
Epidemiological Measures

Sports injury epidemiology, the study of injury occurrence in athletic populations, is important for your clinical practice because it provides information regarding the injury trends that occur in the athletes or patients that you encounter on a daily basis. Understanding the trends associated with injury occurrence in athletic populations is also the foundation for one of your primary roles as an athletic trainer (AT): injury prevention. In this chapter, we review basic concepts in injury surveillance and many of the measures that you can use to understand injury trends and make evidence-based decisions for implementing injury prevention strategies.

Injury surveillance is the documentation of injuries. Injury surveillance systems can be as large scale as the National Collegiate Athletic Association Injury Surveillance System (NCAA ISS), which is the most comprehensive database on sports-related injuries at the collegiate level. The NCAA ISS has kept record of injury information on thousands of intercollegiate athletes in several sports and divisions for longer than 2 decades. These databases may include information on athlete exposures, injury occurrences, and potentially modifiable risk factors that would be used to develop injury prevention strategies. The benefit to databases such as the NCAA ISS is that a large number of participants can be tracked from many institutions over several years. Clinicians and researchers can use NCAA ISS data to make strong inferences regarding expected injury trends for certain sports, levels of competition, and types of exposure.

Injury surveillance can also be small-scale (eg, by consistently and accurately completing injury documentation records). Recording the numbers of participants and the injuries that occur is a part of basic clinical documentation and standard practice. The information that you gather can be used in much the same way as information collected for the NCAA.

In either case, injury epidemiology is important for understanding injury rates, injury risk, and making evidence-based decisions regarding injury prevention strategies in your clinical practice. It can also be used to evaluate injury trends in different groups (eg, in comparing injury rates between a group that performs an injury prevention program and a group that does not). These types of studies will facilitate evidence-based decision making as you plan whether to implement