Comparing AFL Injury Surveillance to other Codes

Injury surveillance is becoming more consistently recognised as a fundamental responsibility of sports governing bodies around the world. This is especially the case with elite football competitions, for which injury rates are typically higher than other sporting codes (Table 1).

It is still difficult to compare the injury rates in different codes and competitions, because of differences in injury definitions and the nature of competitions. The injury definition used in the AFL works for our competition because it means that we can aim to achieve and deliver 100% compliance with the definition. Other football codes – such as soccer and rugby union – have elected to use a much broader definition inclusive of more minor injuries. This certainly has some benefits but leads to difficulty with ensuring compliance.

Even if all other competitions used a similar definition to the AFL, it may still be difficult to compare relative injury rates. For example, in the European soccer competitions it is commonplace for teams to play two matches per week and for players to be rested from the second match with minor conditions. In the AFL, with one match per team per week there is less likelihood of this occurring.

It is also common for other injury surveillance reports to separate match and training injuries and to express the incidence of these in number of injuries per 1000 player hours. Because of the relatively high number of “overuse” injuries in Australian Football that are difficult to characterise as solely being a “match” or a “training” injury, we prefer to express injury incidence as number of injuries per club per season. We also find that this unit of measurement is easier to comprehend when reading the reports; a lay person can understand that a club will experience 6 hamstring injuries per season, on average, but reading that the rate is 8 injuries per 1000 player hours does not give the same sense of how common these injuries are.

Despite the comparative difficulties, some general trends and differences between sports can be noted and can assist the AFL in assessing whether the way our sport is played leads to an acceptable rate of certain injuries (Table 2). In the past the AFL has acted when it has felt that the rate of certain injuries was unacceptable. One example is the centre circle rule which has successfully led to a reduction in PCL injuries in ruckmen. Another example is the reduced tolerance of head-high contact, stricter policing of dangerous tackles, and the introduction of rules to penalise a player who makes forceful contact to another player with his head over the ball.

Those football codes which have the highest number of tackles occurring and allow the most leniencies within the rules with respect to tackling have the highest rates of contact mechanism injuries. On the other hand, a greater number of tackles will generally result in a more limited range of free running, and hence running-related non-contact injuries will tend to be more common in the football codes with less tackling.
Certainly compared to American Football, Rugby League and Rugby Union, Australian Football has fewer contact mechanism injuries but more non-contact injuries. The injury profile of the AFL is most similar to Soccer and Gaelic Football. Compared to other football codes, Australian Football is played on a larger field. Although there is officially 80 minutes of playing time in an AFL match, there is a greater amount of time added for stoppages than in other codes, so that the average time played in an AFL match is greater than 100 minutes. This combination of a large field and extended playing duration means that Australian Football players on average generally run further distances than athletes in other codes. The aerobic demands for AFL players are possibly higher than any other football code. This possibly explains the relatively high rate of non-contact injury in Australian Football.

Despite the high physical in-game demands for an AFL player, AFL players have the advantage of a lighter playing schedule in comparison to Soccer, Rugby League and Rugby Union players. Soccer players in Europe often must play twice per week within a season that is also long in duration. Rugby League players are often required to play with less than a 6 day break between games whereas Rugby Union players have a very short off-season, with northern hemisphere tours sometimes running until November and the Super 14 season starting in February.

**Associate Professor John Orchard**  
University of Sydney

**Dr Hugh Seward**  
AFL Medical Officers Association  
johnorchard@msn.com.au
AFL INJURY SURVEILLANCE

Table 2 – Difference in game parameters between professional football codes

<table>
<thead>
<tr>
<th>Sport</th>
<th>Duration of game</th>
<th>Size and nature of playing field</th>
<th>Amount of tackling</th>
<th>Spacing of games</th>
<th>Off-season length for professional players</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australian Football</td>
<td>Relatively long</td>
<td>Very large</td>
<td>Moderate – tackling to head, neck and legs not allowed</td>
<td>One week (at least 6 days) apart</td>
<td>Relatively long</td>
</tr>
<tr>
<td>Rugby League</td>
<td>Medium</td>
<td>Medium</td>
<td>Very high</td>
<td>Generally one week apart but sometimes shorter durations between matches, especially for representative players</td>
<td>Medium duration (e.g. four months)</td>
</tr>
<tr>
<td>Rugby Union</td>
<td>Medium</td>
<td>Medium</td>
<td>Relatively high</td>
<td>Generally one week apart</td>
<td>Very short for national level players</td>
</tr>
<tr>
<td>American Football</td>
<td>Very short (minimal playing time with many stoppages)</td>
<td>Relatively small (narrow, often artificial surfaces)</td>
<td>Extremely high, including players without the ball (blocking)</td>
<td>Generally one week apart</td>
<td>Very long (6 months)</td>
</tr>
<tr>
<td>Soccer</td>
<td>Fairly long</td>
<td>Medium</td>
<td>Low (although leg to leg tackles allowed)</td>
<td>Teams often play two matches per week</td>
<td>Very short for national level players</td>
</tr>
<tr>
<td>Gaelic Football</td>
<td>Relatively short</td>
<td>Relatively large</td>
<td>Relatively low</td>
<td>Generally one week apart</td>
<td>Relatively long</td>
</tr>
</tbody>
</table>

A paper comparing sports injury prevention in Australia and New Zealand will be presented on Thursday 15th October at be active ‘09

References


