Comparison of nomenclature and classification systems of sport injuries in elected countries with Iran

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ARTICLE INFO

Article history:
Received 11 September 2013
Received in revised form 21 November 2013
Accepted 25 November 2013
Available online 5 December 2013

Keywords:
Coding system, sport injuries, nomenclature and classification

ABSTRACT

Introduction: Today, sport injuries form a considerable amount of accidents in the society. Prevention and management of sport injuries necessitates the existence of a comprehensive system for recording and classification of data. The object of this research was study of a specialized sport injuries classification system for modeling of national sport injury classification system.

Methods: This descriptive-comparative study was conducted in 2012. The sport injuries classification systems in USA, Canada, Australia and Iran were studied. Method for data gathering was a checklist that was completed through valid library and internet sources. Then, data analysis was performed with comparative tables.

Results: Results showed that developed countries had attempted development of national sport injuries classification system. They were adapted from the international classification system of diseases and international classification of external causes of injuries. Iran lacks a national sport injuries classification system.

Conclusion: Designing and use of sport injuries national classification system will have an important role in prevention and release of sport injuries in Iran. Designing of national sport injuries classification system using of developed countries experiences recommends.

INTRODUCTION

Sport injuries have happened to wrong physical activities or with more usual activities and it causes limitation sport activities in one or more days. Sport injuries have happened with acute or chronic. These injuries impose more economic costs to each society. So, need to sports injury data management to prevent and reduce is mandatory for us. Nomenclature and classification system play the main role in sports injury data management. Without use standardized systems, there is no mean to determine and classifying patient information process. Then, every year many standardized the system of nomenclature and classifying submit patient information for comparison objective has established[1]. Coded data use for analysis Epidemiological and management objectives [2]. The goal of this research is study of sport injury classification system in selected countries and suggest a national classification system in Iran.

MATERIALS AND METHODS

Materials:
This research has used Description –Comparison method in 2012.

Methods:
Statistical sampling for this research was a sport injury classification system in the USA, Canada, Austria and Iran. I used the checklist for collecting data. These data, gather form validated information on the internet then I analyzed them in comparison tables.
Results:

In the USA country, the standard Nomenclature system was established by USA medical society in 1964. This book offers a clear definition of the standard terms so that provides naming degree and type of sport injuries, for example sprain with three degrees: Mild, Moderate and Acute has been in the book [1].

National urgent injury events classification system was established by the Consumer Product Safety Commission [2]. In the USA for classification tools to create events as well as sports. The NEISS’s codes used international classification of external causes [3]. For example, when a person has injured from Basketball sport, four digit code was extracted from the book. A brief version of the ICECI has prepared by the center for Diseases Control and Prevention (CDC) is included. Goals, injury mechanism, tools, types of activities and place of events [4].

Canada country in 1999 designed a Sport-Medicine Diagnostic Coding System by central of Sport-Medicine of Calgary university in Canada. This system is so flexible and has more than 1000 codes. It has the ability to expand. Each code consists six characters, two letters and four digits [5].

The first part of SMDCS includes two letters that indicate the place of injuries, for example HE means Head and NE means Neck. Also, next two digit use of structure for example 1 use for muscle, 2 for Nerv, 3 for Bone and etc. And the last digit use for injuries that indicate recognize the code. For example, 01 uses for Sprain, 07 for strain, 09 for muscle cramps, 10 for dislocation, 13 for acute fractures and so on. You can see International Classification of Diseases cross of the code [6]. In Australia country for coding type of injuries use ICD10AM and The Orchard Sports Injuries Classification [7]. Many countries use recognized classification system Orchard for the coding type of sport injuries. First time Mr, Dr John Orchard designed it in Sydney university in 1992. This system is in internet with free charge and has more than 200 codes [8].

OSICS is available in paper ad paperless format. The paper format includes seven pages (first pages indicate anatomy and other pages indicates functional group). The paperless format so like ICD10AM and emphasis to key keyboard that has typed and selected a code [13]. For classification type of sport activities used ICECI codes [9, 10].

The orchard 9th edition has three digit codes and Orchard 10th has four digit codes. The first version of it was established for football and then has used for Tennis, Rugby, Cricket and so on. In 1998, 6th edition, 2000 7th edition and 2002 8th edition were established. Three digit version has not covered needs then in 2007 was created four digits [11].

The code of the last version of Orchard is four letters and the first letter indicate the place of anatomy injury. For example H means Head and N means Neck and so on. The second letter indicates the type of injury and also show defined list of characters. For example Laceration/Abrasion defined by H letter. Third and fourth letter uses for describing more about injury [11].

In Iran country, there was not established national sport injury classification system.

Table 1: Comparisons of specialist nomenclature and classification sports injuries systems in selected countries.

<table>
<thead>
<tr>
<th>Country</th>
<th>System name</th>
<th>Organization</th>
<th>Count</th>
<th>System Type</th>
<th>Code structure</th>
<th>Match specificity</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>SNAI NEISS</td>
<td>AMA CPSC CDC</td>
<td>Single-axis</td>
<td>Diagnostic Factor</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Short version of ICECI</td>
<td></td>
<td>Multi-axis</td>
<td>Factor</td>
<td>4 characters</td>
<td>ICECI</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3-8 characters</td>
<td>ICECI</td>
</tr>
<tr>
<td>Canada</td>
<td>SMDCS</td>
<td>Calgary university</td>
<td>Single-axis</td>
<td>Diagnostic</td>
<td>6 characters</td>
<td>ICD</td>
</tr>
<tr>
<td>Australia</td>
<td>ICD10 AM(U50-U72) OSICS(8-10)</td>
<td>Australian Health and welfare Institute John Orchard</td>
<td>Two-axis</td>
<td>Factor</td>
<td>5 characters</td>
<td>ICECI</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Single-axis</td>
<td>Diagnostic</td>
<td>4 characters</td>
<td>ICD</td>
</tr>
</tbody>
</table>

Discussion:

According to classification system ICD is the reference for diseases and hygiene situation and use it was very boring then developed countries regarding with two international classification systems by world health organization (WHO), ICD and ICECI, start to design and develop special national sport injury system [12, 11]. According by John Orchard and his collages study in 2004 in sport medicine clinics, they found that the Orchard classification system more faster ICD10AM in the coding process [14, 15]. Also according Hammond this collage study in 2009 on OICS classification system, they pointed to that last version of OSICS is so user findly and for this reason country use it [16].

Also in Iran, this study has been done. The PhD thesis by Dr Safari in 2001 was emphasized to create a national disease classification system, and customize with national formatting. In Mr Ghorbani and Givi's thesis, regarding by their study, they pointed to the effective role of the national classification system. Mrs Afifiyan and developed national Oral diseases system in 2011 according by our study, to save time...
oncoding and create a user friendly system, we need to establish and develop special sport injury classification system regarding by other countries’ experiences.

**Conclusion:**

Sport injuries in order to classification needed for recognition or patient with environmental conditions and root cause of them. As regarding the world health organization designed ICECI system for classification root and condition of injury and sport injuries are unintentional injuries and need to use system for 4-axis, type of activities, Place event, tools and injury mechanism. Create National classification sport injuries match with the international classification patient system and classify. Create National sport injuries classification match with ICD and ICECI that use 4-Axis to classify sport injuries is mandatory. In this regard, the customize classification system with the country’s need is mandatory.

**REFERENCES**


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