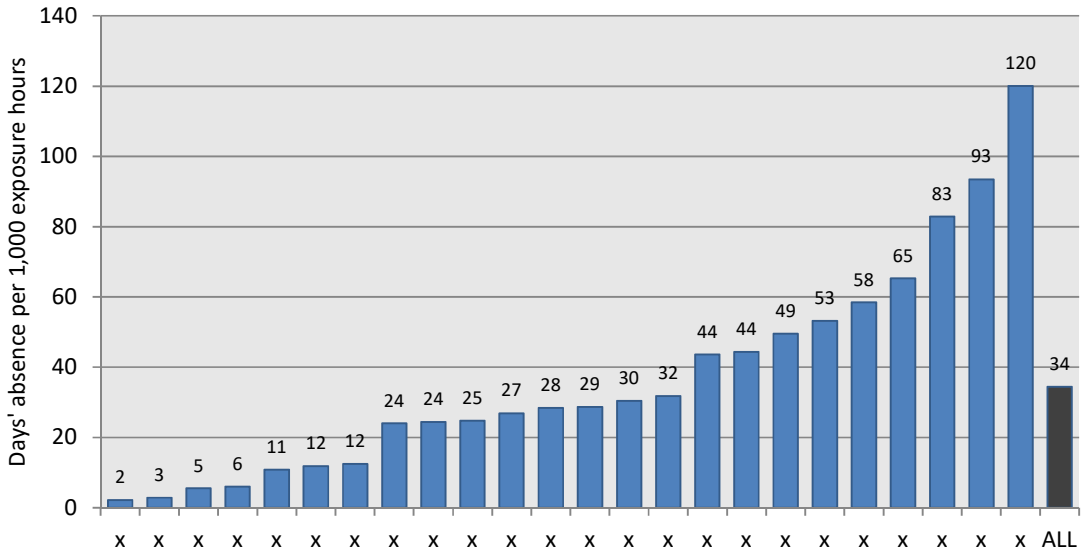


Figure 48. Ligament injury burden in previous seasons

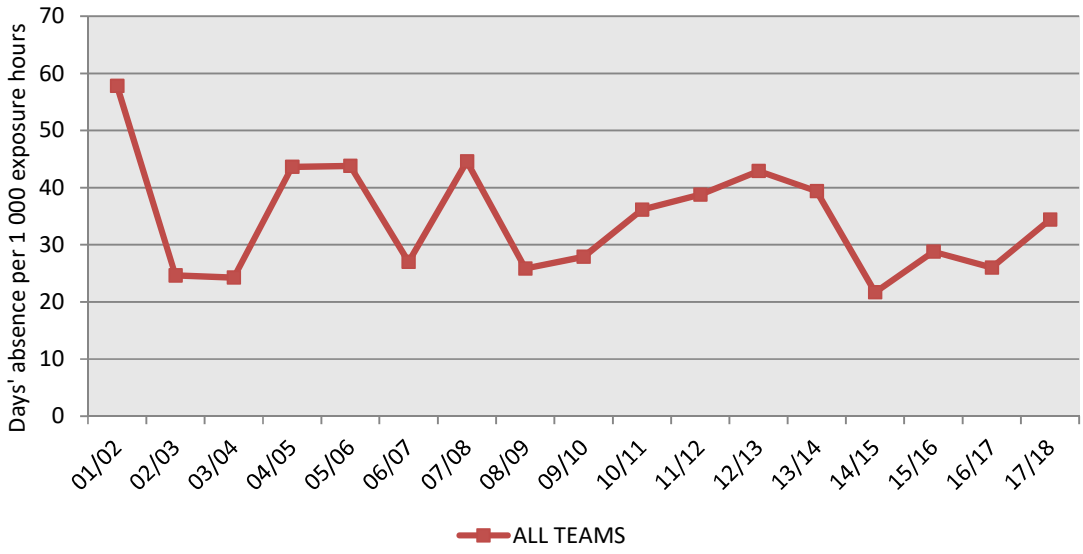
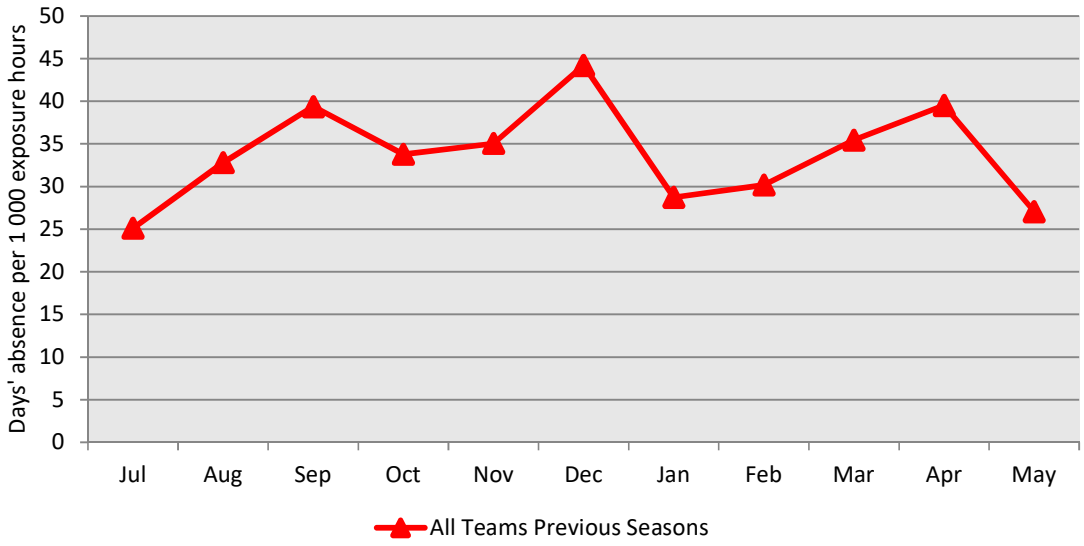


Figure 49. Ligament injury burden for Team X over the season in comparison to previous seasons



11 Re-injuries

11.1 Re-injury patterns

Figure 50. Distribution of re-injury locations

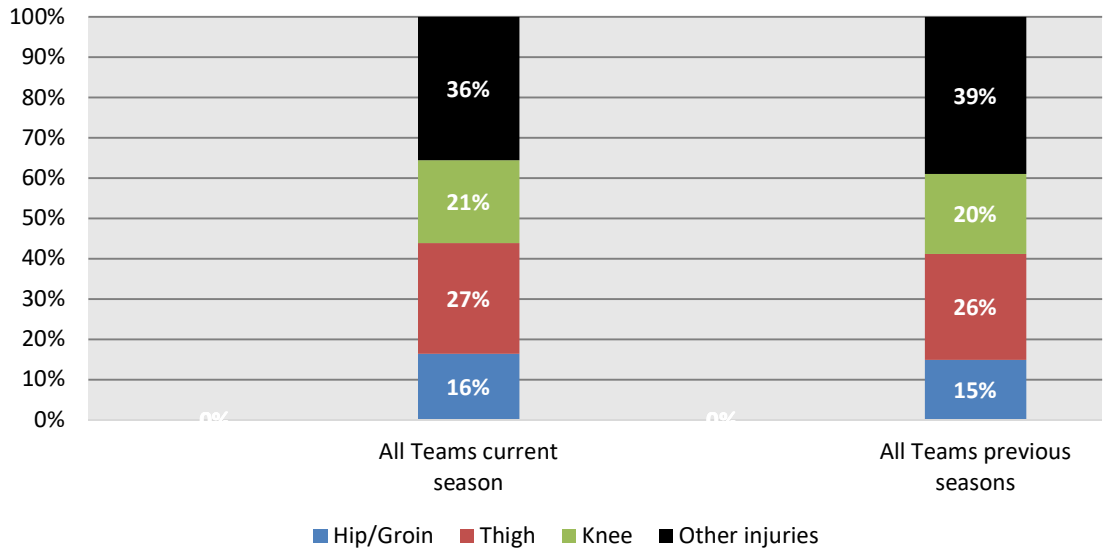


Figure 51. Distribution of re-injury types

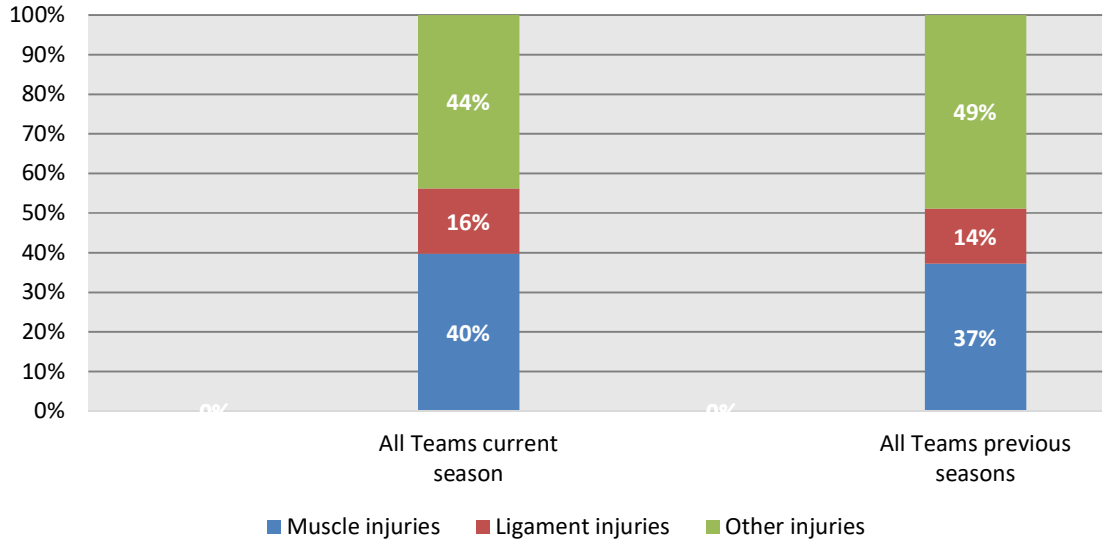
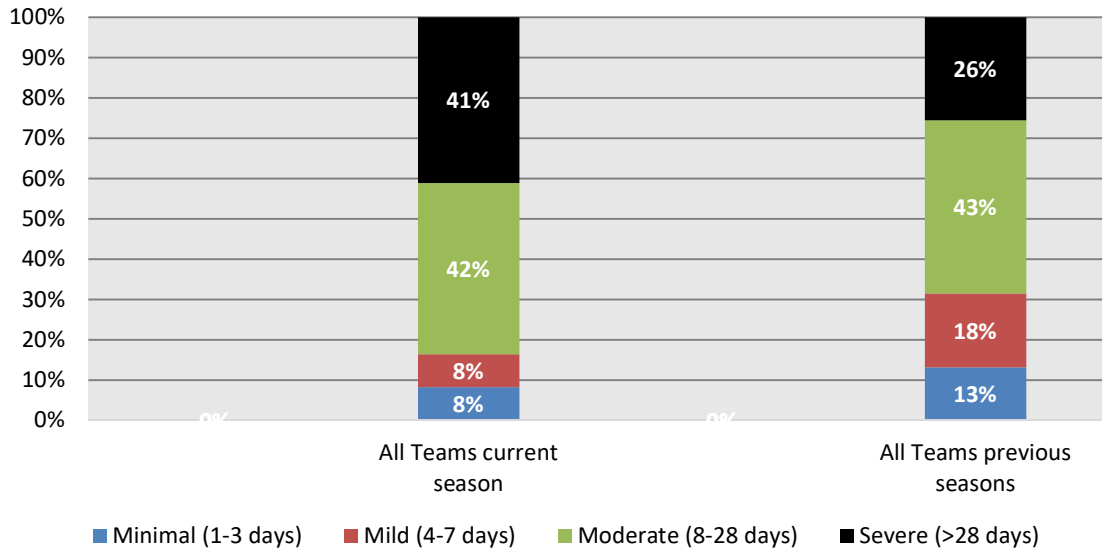


Figure 52. Distribution of re-injury severities



11.2 Re-injury proportion

On average, 9% of injuries sustained were re-injuries, ranging from 0% to 27% at the various clubs.

Figure 53. Re-injury proportion

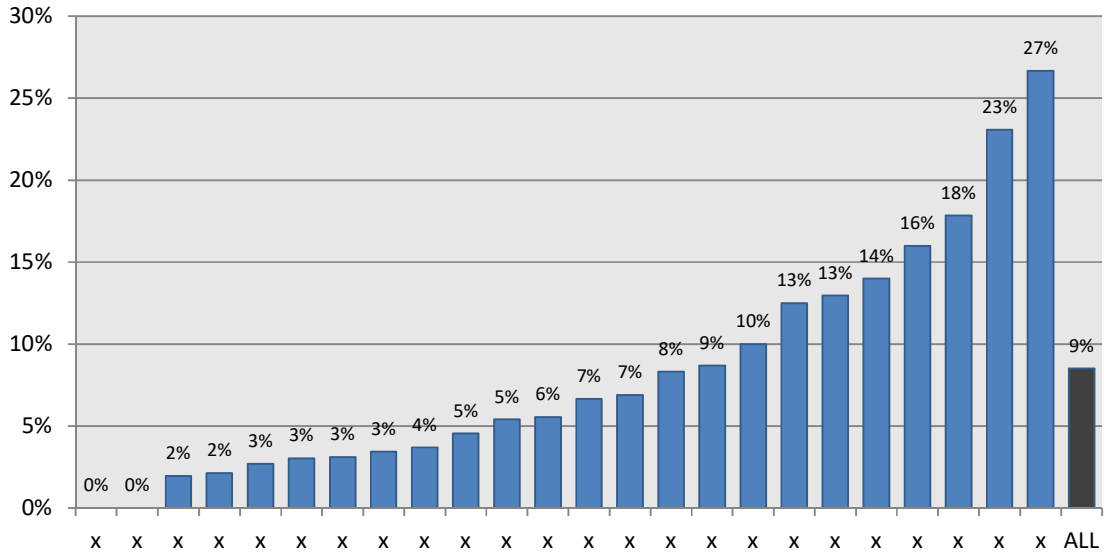
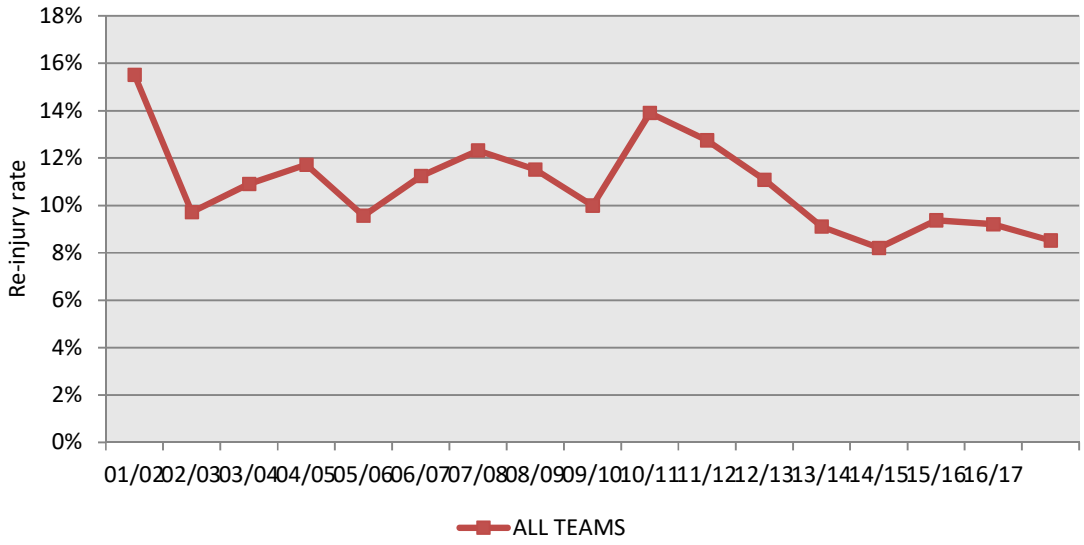


Figure 54. Re-injury proportions in previous seasons



12 Squad attendance/availability and absence

All data in the charts in this section is in the form of percentages.

12.1 Squad attendance/availability

Squad attendance/availability refers to the average percentage of players who participated in training sessions or were available for match selection over the review period. An attendance/availability rate of 100% would mean that no player was absent because of injury, illness, international duty or any other reason.

Figure 55. Squad attendance rates for training

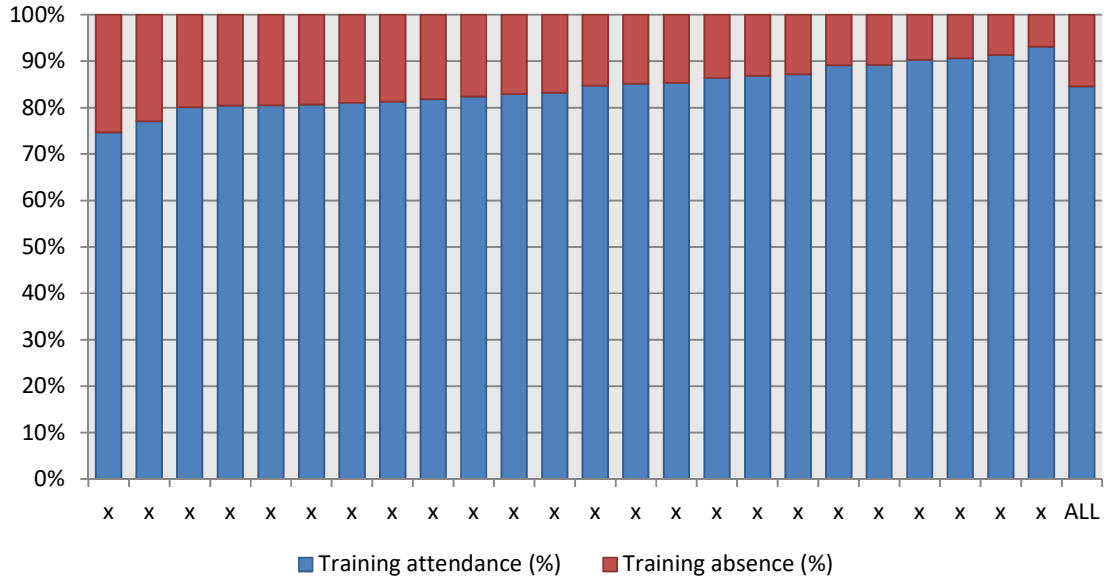


Figure 56. Squad attendance rates for training in previous seasons

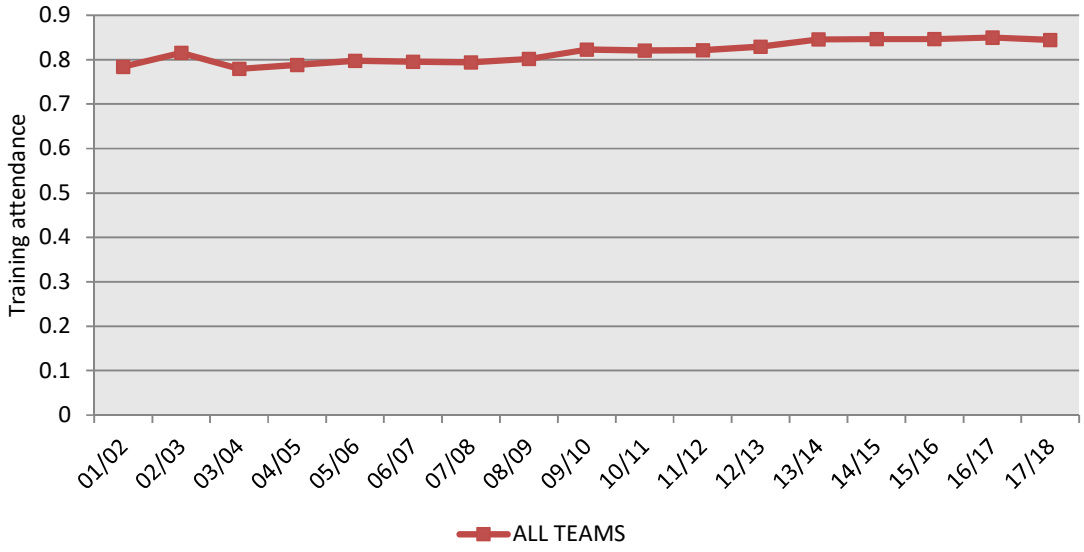


Figure 57. Squad attendance in training for Team X over the season in comparison to previous seasons

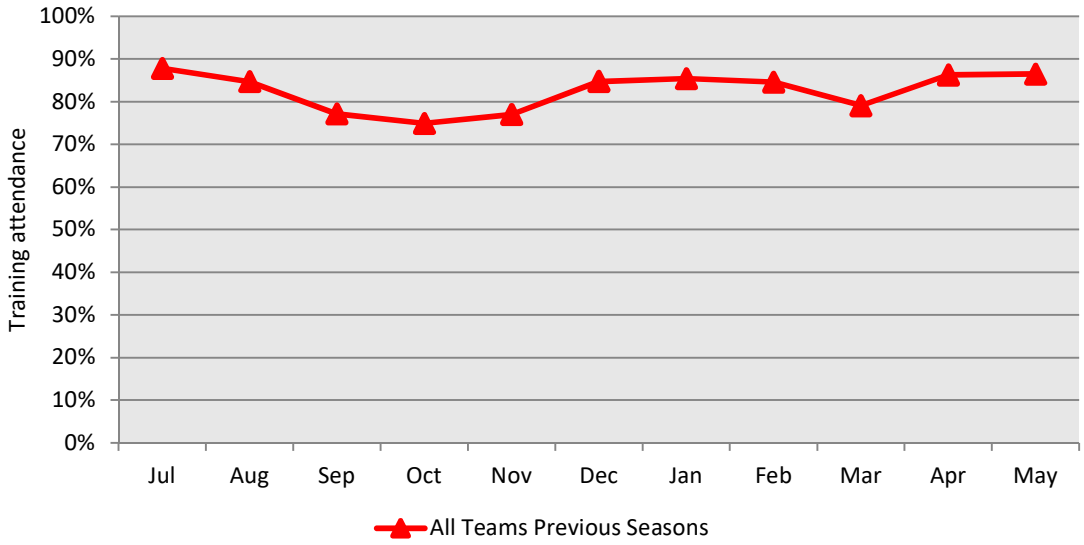


Figure 58. Squad availability rates for matches

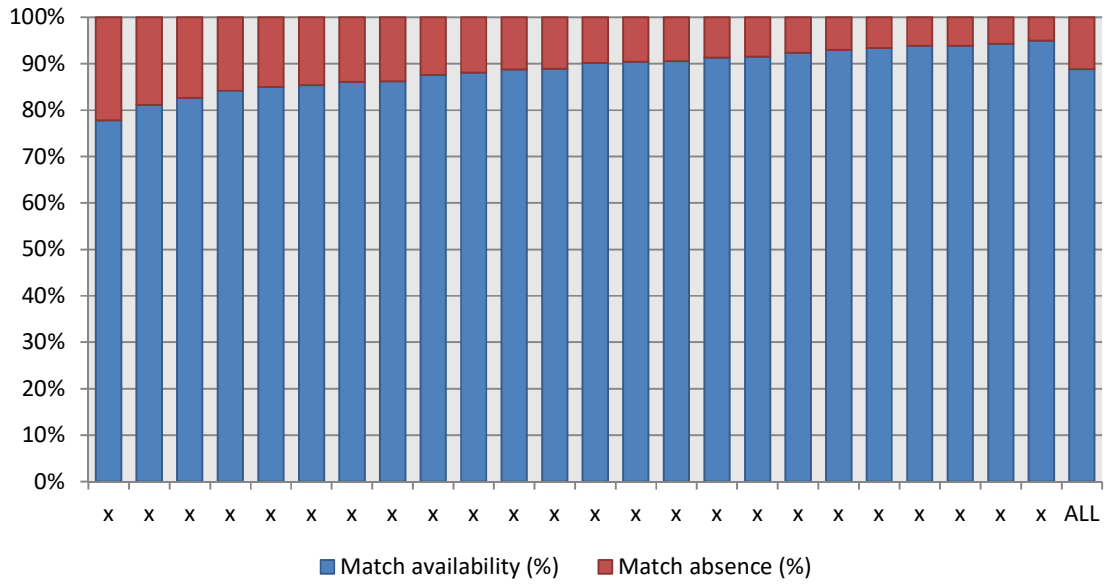


Figure 59. Squad availability rates for matches in previous seasons

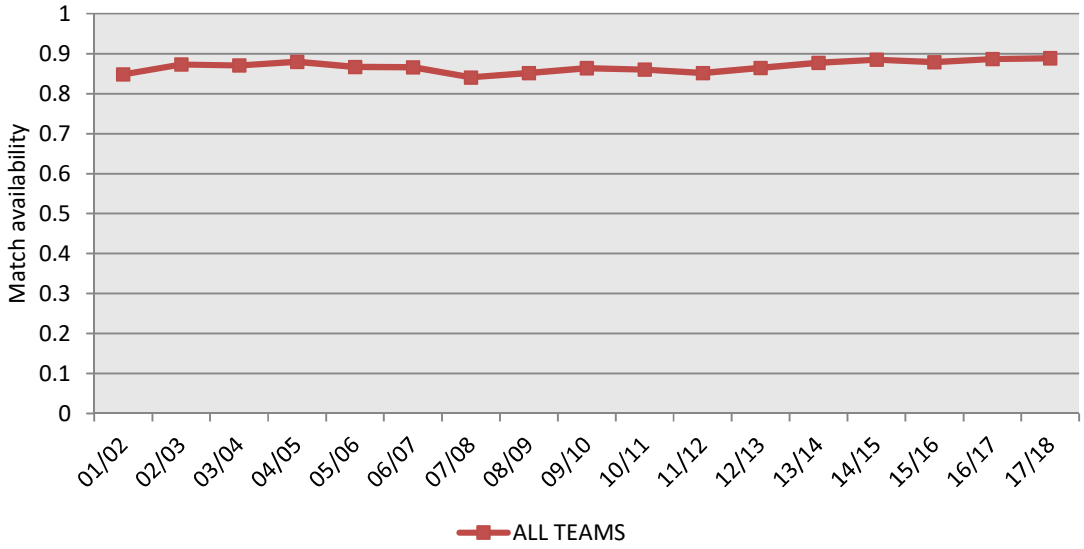
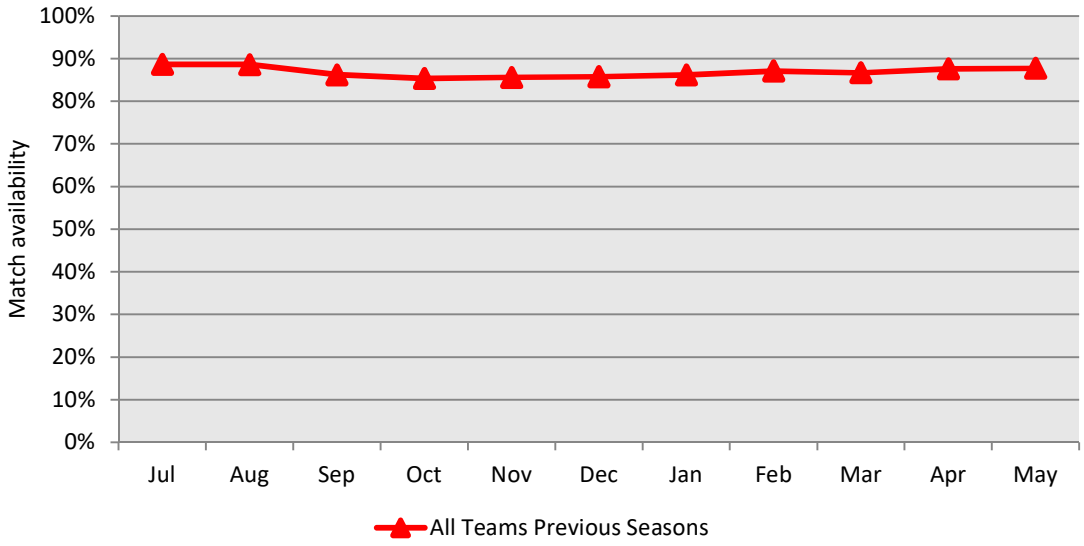


Figure 60. Squad availability for matches for Team X over the season in comparison to previous seasons



12.2 Squad absence

The charts below break players' absences down by reason.

Figure 61. Reasons for absence from training sessions

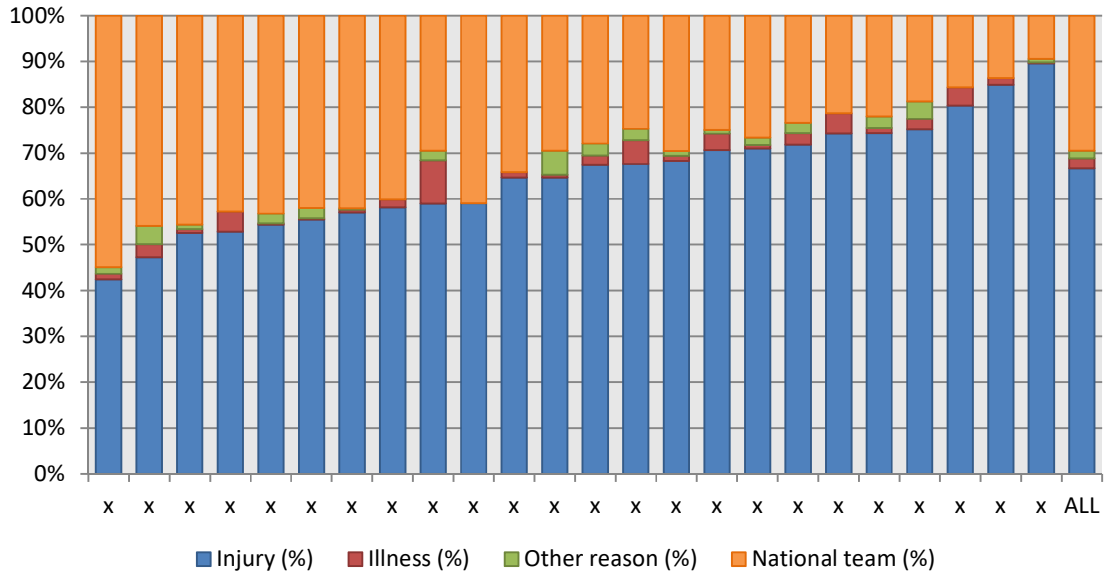
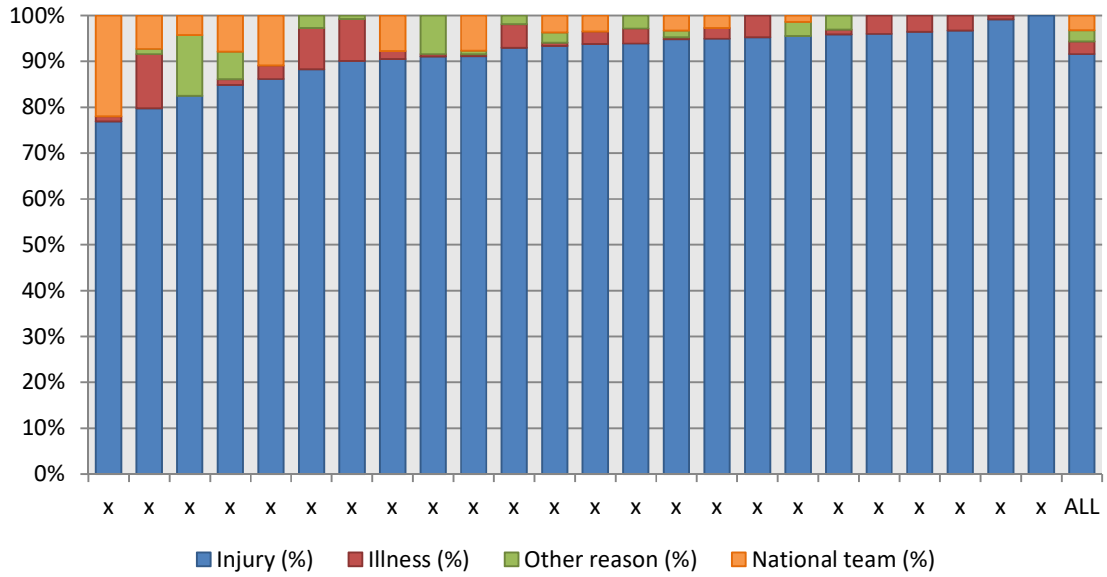


Figure 62. Reasons for absence from matches



12.2.1 Absence due to injury

Figure 63. Absence from training sessions due to injury

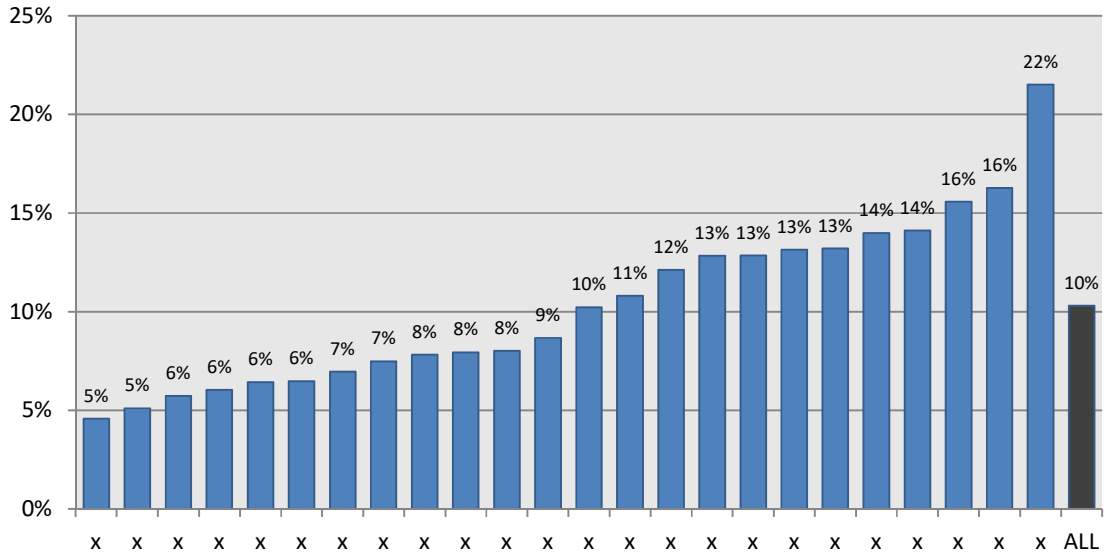


Figure 64. Absence from training sessions due to injury in previous seasons

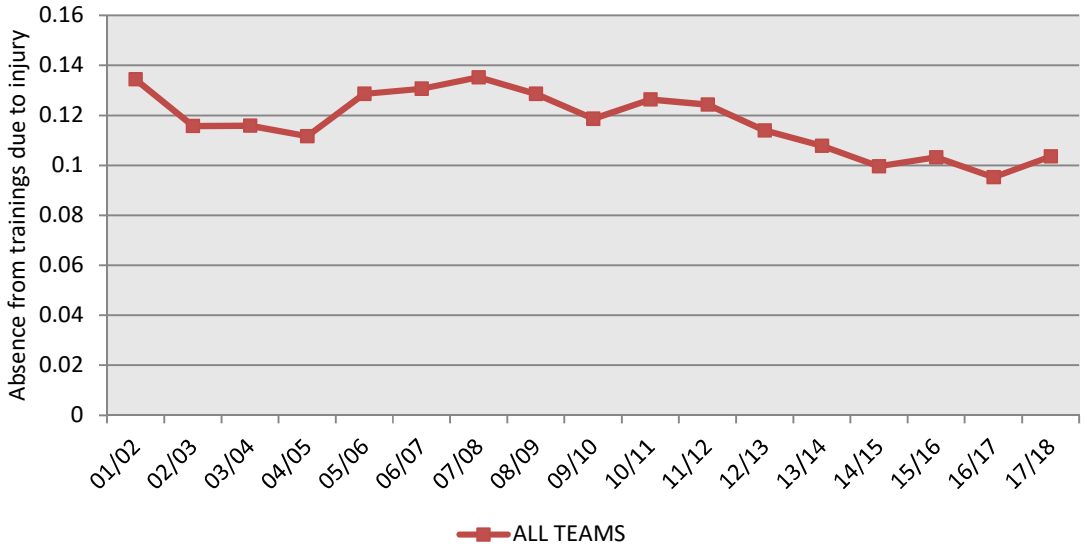


Figure 65. Absence from training sessions due to injury for Team X over the season in comparison to previous seasons

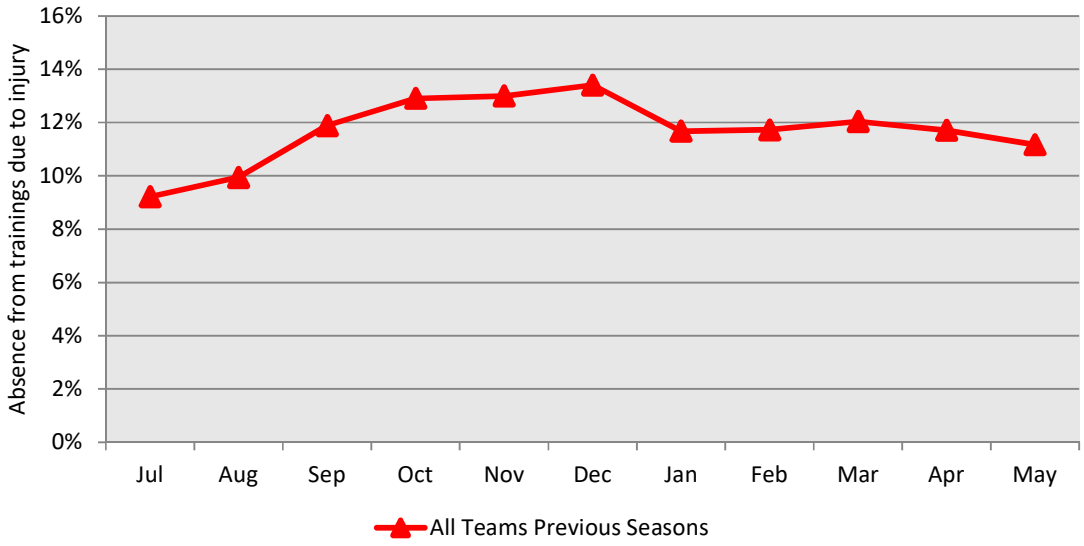


Figure 66. Absence from matches due to injury

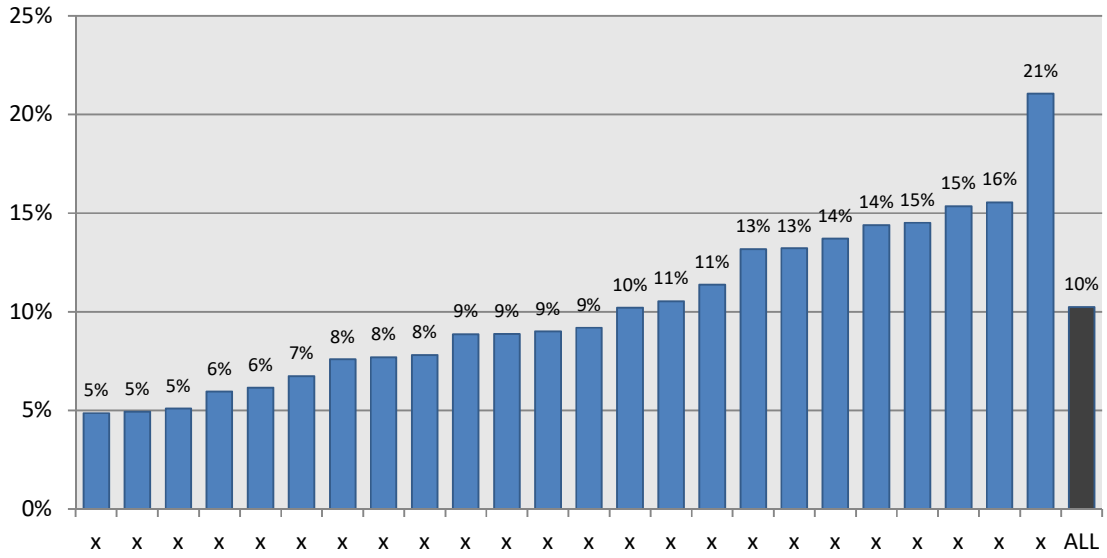


Figure 67. Absence from matches due to injury in previous seasons

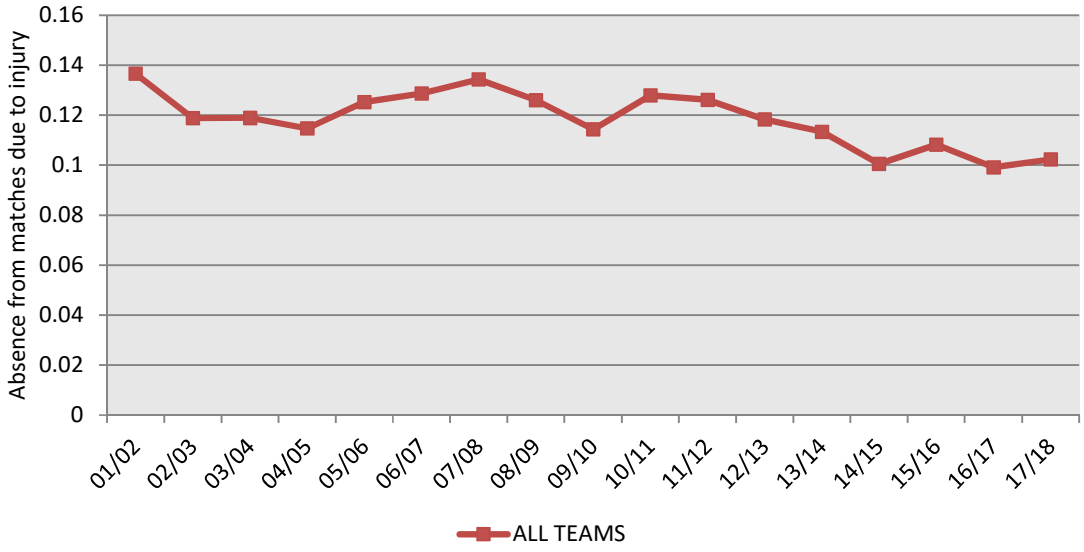
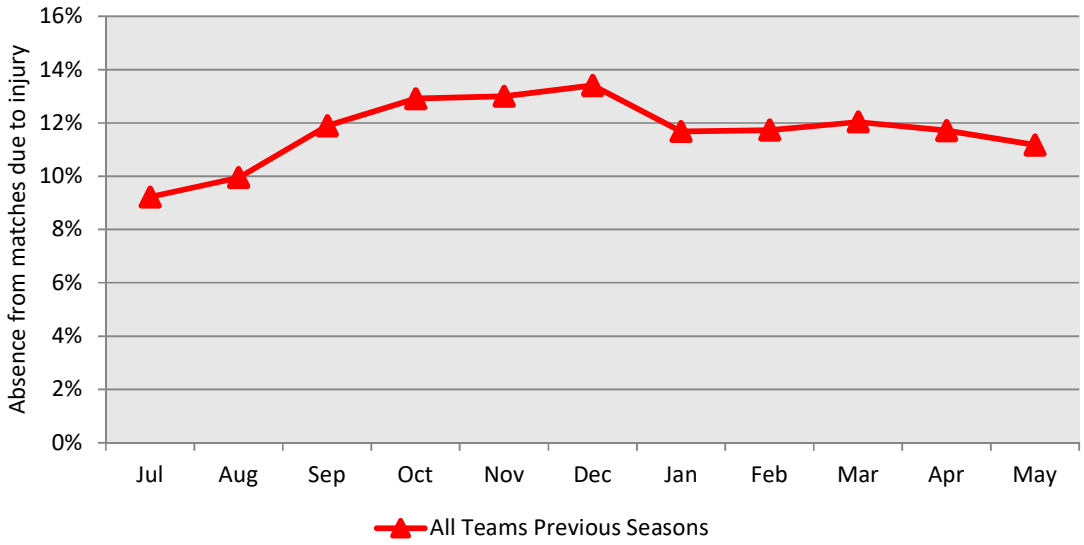


Figure 68. Absence from matches due to injury for Team X over the season in comparison to previous seasons



12.3 Number of training sessions/matches missed because of injury

The consequences of injuries have also been assessed in terms of the number of training sessions and matches that players missed during the review period. On average, across all clubs, each player missed 2.1 training sessions and 0.6 matches each month because of injury. Data specific to each club is presented below.

Figure 69. Number of training sessions missed per player per month owing to injury

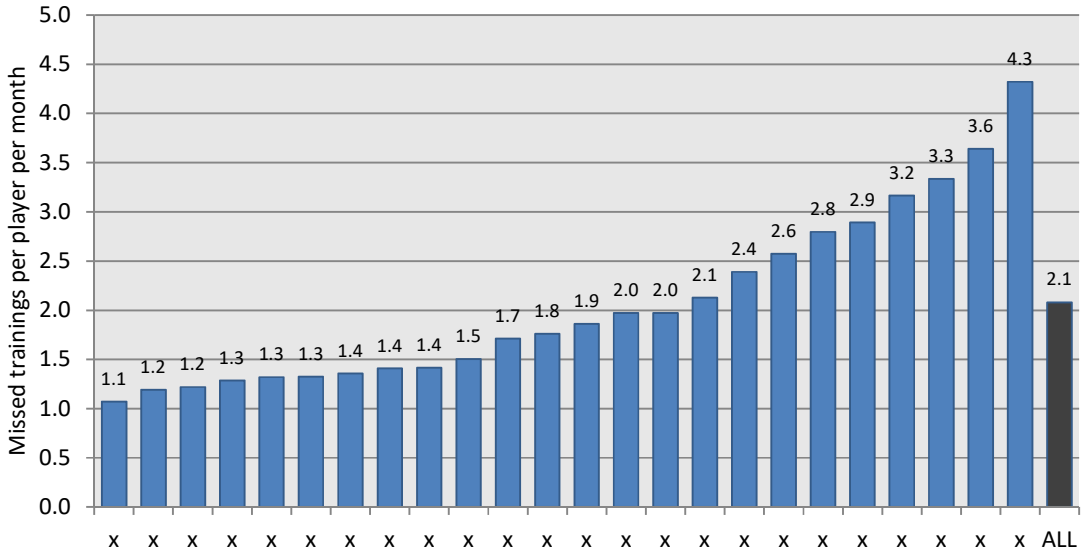


Figure 70. Number of matches missed per player per month owing to injury