Gaëtan BOLPAIRE

Kinésithérapeute

SURVEILLANCE DES BLESSURES DANS LES SPORTS D'ÉQUIPE

Gaëtan BOLPAIRE
Kinésithérapeute

460238637
TMB
TOULOUSE METROPOLE BASKET
FFBB

Topics

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Topics

- Théorie, méthode, exemples et développement récent
- Appliquer les principes de surveillance à votre équipe

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Surveillance des blessures

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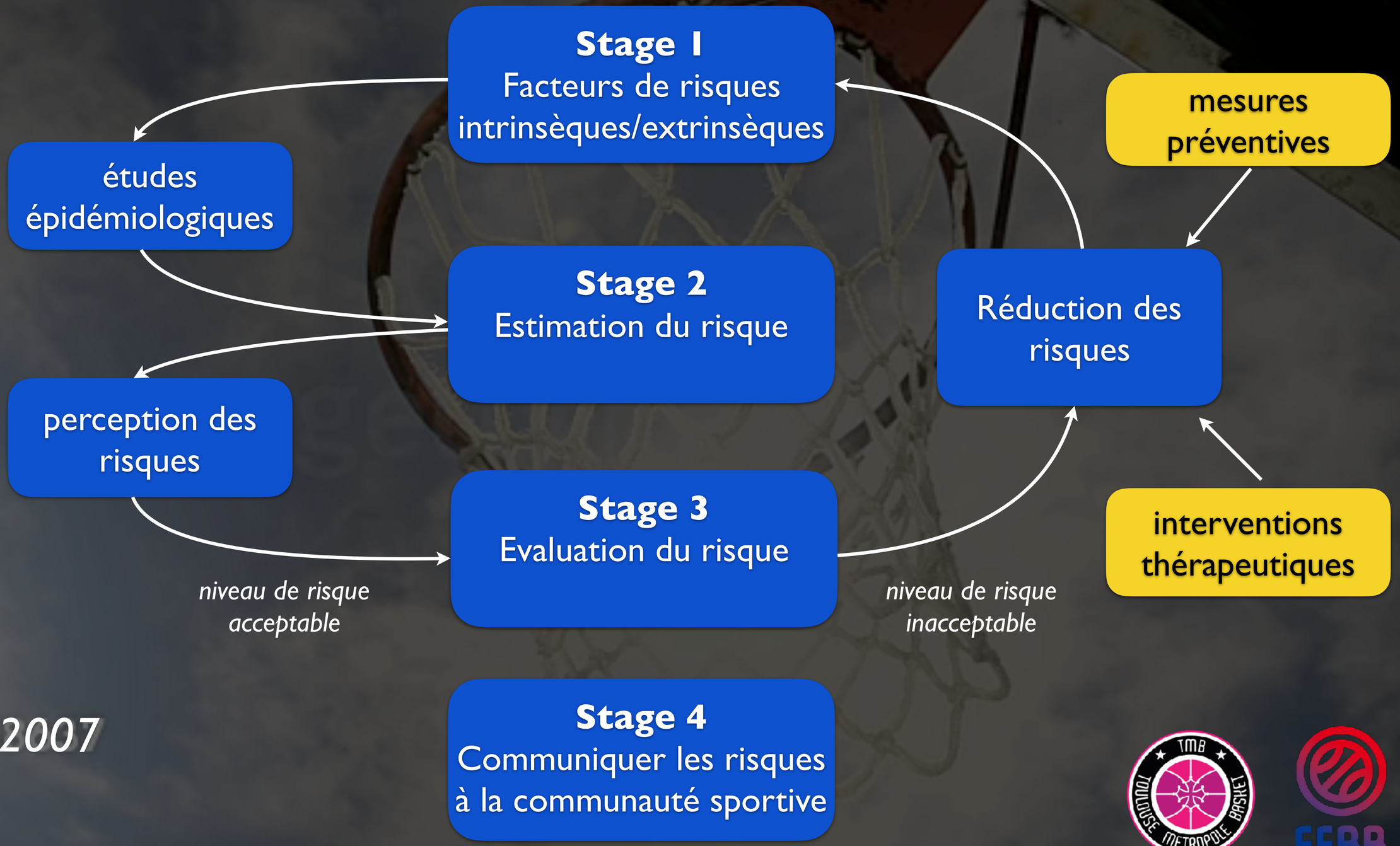
Surveillance des blessures

- Le terme "surveillance"... désigne la collecte, l'analyse, l'interprétation et la diffusion permanentes et systématiques d'informations de santé.

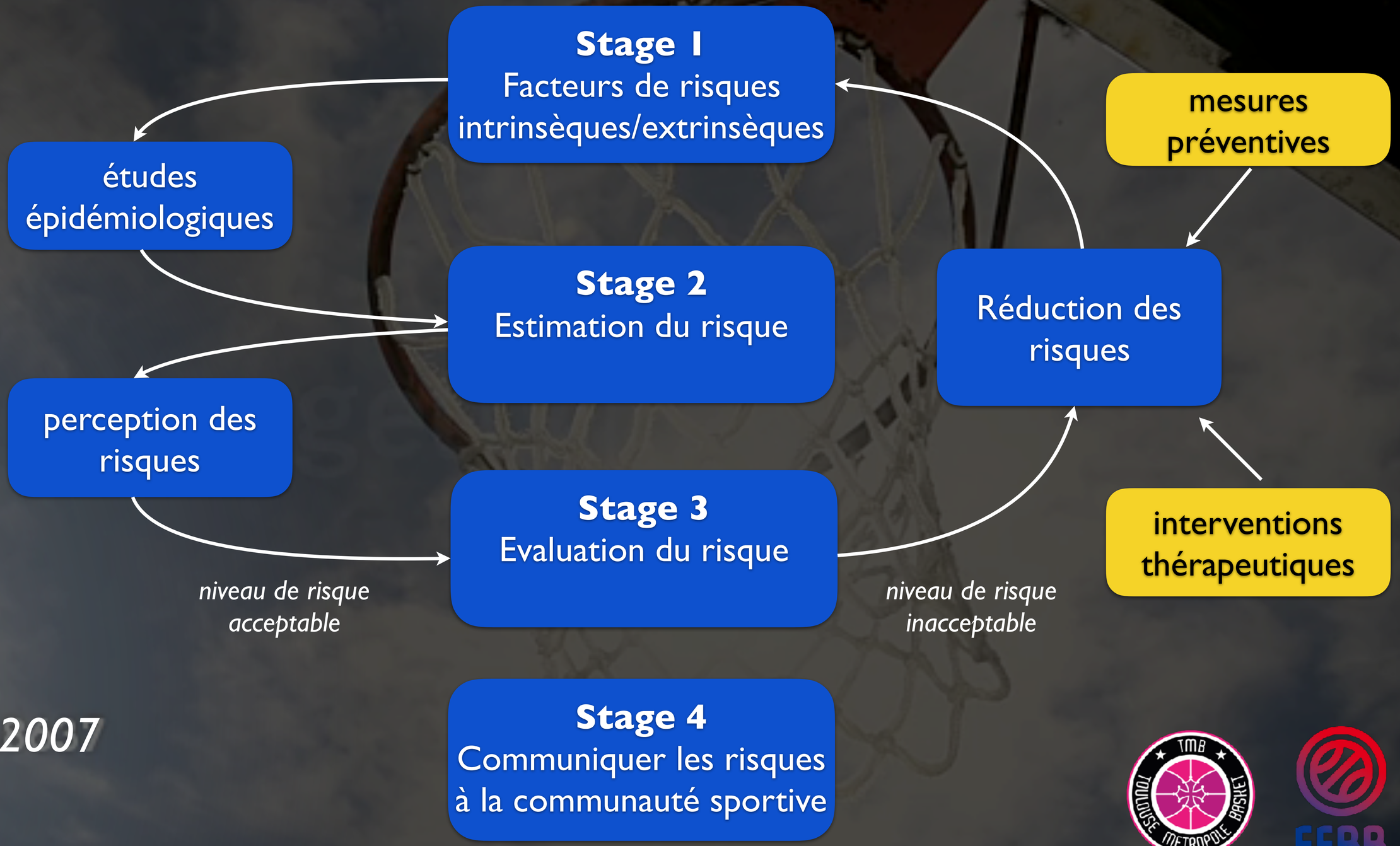
  Who 2001

- La collecte continue de données décrivant l'occurrence et les facteurs associés aux blessures

  Finch 1997


Stage 1
Facteurs de risques intrinsèques/extrinsèques
études épidémiologiques
Stage 2
Estimation du risque
perception des risques
Stage 3
Evaluation du risque
niveau de risque acceptable
niveau de risque inacceptable
Stage 4
Communiquer les risques à la communauté sportive
mesures préventives
Réduction des risques
interventions thérapeutiques

Fuller 2007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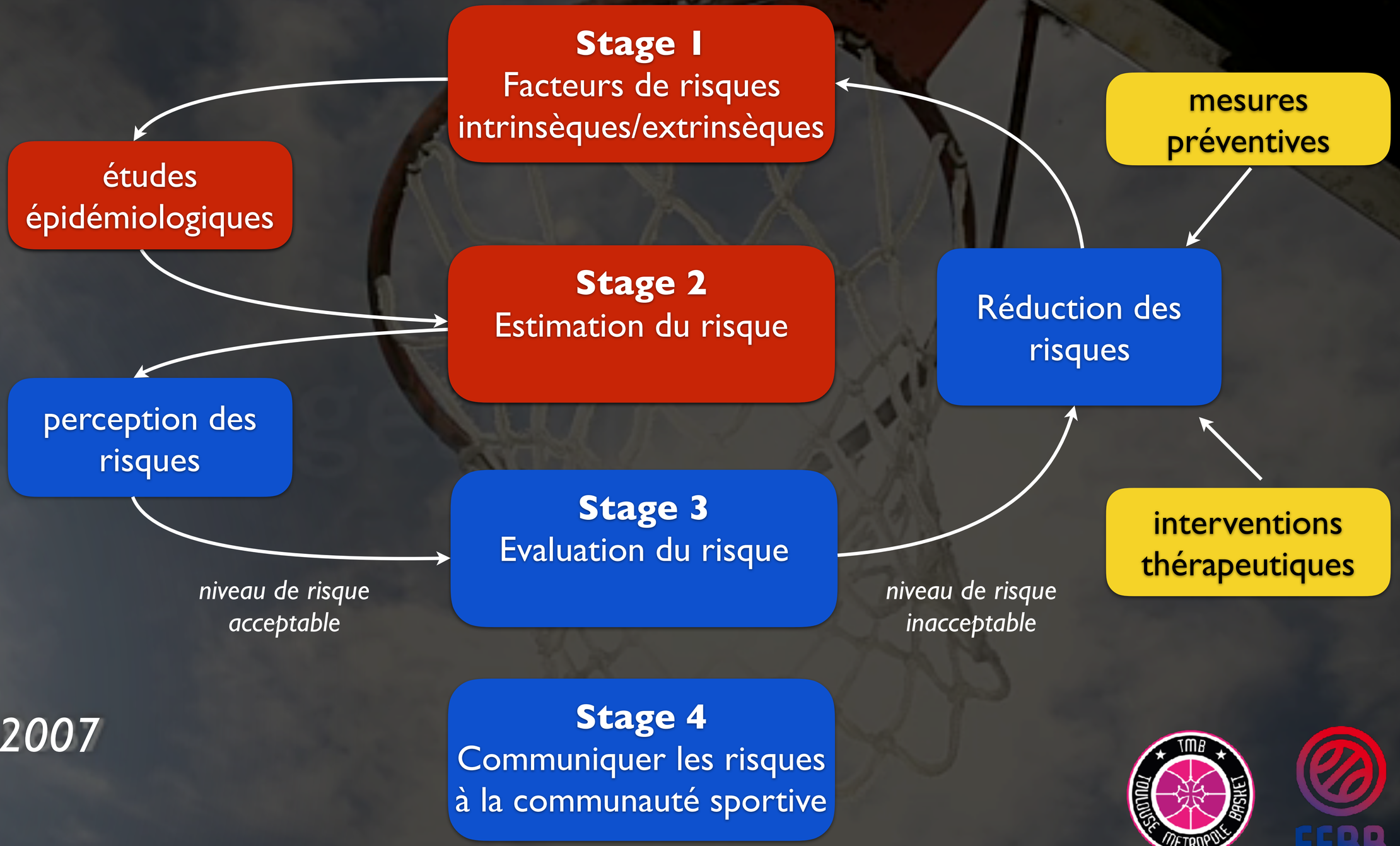
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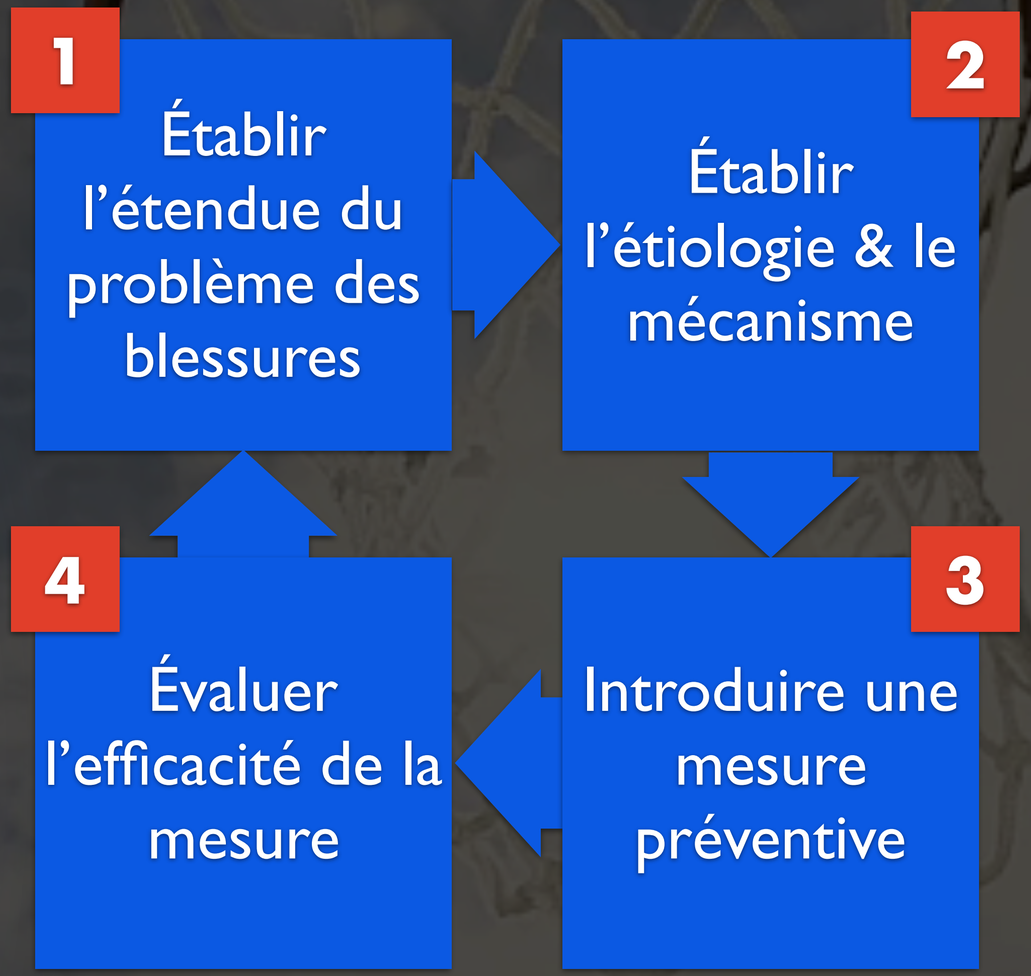
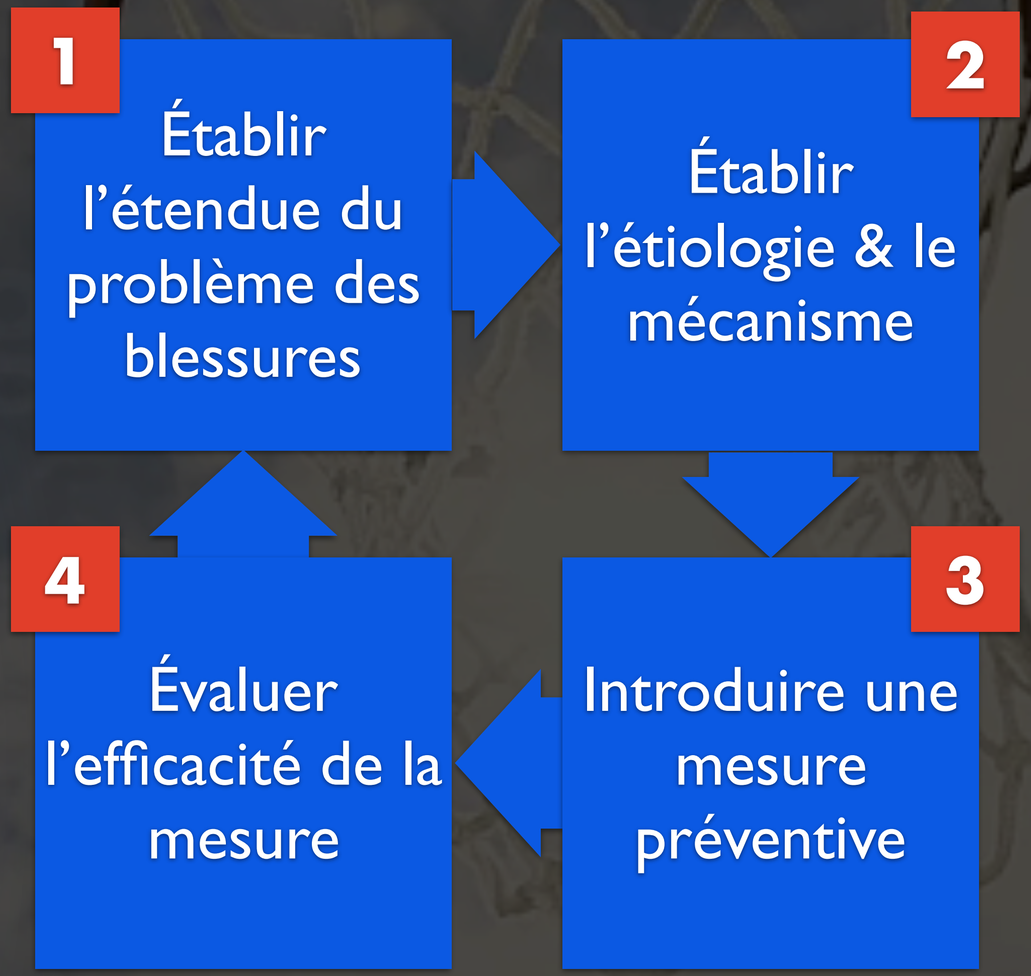


Van Mechelen 1992



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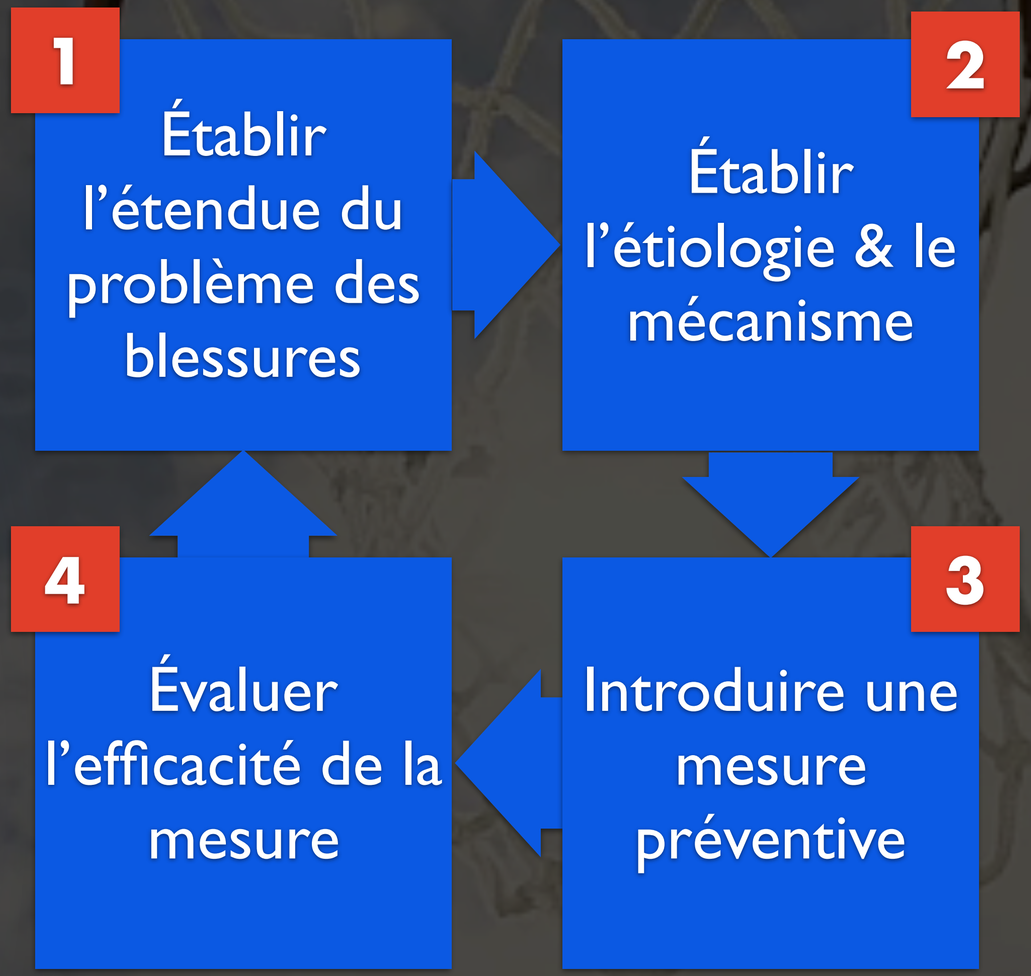

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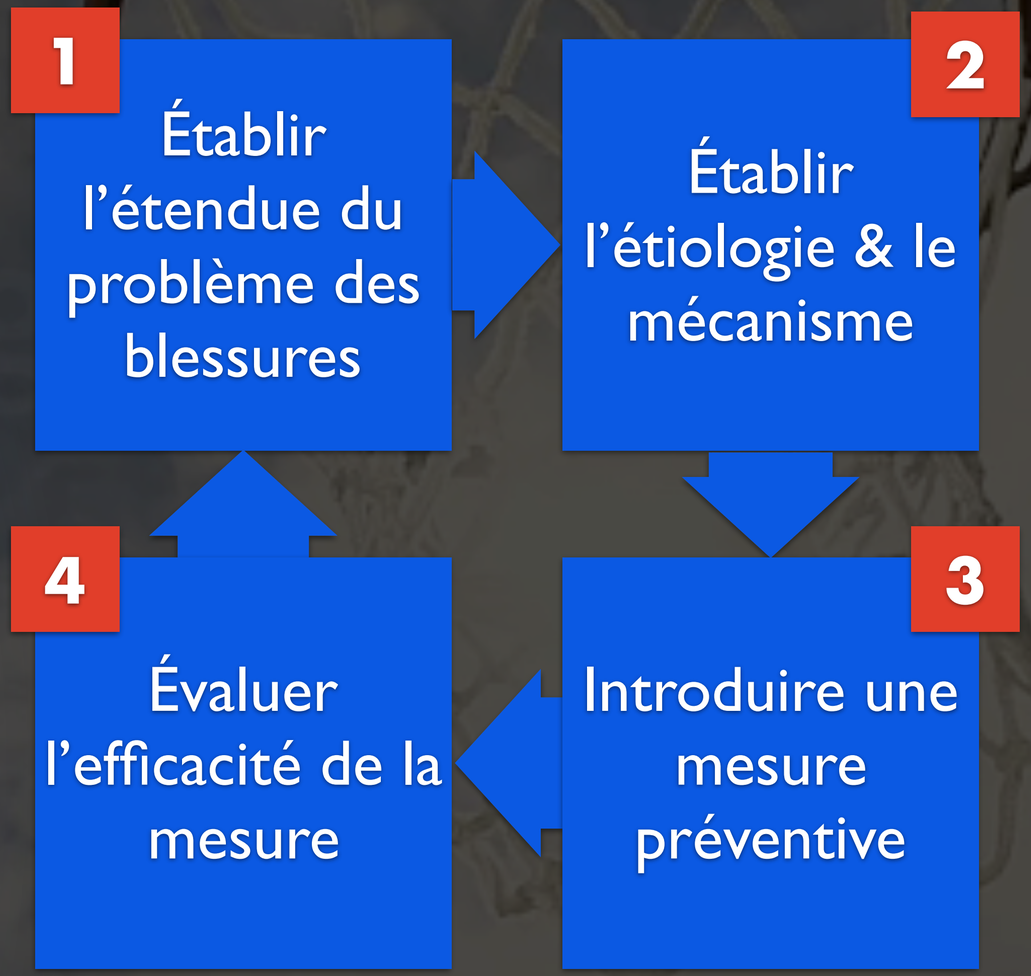

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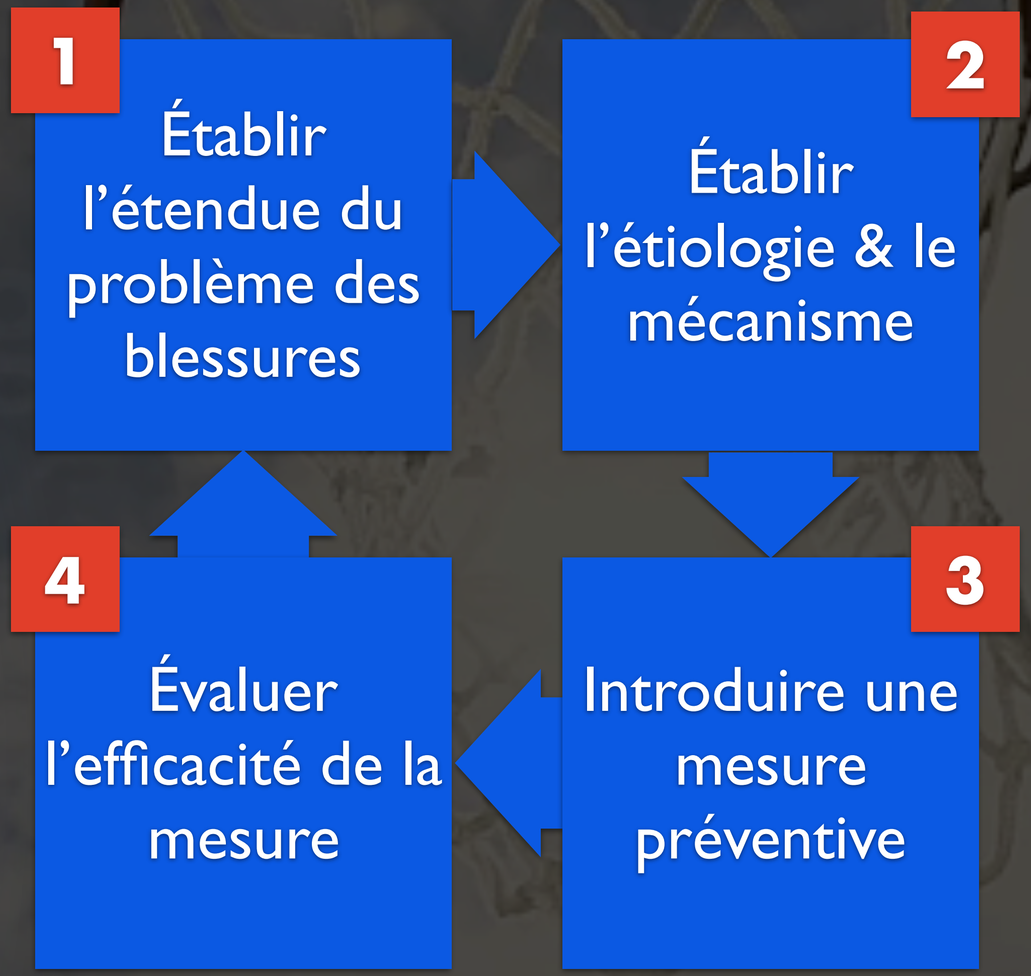

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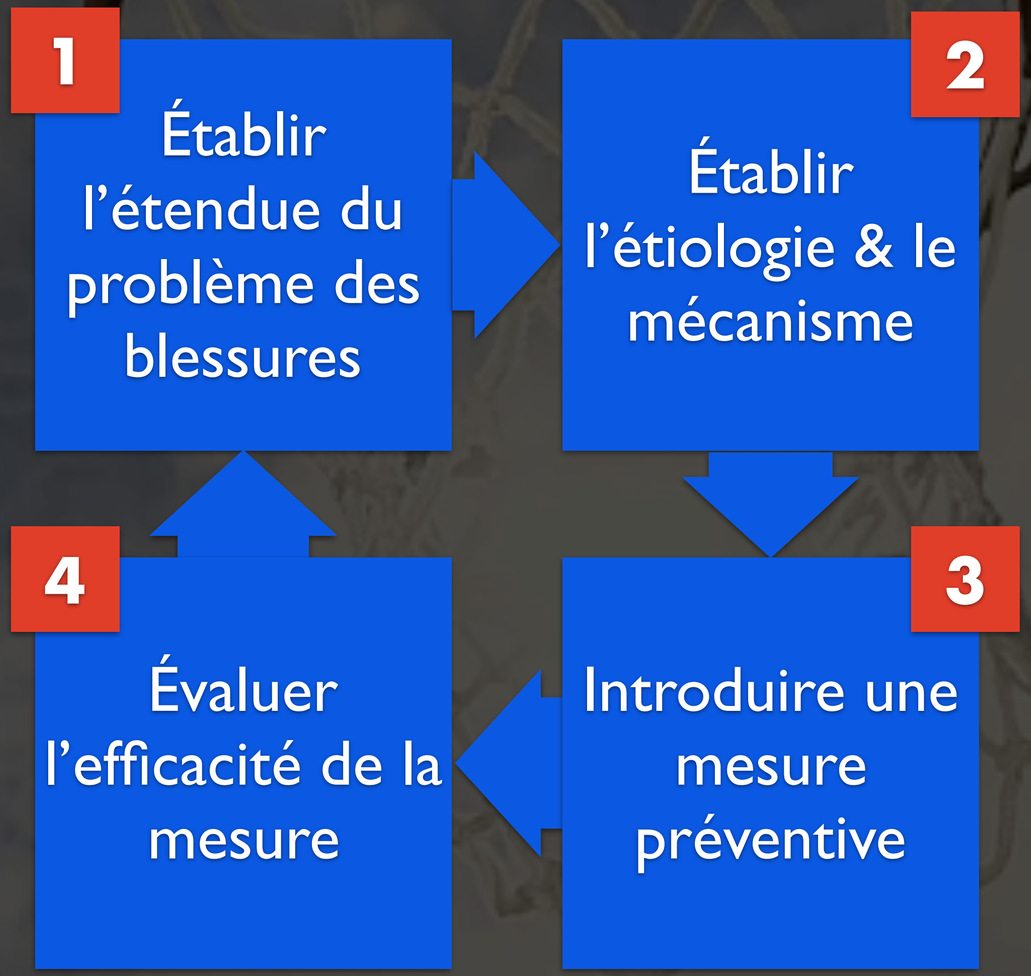
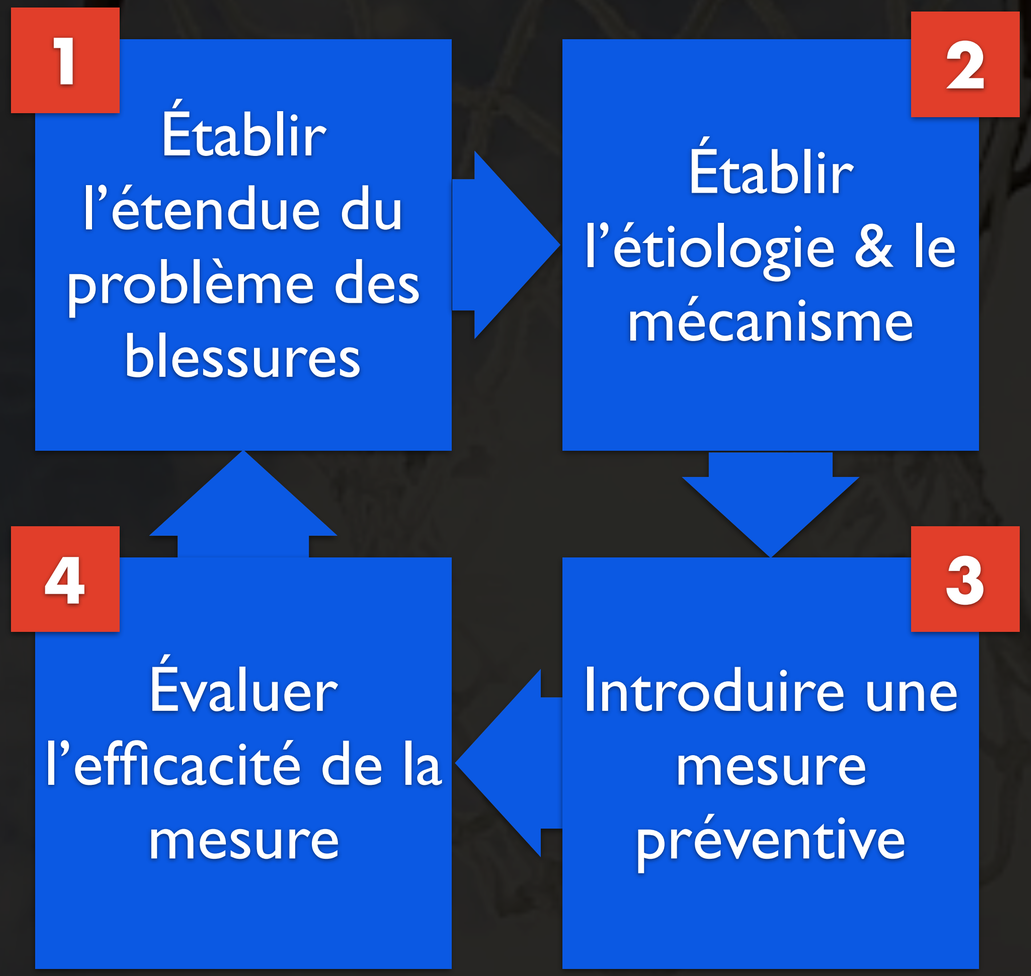


Van Mechelen 1992

Ce principe de "séquence de prévention" ne peut être appliqué sans une surveillance appropriée des blessures sportives propre à chaque sport.



Van Mechelen 1992

Les programmes de surveillance des blessures dans les sports d'élites

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International
Paralympic

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International
Paralympic

UEFA
CHAMPIONS
LEAGUE

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International
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International
Paralympic

NFL

UEFA
CHAMPIONS
LEAGUE

ENGLAND
RUGBY

Les programmes de surveillance des blessures dans les sports d'élites

International
Paralympic

NFL

UEFA
CHAMPIONS
LEAGUE

ENGLAND
RUGBY

CRICKET
AUSTRALIA

Programmes de surveillance des blessures au Basket-ball

Programmes de surveillance des blessures au Basket-ball

J Athl Train. 2000 Apr-Jun; 35(2): 161–167.

PMCID: PMC1323413

PMID: 16558626

Injuries and Illnesses in the National Basketball Association: A 10-Year Perspective

Chad Starkey, PhD, ATC

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Author informa

Sports Health. 2010 Jul; 2(4): 284–290.
doi: 10.1177/1941738109357303
PMCID: PMC3445097
PMID: 23015949

Injury in the National Basketball Association

A 17-Year Overview

Mark C. Drakos, MD,[*†] Benjamin Domb, MD,[‡] Chad Starkey, PhD, ATC,[§] Lisa Callahan, MD,[†] and Answorth A. Allen, MD[†]

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J Athl Train. 2019 May; 54(5): 466–471. PMCID: PMC6602371
Published online 2019 May 10. doi: 10.4085/1062-6050-18-19 PMID: 31074633

The Establishment and Refinement of the National Basketball Association Player Injury and Illness Database

Christina D. Mack, PhD, MSPH,[✉*†] Peter Meisel, MSPH,[‡] Mackenzie M. Herzog, PhD, MPH,[*†] Lisa Callahan, MD,[§] Eva E. Oakkar, PhD, MS,[*] Taylor Walden, BA,[‡] Joseph Sharpe, ATC,[‖] Nancy A. Dreyer, PhD, MPH,[*†] and John DiFiori, MD[‡§]

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Abstract

Go to:

The National Basketball Association (NBA; also referred to as “the league”) has established a centralized, audited electronic medical record system that has been linked with external sources to provide a platform for robust research and to allow the NBA to conduct player health and safety reviews. The system is customized and maintained by the NBA and individual teams as part of the employment records for each player and is deployed uniformly across all 30 teams in the league, thereby allowing for standardized data on injuries, illnesses, and player participation in NBA games and practices. The electronic medical record data are enriched by linkage with other league external data sources that provide additional information about injuries, players, game and practice participation, and movement. These data linkages allow for the assessment of potential injury trends, development of injury-prevention programs, and rule changes, with the ultimate goal of improving player health and wellness. The purpose of this article is to describe this NBA injury database, including the details of data collection, data linkages with external data sources, and activities related to reporter training and data quality improvement.

Pathology	All Injuries				Game-Related Injuries				
	Total		Games Missed		Total		Game Related		
	n	%	n	%	n	%	%	Rate	95% CI[b]
Lateral ankle sprain	1658	13.2	5223	8.8	1066	17.0	64.3	3.2	3.0-3.4
Patellofemoral inflammation	1493	11.9	10 370	17.5	245	3.9	16.4	0.7	0.7-0.8
Lumbar sprain/strain	999	7.9	3933	6.6	361	5.7	36.1	1.1	1.0-1.2
Hamstring strain	413	3.3	1826	3.1	189	3.0	45.8	0.6	0.5-0.7
Adductor strain	394	3.1	1416	2.4	185	2.9	47.0	0.6	0.5-0.6
Knee sprain	392	3.1	4369	7.4	268	4.3	68.4	0.8	0.7-0.9
Foot inflammation	362	2.9	2043	3.5	94	1.5	26.0	0.3	0.2-0.3
Quadriceps contusion	338	2.7	478	0.8	232	3.7	68.6	0.7	0.6-0.8
Knee/patella contusion	321	2.5	690	1.2	213	3.4	66.4	0.6	0.6-0.7
Finger sprain	308	2.4	336	0.6	205	3.3	66.6	0.6	0.5-0.7
Triceps surae strain	259	2.1	2078	3.5	138	2.2	53.3	0.4	0.3-0.5
Leg contusion	227	1.8	316	0.5	157	2.5	69.2	0.5	0.4-0.6
Hip contusion	218	1.7	249	0.4	159	2.5	72.9	0.5	0.4-0.6
Foot sprain	207	1.6	866	1.5	120	1.9	58.0	0.4	0.3-0.4
Achilles tendinopathy	204	1.6	1038	1.8	45	0.7	22.1	0.1	0.1-0.2
Thumb sprain	196	1.6	811	1.4	127	2.0	64.8	0.4	0.3-0.5
Wrist sprain	181	1.4	851	1.4	125	2.0	69.1	0.4	0.3-0.4
Periorbital laceration	172	1.4	52	0.1	114	1.8	66.3	0.3	0.3-0.4
Ankle inflammation	150	1.2	1026	1.7	37	0.6	24.7	0.1	0.1-0.1
Cervical sprain/strain	124	1.0	150	0.3	71	1.1	57.3	0.2	0.2-0.3
Lumbar disc degeneration	110	0.9	2151	3.6	23	0.4	20.9	0.1	0.0-0.1
Lumbosacral contusion	109	0.9	169	0.3	90	1.4	82.6	0.3	0.2-0.3
Foot contusion	107	0.8	255	0.4	54	0.9	50.5	0.2	0.1-0.2
Foot fracture	106	0.8	2169	3.7	37	0.6	34.9	0.1	0.1-0.1
Mouth laceration	103	0.8	2	0.0	69	1.1	67.0	0.2	0.2-0.3
Foot strain	102	0.8	302	0.5	51	0.8	50.0	0.2	0.1-0.2
Meniscal tear	102	0.8	2421	4.1	40	0.6	39.2	0.1	0.1-0.2
Quadriceps strain	101	0.8	312	0.5	44	0.7	43.6	0.1	0.1-0.2
Hand/wrist fracture	100	0.8	1470	2.5	76	1.2	76.0	0.2	0.2-0.3
Rotator cuff tendinopathy	89	0.7	303	0.5	23	0.4	25.8	0.1	0.0-0.1
Hip flexor strain	87	0.7	296	0.5	39	0.6	44.8	0.1	0.1-0.2
Elbow inflammation	84	0.7	203	0.3	31	0.5	36.9	0.1	0.1-0.1

Starkey 2010

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Hand/wrist fracture	100	0.8	1470	2.5	76	1.2	76.0	0.2	0.2-0.3
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Starkey 2010

Incidence des blessures 19.1 pour 1000 athlètes exposés

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Starkey 2010

Entorse de cheville 13,2% > 8,8 % des matchs manqués

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Finger sprain	308	2.4	336	0.6	205	3.3	66.6	0.6	0.5-0.7
Triceps surae strain	259	2.1	2078	3.5	138	2.2	53.3	0.4	0.3-0.5
Leg contusion	227	1.8	316	0.5	157	2.5	69.2	0.5	0.4-0.6
Hip contusion	218	1.7	249	0.4	159	2.5	72.9	0.5	0.4-0.6
Foot sprain	207	1.6	866	1.5	120	1.9	58.0	0.4	0.3-0.4
Achilles tendinopathy	204	1.6	1038	1.8	45	0.7	22.1	0.1	0.1-0.2
Thumb sprain	196	1.6	811	1.4	127	2.0	64.8	0.4	0.3-0.5
Wrist sprain	181	1.4	851	1.4	125	2.0	69.1	0.4	0.3-0.4
Periorbital laceration	172	1.4	52	0.1	114	1.8	66.3	0.3	0.3-0.4
Ankle inflammation	150	1.2	1026	1.7	37	0.6	24.7	0.1	0.1-0.1
Cervical sprain/strain	124	1.0	150	0.3	71	1.1	57.3	0.2	0.2-0.3
Lumbar disc degeneration	110	0.9	2151	3.6	23	0.4	20.9	0.1	0.0-0.1
Lumbosacral contusion	109	0.9	169	0.3	90	1.4	82.6	0.3	0.2-0.3
Foot contusion	107	0.8	255	0.4	54	0.9	50.5	0.2	0.1-0.2
Foot fracture	106	0.8	2169	3.7	37	0.6	34.9	0.1	0.1-0.1
Mouth laceration	103	0.8	2	0.0	69	1.1	67.0	0.2	0.2-0.3
Foot strain	102	0.8	302	0.5	51	0.8	50.0	0.2	0.1-0.2
Meniscal tear	102	0.8	2421	4.1	40	0.6	39.2	0.1	0.1-0.2
Quadriceps strain	101	0.8	312	0.5	44	0.7	43.6	0.1	0.1-0.2
Hand/wrist fracture	100	0.8	1470	2.5	76	1.2	76.0	0.2	0.2-0.3
Rotator cuff tendinopathy	89	0.7	303	0.5	23	0.4	25.8	0.1	0.0-0.1
Hip flexor strain	87	0.7	296	0.5	39	0.6	44.8	0.1	0.1-0.2
Elbow inflammation	84	0.7	203	0.3	31	0.5	36.9	0.1	0.1-0.1

Starkey 2010

SFP 11,9% > 17,5 % des matchs manqués

	All Injuries				Game-Related Injuries				
	Total		Games Missed		Total		Game Related		
Pathology	n	%	n	%	n	%	%	Rate	95% CI[b]
Lateral ankle sprain	1658	13.2	5223	8.8	1066	17.0	64.3	3.2	3.0-3.4
Patellofemoral inflammation	1493	11.9	10 370	17.5	245	3.9	16.4	0.7	0.7-0.8
Lumbar sprain/strain	999	7.9	3933	6.6	361	5.7	36.1	1.1	1.0-1.2
Hamstring strain	413	3.3	1826	3.1	189	3.0	45.8	0.6	0.5-0.7
Adductor strain	394	3.1	1416	2.4	185	2.9	47.0	0.6	0.5-0.6
Knee sprain	392	3.1	4369	7.4	268	4.3	68.4	0.8	0.7-0.9
Foot inflammation	362	2.9	2043	3.5	94	1.5	26.0	0.3	0.2-0.3
Quadriceps contusion	338	2.7	478	0.8	232	3.7	68.6	0.7	0.6-0.8
Knee/patella contusion	321	2.5	690	1.2	213	3.4	66.4	0.6	0.6-0.7
Finger sprain	308	2.4	336	0.6	205	3.3	66.6	0.6	0.5-0.7
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Elbow inflammation	84	0.7	203	0.3	31	0.5	36.9	0.1	0.1-0.1

Starkey 2010

La surveillance peut améliorer la sécurité des athlètes

La surveillance peut améliorer la sécurité des athlètes

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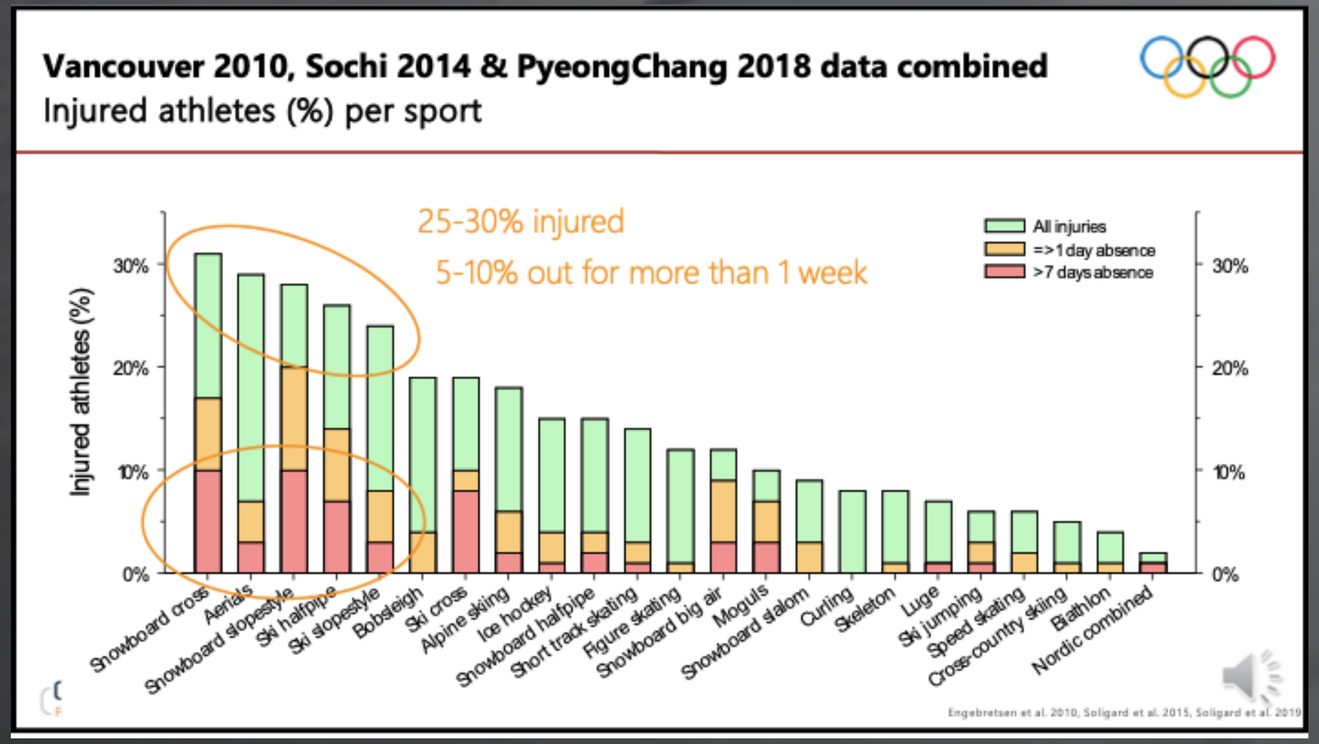
La surveillance peut améliorer la sécurité des athlètes

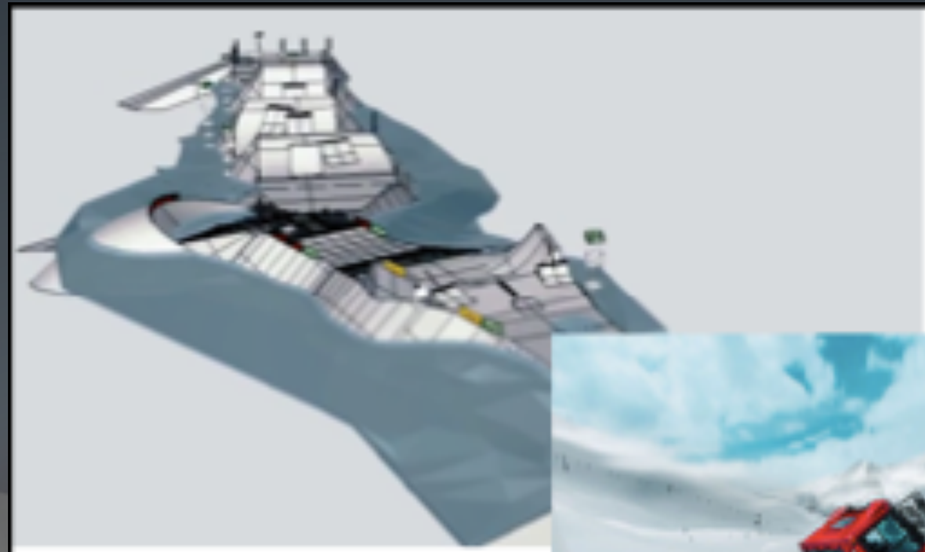


La surveillance peut améliorer la sécurité des athlètes

Convened a interdisciplinary meeting in 2015:
FIS Medical Chair, 2 directors/coordinators of freestyle skiing and snowboarding, 1 park/jump builder, 2 biomechanical engineers, 1 professor of physics, 2 epidemiologists, 2 MDs, 2 PTs, and more

Outcome: 4 new research projects on engineering of snow park jumps and courses (slopestyle and cross) in 2016-2020

La surveillance peut améliorer la sécurité des athlètes

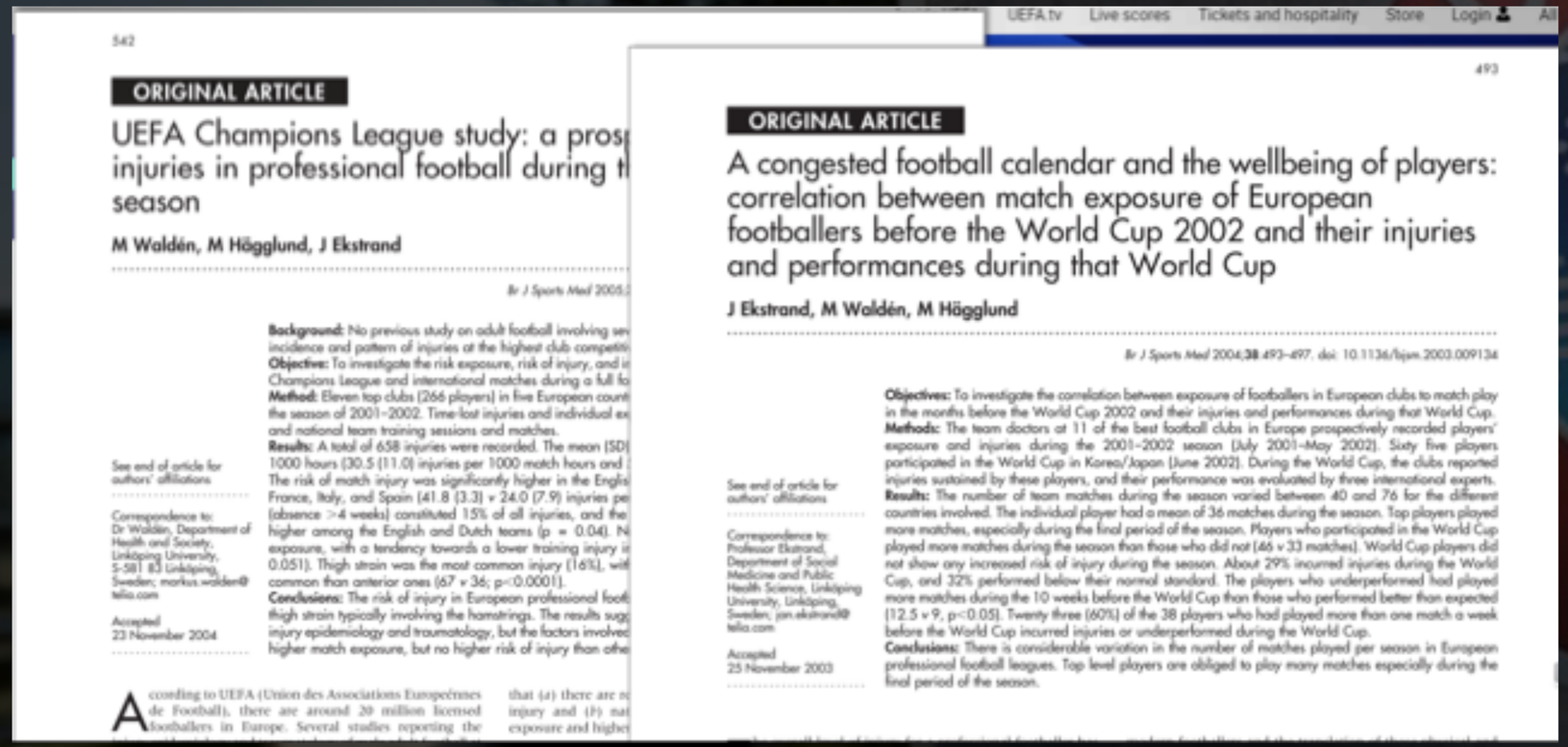


Experience
AND
Simulation

Convened
FIS Medic
park/jump
2 MDs, 2
Outcome: 4 new research projects on engineering of snow park jumps and courses
(slopestyle and cross) in 2016-2020

La surveillance peut améliorer la sécurité des athlètes

La surveillance peut améliorer la sécurité des athlètes



542

ORIGINAL ARTICLE

UEFA Champions League study: a pros
injuries in professional football during t
season

M Waldén, M Hägglund, J Ekstrand

Br J Sports Med 2005;

Background: No previous study on adult football involving se
incidence and pattern of injuries at the highest club competiti
Objective: To investigate the risk exposure, risk of injury, and i
Champions League and international matches during a full fo
Method: Eleven top clubs (266 players) in five European count
the season of 2001–2002. Time-lost injuries and individual ex
and national team training sessions and matches.
Results: A total of 658 injuries were recorded. The mean (SD)
1000 hours (30.5 (11.0) injuries per 1000 match hours and
The risk of match injury was significantly higher in the Englis
France, Italy, and Spain (41.8 (3.3) v 24.0 (7.9) injuries pe
(absence >4 weeks) constituted 15% of all injuries, and the
higher among the English and Dutch teams (p = 0.04). N
exposure, with a tendency towards a lower training injury i
0.051). Thigh strain was the most common injury (16%), wit
common than anterior ones (67 v 36; p<0.0001).
Conclusions: The risk of injury in European professional foot
thigh strain typically involving the hamstrings. The results sug
injury epidemiology and traumatology, but the factors involve
higher match exposure, but no higher risk of injury than othe

See end of article for authors' affiliations

Correspondence to: Dr Waldén, Department of Health and Society, Linköping University, S-581 83 Linköping, Sweden; markus.walden@telia.com

Accepted 23 November 2004

According to UEFA (Union des Associations Européennes de Football), there are around 20 million licensed footballers in Europe. Several studies reporting the

that (a) there are n
injury and (b) na
exposure and highe

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493

ORIGINAL ARTICLE

A congested football calendar and the wellbeing of players: correlation between match exposure of European footballers before the World Cup 2002 and their injuries and performances during that World Cup

J Ekstrand, M Waldén, M Hägglund

Br J Sports Med 2004;38:493–497. doi: 10.1136/bjsm.2003.009134

Objectives: To investigate the correlation between exposure of footballers in European clubs to match play in the months before the World Cup 2002 and their injuries and performances during that World Cup.
Methods: The team doctors at 11 of the best football clubs in Europe prospectively recorded players' exposure and injuries during the 2001–2002 season (July 2001–May 2002). Sixty five players participated in the World Cup in Korea/Japan (June 2002). During the World Cup, the clubs reported injuries sustained by these players, and their performance was evaluated by three international experts.
Results: The number of team matches during the season varied between 40 and 76 for the different countries involved. The individual player had a mean of 36 matches during the season. Top players played more matches, especially during the final period of the season. Players who participated in the World Cup played more matches during the season than those who did not (46 v 33 matches). World Cup players did not show any increased risk of injury during the season. About 29% incurred injuries during the World Cup, and 32% performed below their normal standard. The players who underperformed had played more matches during the 10 weeks before the World Cup than those who performed better than expected (12.5 v 9, p<0.05). Twenty three (60%) of the 38 players who had played more than one match a week before the World Cup incurred injuries or underperformed during the World Cup.
Conclusions: There is considerable variation in the number of matches played per season in European professional football leagues. Top level players are obliged to play many matches especially during the final period of the season.

See end of article for authors' affiliations

Correspondence to: Professor Ekstrand, Department of Social Medicine and Public Health Science, Linköping University, Linköping, Sweden; jan.ekstrand@telia.com

Accepted 25 November 2003

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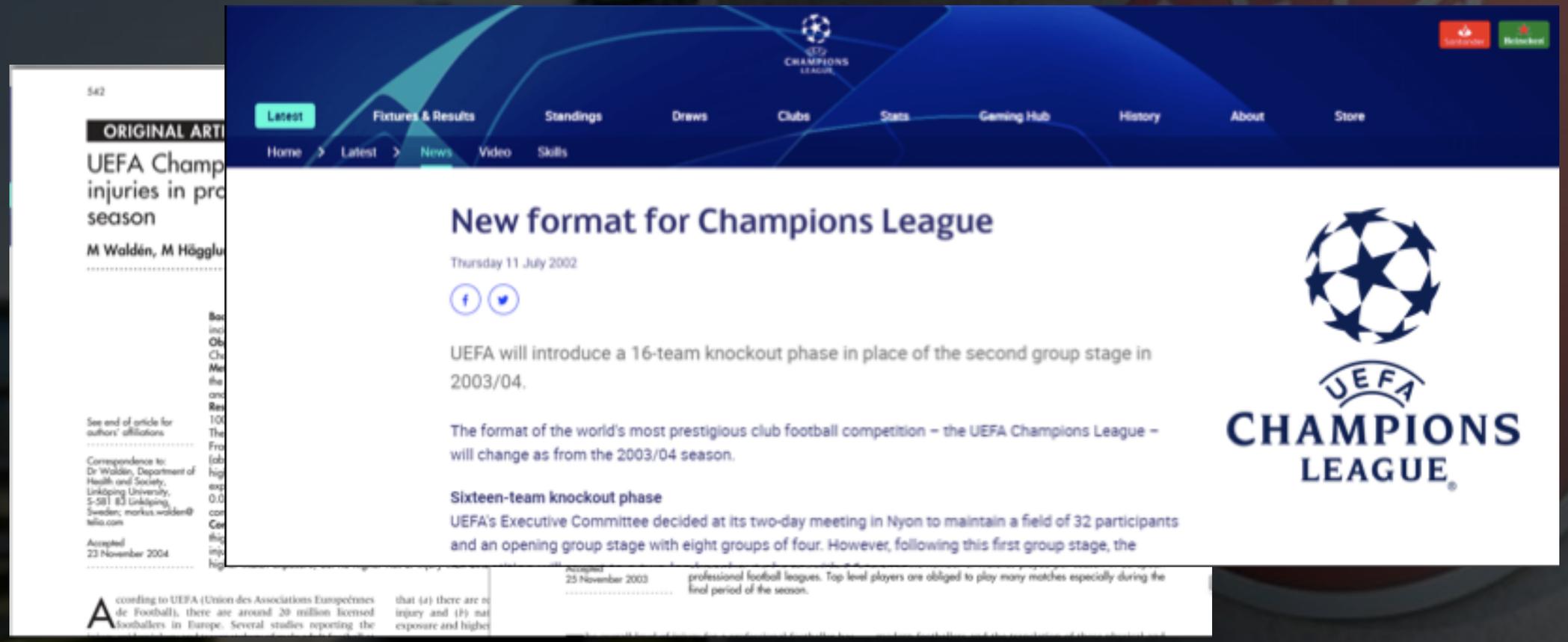
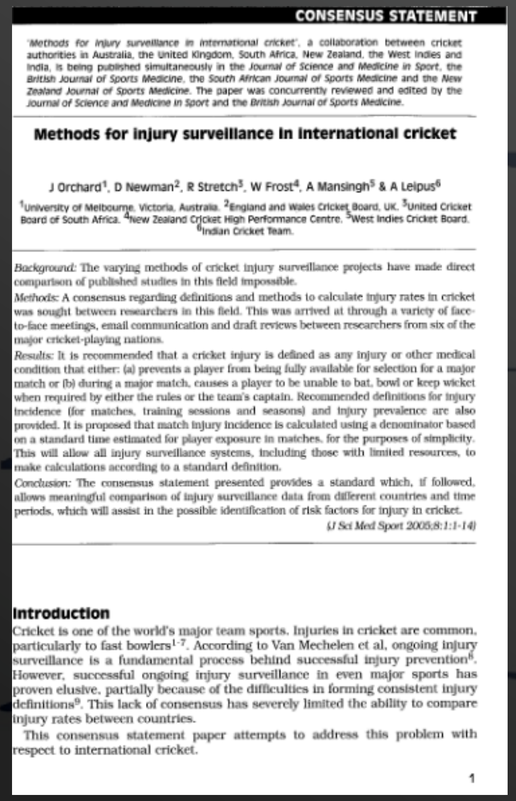


La surveillance peut améliorer la sécurité des athlètes

La surveillance peut améliorer la sécurité des athlètes



CONSENSUS STATEMENT

'Methods for injury surveillance in international cricket', a collaboration between cricket authorities in Australia, the United Kingdom, South Africa, New Zealand, the West Indies and India, is being published simultaneously in the *Journal of Science and Medicine in Sport*, the *British Journal of Sports Medicine*, the *South African Journal of Sports Medicine* and the *New Zealand Journal of Sports Medicine*. The paper was concurrently reviewed and edited by the *Journal of Science and Medicine in Sport* and the *British Journal of Sports Medicine*.

Methods for injury surveillance in international cricket

J Orchard[1], D Newman[2], R Stretch[3], W Frost[4], A Mansingh[5] & A Leipus[6]

[1]University of Melbourne, Victoria, Australia. [2]England and Wales Cricket Board, UK. [3]United Cricket Board of South Africa. [4]New Zealand Cricket High Performance Centre. [5]West Indies Cricket Board. [6]Indian Cricket Team.

Background: The varying methods of cricket injury surveillance projects have made direct comparison of published studies in this field impossible.

Methods: A consensus regarding definitions and methods to calculate injury rates in cricket was sought between researchers in this field. This was arrived at through a variety of face-to-face meetings, email communication and draft reviews between researchers from six of the major cricket-playing nations.

Results: It is recommended that a cricket injury is defined as any injury or other medical condition that either: (a) prevents a player from being fully available for selection for a major match or (b) during a major match, causes a player to be unable to bat, bowl or keep wicket when required by either the rules or the team's captain. Recommended definitions for injury incidence (for matches, training sessions and seasons) and injury prevalence are also provided. It is proposed that match injury incidence is calculated using a denominator based on a standard time estimated for player exposure in matches, for the purposes of simplicity. This will allow all injury surveillance systems, including those with limited resources, to make calculations according to a standard definition.

Conclusion: The consensus statement presented provides a standard which, if followed, allows meaningful comparison of injury surveillance data from different countries and time periods, which will assist in the possible identification of risk factors for injury in cricket.

(J Sci Med Sport 2005;8:1:1-14)

Introduction

Cricket is one of the world's major team sports. Injuries in cricket are common, particularly to fast bowlers[1-7]. According to Van Mechelen et al, ongoing injury surveillance is a fundamental process behind successful injury prevention[8]. However, successful ongoing injury surveillance in even major sports has proven elusive, partially because of the difficulties in forming consistent injury definitions[9]. This lack of consensus has severely limited the ability to compare injury rates between countries.

This consensus statement paper attempts to address this problem with respect to international cricket.

1

2005 Cricket

La surveillance peut améliorer la sécurité des athlètes

CONSENSUS STATEMENT

'Methods for injury surveillance in international cricket', a collaboration between cricket

Downloaded from http://bjsm.bmj.com/ on March 10, 2015 - Published by group.bmj.com

REVIEW

Consensus statement on injury definitions and data collection procedures in studies of football (soccer) injuries

C W Fuller, J Ekstrand, A Junge, T E Andersen, R Bahr, J Dvorak, M Hägglund, F McCrory, W H Meeuwisse

Variations in definitions and methodologies have created differences in the results and conclusions obtained from studies of football (soccer) injuries, making interstudy comparisons difficult. Therefore an Injury Consensus Group was established under the auspices of Fédération Internationale de Football Association Medical Assessment and Research Centre. A nominal group consensus made approach was used. A working document on definitions, methodology, and implementation was discussed by the group. Iterative draft statements were prepared and circulated to members of the group for comment before the final consensus statement was produced. Definitions of injury, recurrent injury, severity, and training and match exposures in football together with criteria for classifying injuries in terms of location, type, diagnosis, and causation are proposed. Proforma for recording players' baseline information, injuries, and training and match exposures are presented. Recommendations are made on how the incidence of match and training injuries should be reported and a checklist of issues and information that should be included in published reports of studies of football injuries is presented.

It has been well documented that variations in definitions and methodologies create significant differences in the results and conclusions obtained from studies of sports injuries.[1–3] Medical journals have developed strategies, such as the CONSORT statement[4] for randomised controlled trials, to address these problems and to improve the quality of published studies. However, despite continuing calls for common methodologies to be adopted, fundamental differences in definitions and implementation strategies have persisted in published studies of football injuries. This consensus statement aims to establish definitions and methodology implementation, and reporting standards that should be adopted by studies of injuries in football and to provide the basis for studies of injuries in other team sports.

METHOD

After informal discussions during the 1st World Congress on Sports Injury Prevention in Oslo in June 2005, the Fédération Internationale de Football Association Medical Assessment and Research Centre (F-MARC) agreed to host an Injury Consensus Group comprising a range of experts involved in the study of football injuries. A nominal group consensus model approach[5] was adopted for producing a consensus statement on definitions and methodological issues related to studies of football injuries. A working document identifying key issues associated with data collection and reporting in surveillance, risk factor and intervention studies was produced to structure discussions at a two day meeting in Zurich. After this meeting, iterative draft consensus statements were prepared and circulated to members of the group for comment before this final statement was produced.

DEFINITIONS

Injury

An injury is defined as:

> *Any physical complaint sustained by a player that results from a football match or football training, irrespective of the need for medical attention or time loss from football activities.*

An injury that results in a player receiving medical attention is referred to as a "medical attention" injury, and an injury that results in a player being unable to take a full part in future football training or match play as a "time loss" injury.

"Medical attention" refers to an assessment of a player's medical condition by a qualified medical practitioner. "A player being unable to take a full part in future football training or match play" is independent of whether a training session actually takes place on the day after the injury or whether a player is selected to play in the next match. The term "future" refers to any time after the onset of injury including the day of injury. It is important to recognise that variations in medical support and practice and in an individual player's tolerance to pain may create differences in the incidence of injury reported in studies. Multiple injuries sustained by a player in a single event should be recorded as one injury with multiple diagnoses. Injuries that are unrelated to football competition or training should not be recorded in studies of football injuries. Players may also experience problems other than physical complaints, such as illnesses, diseases, and mental complaints, and it may be appropriate in specific studies to record these problems, however, this incidence should be reported separately from the incidence of physical complaints.

See end of article for author' affiliations

Correspondence to Dr Fuller, Centre for Sports Medicine, University of Nottingham, Nottingham NG7 2UH, UK; colin.fuller@nottingham.ac.uk

Accepted 15 December 2006

2005 Cricket

2006 Football

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CONSENSUS STATEMENT

'Methods for injury surveillance in international cricket', a collaboration between cricket

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REVIEW

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SHORT REPORT

Consensus statement on injury definitions and data collection procedures for studies of injuries in rugby union

Colin W Fuller, Michael G Molloy, Christian Bagate, Roald Bahr, John H M Brooks, Hilton Dorson, Simon P T Kemp, Paul McCrory, Andrew S McIntosh, Willem H Meeuwisse, Kenneth L Quarrie, Martin Raftery, Preston Wiley

2005 Cricket

2006 Football

2007 Rugby Union

La surveillance peut améliorer la sécurité des athlètes

CONSENSUS STATEMENT

'Methods for injury surveillance in international cricket', a collaboration between cricket

REVIEW

Injury surveillance in multi-sport events: the International Olympic Committee approach

A Junge,[1] L Engebretsen,[2,3] J M Alonso,[4] P Renström,[2] M Mountjoy,[2,5] M Aubry,[6] J Dvorak[1,7]

2005 Cricket

2006 Football

2007 Rugby Union

2007 Tournoi Multi-sports

La surveillance peut améliorer la sécurité des athlètes

CONSENSUS STATEMENT

REVIEW

Consensus Statement on Epidemiological Studies of Medical Conditions in Tennis, April 2009

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2005 Cricket
2006 Football
2007 Rugby Union
2007 Tournoi Multi-sports
2009 Rugby League
2009 Tennis
2009 Course chevaux
2014 Athlétisme
2016 Sports aquatiques
2019 Evènements sportifs de masse

IOC CONSENSUS STATEMENT

IOC CONSENSUS STATEMENT

OPEN ACCESS

International Olympic Committee consensus statement: methods for recording and reporting of epidemiological data on injury and illness in sport 2020 (including STROBE Extension for Sport Injury and Illness Surveillance (STROBE-SIIS))

Roald Bahr,[1,2] Ben Clarsen,[1,3] Wayne Derman,[4] Jiri Dvorak,[5] Carolyn A Emery,[6,7] Caroline F Finch,[8] Martin Hägglund,[9] Astrid Junge,[10,11] Simon Kemp,[12,13] Karim M Khan,[14,15] Stephen W Marshall,[16] Willem Meeuwisse,[17,18] Margo Mountjoy,[19,20] John W Orchard,[21] Babette Pluim,[22,23,24] Kenneth L Quarrie,[25,26] Bruce Reider,[27] Martin Schwellnus,[28] Torbjørn Soligard,[29,30] Keith A Stokes,[31,32] Toomas Timpka,[33,34] Evert Verhagen,[35] Abhinav Bindra,[36] Richard Budgett,[29] Lars Engebretsen,[1,29] Uğur Erdener,[29] Karim Chamari[37]

► Additional material is published online only. To view, please visit the journal online (http://dx.doi.org/10.1136/bjsports-2019-101868).

For numbered affiliations see end of article.

Correspondence to:
Professor Roald Bahr, Oslo Sports Trauma Research Center, Department of Sports Medicine, Norwegian School of Sport Sciences, 0863 Oslo, Norway; roald@nih.no

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Accepted 7 January 2020

ABSTRACT

Injury and illness surveillance, and epidemiological studies, are fundamental elements of concerted efforts to protect the health of the athlete. To encourage consistency in the definitions and methodology used, and to enable data across studies to be compared, research groups have published 11 sport-specific or setting-specific consensus statements on sports injury (and, eventually, illness) epidemiology to date. Our objective was to further strengthen consistency in data collection, injury definitions and research reporting through an updated set of recommendations for sports injury and illness studies, including a new Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) checklist extension. The IOC invited a working group of international experts to review relevant literature and provide recommendations. The procedure included an open online survey, several stages of text drafting and consultation by working groups and a 3-day consensus meeting in October 2019. This statement includes recommendations for data collection and research reporting covering key components: defining and classifying health problems; severity of health problems; capturing and reporting athlete exposure; expressing risk, burden of health problems, study population characteristics, and data collection methods. Based on these, we also developed a new reporting guideline as a STROBE extension—the STROBE Sports Injury and Illness Surveillance (STROBE-SIIS).

accurate data capture and careful analysis of data are building blocks for sports injury/illness prevention programmes. Important questions that sports injury and illness surveillance projects are designed to address include: What is the risk of an individual athlete sustaining an acute injury, developing an overuse injury or becoming ill in a given sport? Within a given sport, what is the typical pattern and severity of injuries and illnesses? How do injury rates in various sports compare? Do participant characteristics and factors within competition and training affect risk?

To encourage consistency in the definitions and methods used, and to enable data across studies to be compared, research teams have published 11 consensus papers on sports injury (and, eventually, illness) epidemiology. Most of them addressed specific sports—cricket,[1] football,[2] rugby union,[3] rugby league,[4] aquatic sports,[5] tennis,[6] athletics[7] and horse racing.[8] Two statements covered multi-sport events[9] and mass-participation events (eg,

International Olympic Committee Consensus Statement

Methods for Recording and Reporting of Epidemiological Data on Injury and Illness in Sports 2020 (Including the STROBE Extension for Sports Injury and Illness Surveillance (STROBE-SIIS))

International Olympic Committee Injury and Illness Epidemiology Consensus Group*†

Background: Injury and illness surveillance, and epidemiological studies, are fundamental elements of concerted efforts to protect the health of the athlete. To encourage consistency in the definitions and methodology used, and to enable data across studies to be compared, research groups have published 11 sport- or setting-specific consensus statements on sports injury (and, eventually, illnesses) epidemiology to date.

Objective: To further strengthen consistency in data collection, injury definitions, and research reporting through an updated set of recommendations for sports injury and illness studies, including a new Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) checklist extension.

Study Design: Consensus statement of the International Olympic Committee (IOC).

Methods: The IOC invited a working group of international experts to review relevant literature and provide recommendations. The procedure included an open online survey, several stages of text drafting and consultation by working groups, and a 3-day consensus meeting in October 2019.

Results: This statement includes recommendations for data collection and research reporting covering key components: defining and classifying health problems, severity of health problems, capturing and reporting athlete exposure, expressing risk, burden of health problems, study population characteristics, and data collection methods. Based on these, we also developed a new reporting guideline as a STROBE extension—the STROBE Sports Injury and Illness Surveillance (STROBE-SIIS).

Conclusion: The IOC encourages ongoing in- and out-of-competition surveillance programs and studies to describe injury and illness trends and patterns, understand their causes, and develop measures to protect the health of the athlete. The implementation of the methods outlined in this statement will advance consistency in data collection and research reporting.

Keywords: injuries; illness; epidemiologic methods; surveillance; STROBE

Injury and illness surveillance, and epidemiological studies, are fundamental elements of concerted efforts to protect the health of the athlete. Carefully designed injury

injuries and illnesses? How do injury rates in various sports compare? Do participant characteristics and factors within competition and training affect the risk?

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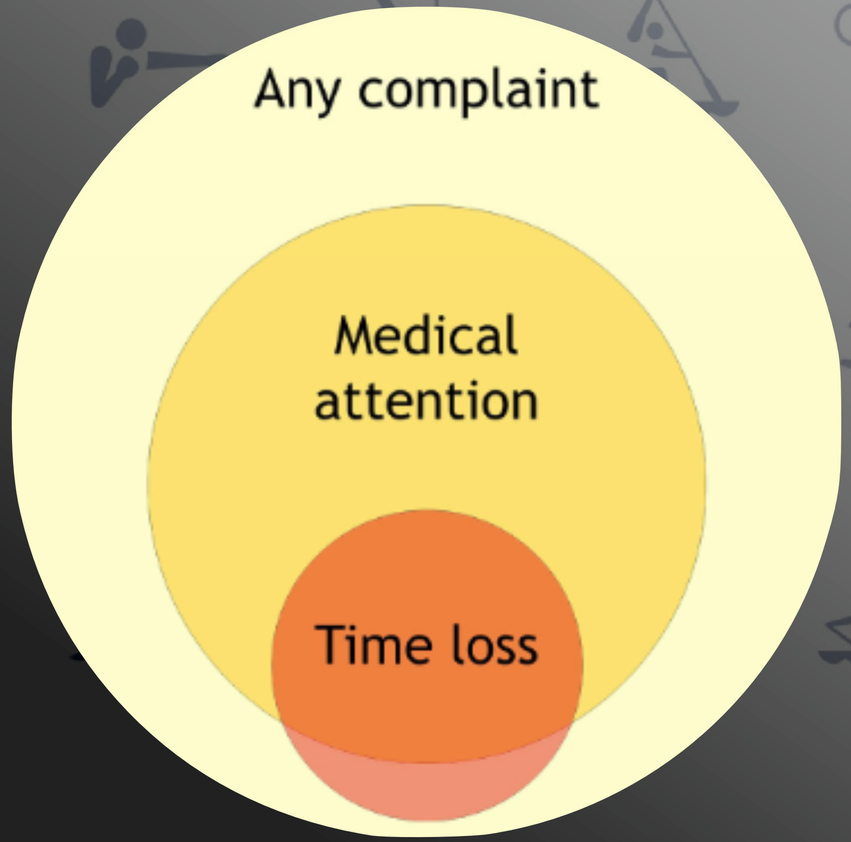
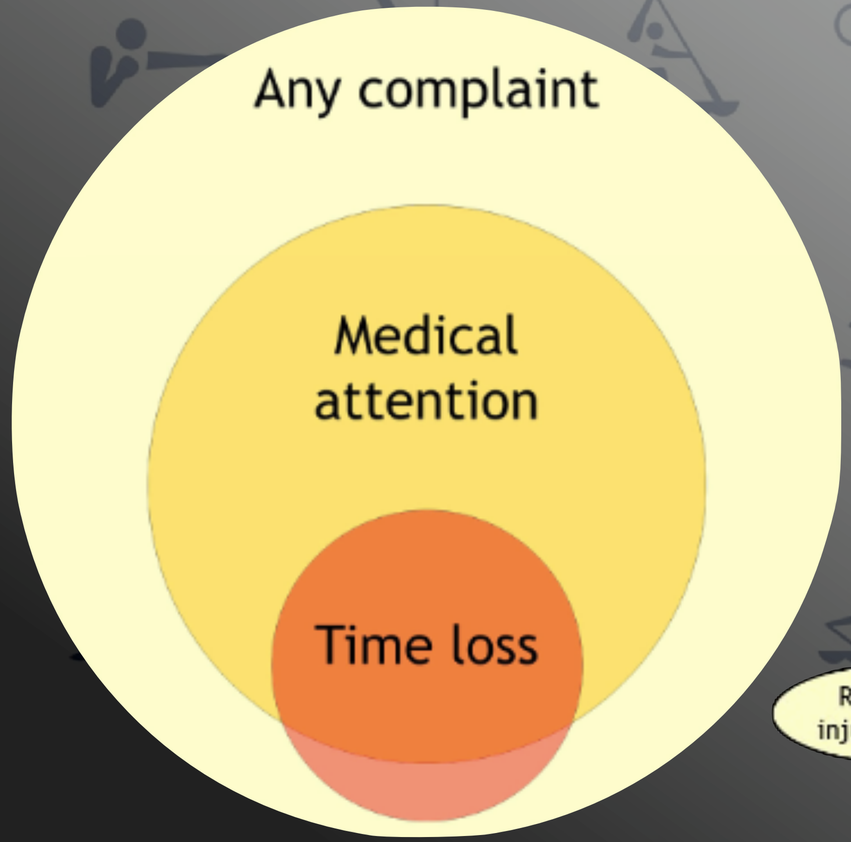
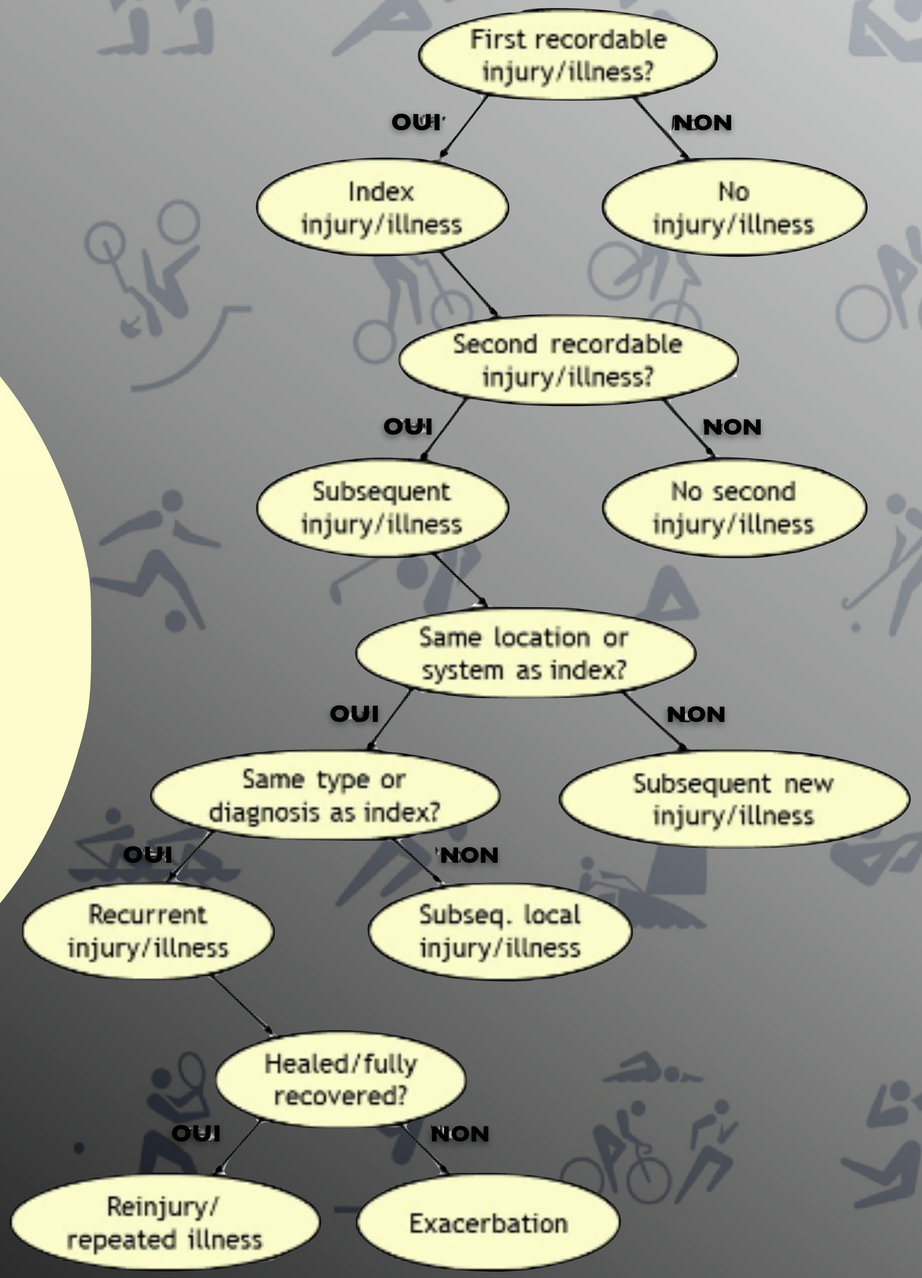
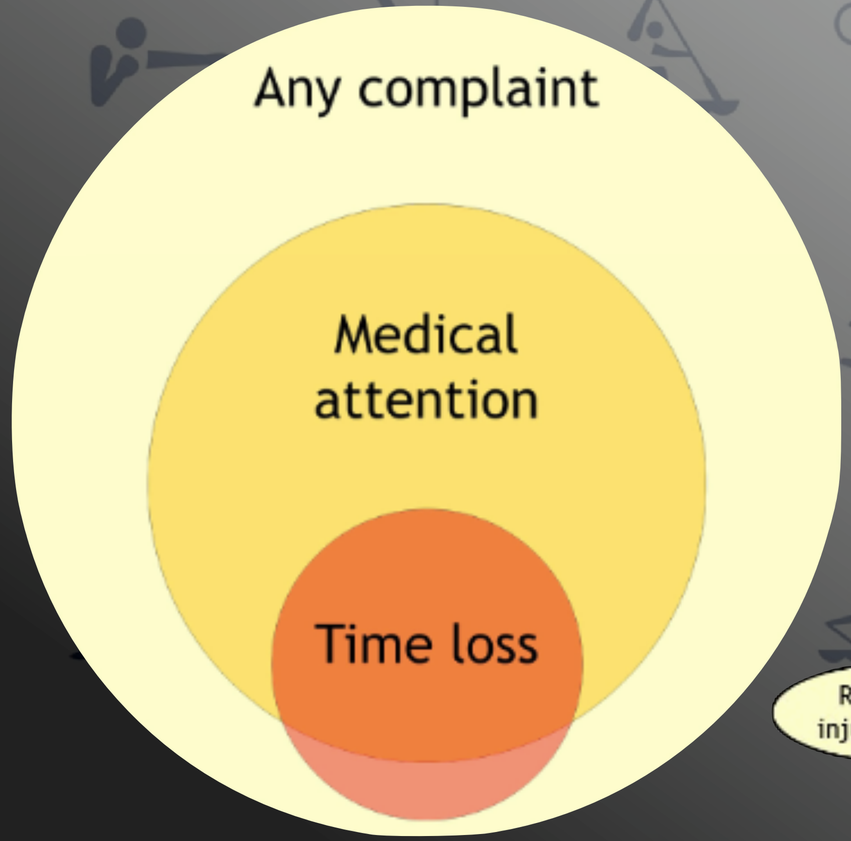

Any complaint
Medical attention
Time loss


Any complaint
Medical attention
Time loss


First recordable injury/illness?
OUI
NON
Index injury/illness
No injury/illness
Second recordable injury/illness?
OUI
NON
Subsequent injury/illness
No second injury/illness
Same location or system as index?
OUI
NON
Same type or diagnosis as index?
Subsequent new injury/illness
OUI
NON
Recurrent injury/illness
Subseq. local injury/illness
Healed/fully recovered?
OUI
NON
Reinjury/ repeated illness
Exacerbation


Any complaint
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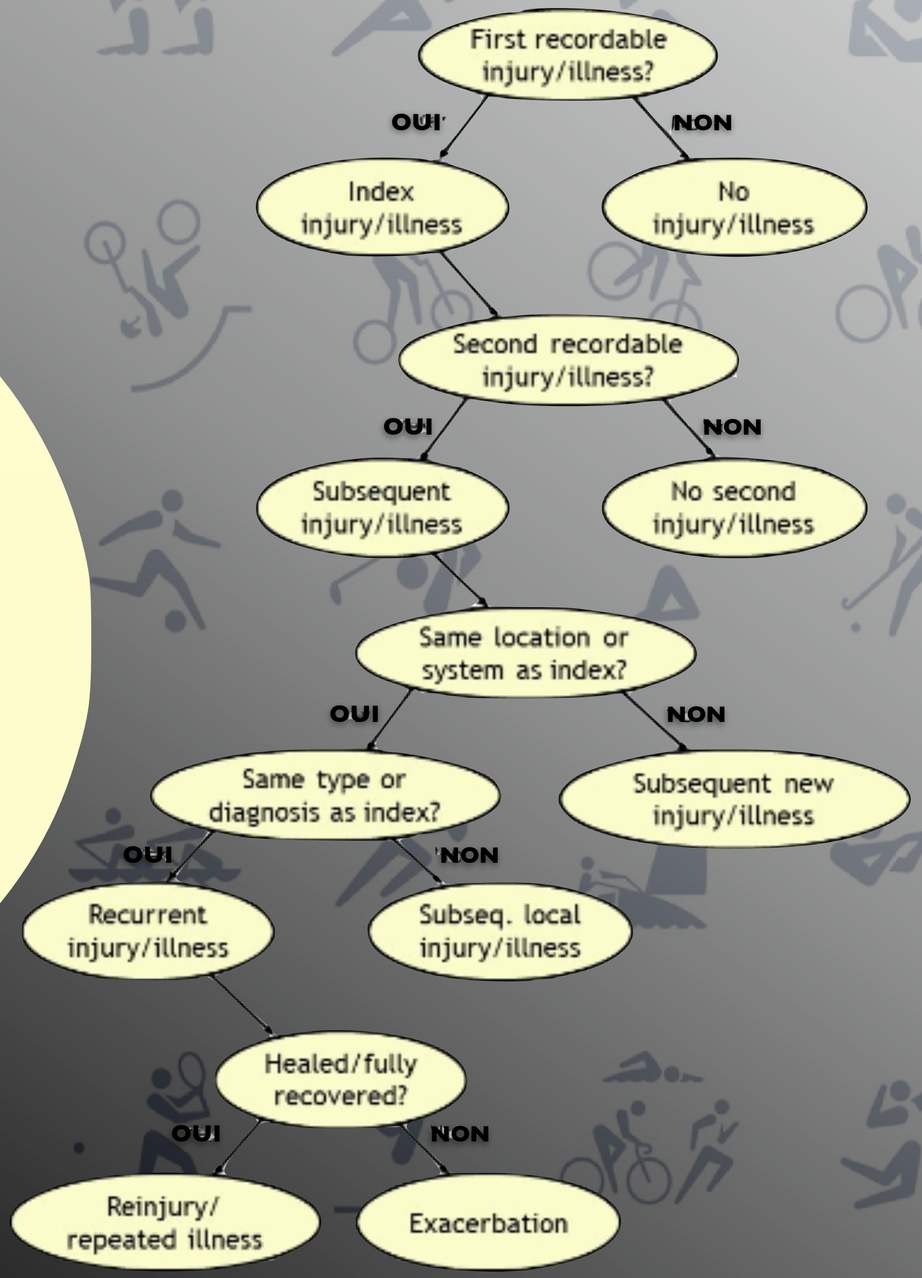
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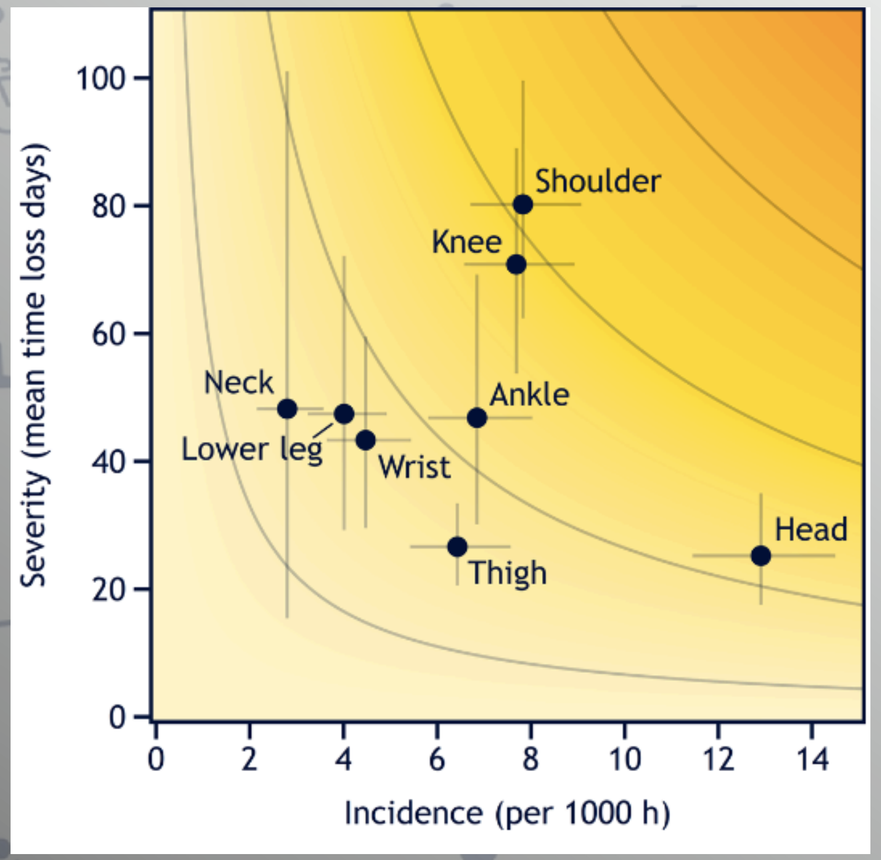
Severity (mean time loss days)
100
80
60
40
20
0
0
2
4
6
8
10
12
14
Incidence (per 1000 h)
Shoulder
Knee
Neck
Ankle
Lower leg
Wrist
Head
Thigh

ADAPTATION SPÉCIFIQUE IOC CONSENSUS STATEMENT

ADAPTATION SPÉCIFIQUE IOC CONSENSUS STATEMENT

OPEN ACCESS

Tennis-specific extension of the International Olympic Committee consensus statement: methods for recording and reporting of epidemiological data on injury and illness in sport 2020

Evert Verhagen,[1,2,3,4] Benjamin Clarsen,[5,6] Jamie Capel-Davies,[7] Christy Collins,[8] Wayne Derman,[9,10] Don de Winter,[11] Nicky Dunn,[7] Todd S Ellenbecker,[12] Raymond Forde,[13] Brian Hainline,[14] Jo Larkin,[15] Machar Reid,[16] Per AFH Renstrom,[17] Kathleen Stroia,[18] Sue Wolstenholme,[19] Babette M Pluim[1,20,21]

► Additional material is published online only. To view, please visit the journal online (http://dx.doi.org/10.1136/bjsports-2020-102360).

For numbered affiliations see end of article.

Correspondence to
Professor Evert Verhagen, Amsterdam Collaboration on Health & Safety in Sports, Department of Public and Occupational Health, Amsterdam Movement Sciences, Amsterdam UMC, Amsterdam 1081BT, The Netherlands; e.verhagen@amsterdamumc.nl

Accepted 25 September 2020
Published Online First 20 October 2020

ABSTRACT
The IOC has proposed standard methods for recording and reporting of data for injury and illness in sport. The IOC consensus statement authors anticipated that sport-specific statements would provide further recommendations. This statement is the tennis-specific extension of the partner IOC statement. The International Tennis Federation Sport Science and Medicine Committee, in collaboration with selected external experts, met in June 2019 to consider athlete health monitoring issues specific to tennis. Once the IOC consensus statement was finalised, the tennis-specific consensus was drafted and agreed on by the members over three iterations. Compared with the IOC consensus statement, the tennis consensus contains tennis-specific information on injury mechanism, mode of onset, injury classification, injury duration, capturing and reporting exposure, reporting risk and study population. Our recommendations apply to able-bodied as well as wheelchair tennis players. Where applicable, specific recommendations are made for wheelchair tennis.

INTRODUCTION

Athlete health monitoring has many benefits. There is an immediate value in identifying those interventions that could protect or improve the athletes' current health via feedback to the athletes and their support staff. Also, there is long-term value in serial health assessments to

2016 Summer Olympics,[3] seven sports involving 15 disciplines in the 2018 Winter Games,[4] and it is anticipated that 33 sports with a total of 50 disciplines will participate in Tokyo 2021.[5] Each of these sports poses a unique challenge to their athletes. The IOC consensus recommendation authors anticipated that subsequent sport-specific statements would provide more detailed recommendations relevant for the sport and setting. Here we update the 2009 consensus statement on medical conditions in tennis[6] as a partner document to the 2020 IOC consensus statement.[1 2]

METHODS

In February 2019, EV and BMP reviewed the previous tennis consensus statement[6] and compared this with other published consensus statements.[7–14] In June 2019, the International Tennis Federation (ITF) hosted a tennis consensus meeting in London with the eight ITF medical committee members and five external experts (EV, BC, DdW, TE and CC). Three tennis consensus group members were also part of the IOC consensus group (EV, BC and BMP). During the London meeting, the tennis consensus group members agreed on which of the previous recommendations needed to be updated and which tennis-specific athlete health monitoring issues to consider. Once the IOC consensus statement was accepted for publication, EV and BP prepared a draft of the additions based on the tennis consensus group's discussions. During this final phase, an additional expert

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Consensus statement

OPEN ACCESS

International consensus statement: methods for recording and reporting of epidemiological data on injuries and illnesses in golf

Andrew Murray,[1,2] Astrid Junge,[3,4] Patrick Gordon Robinson,[5,6] Mario Bizzini,[7,8] Andre Bossert,[9] Benjamin Clarsen,[10,11] Daniel Coughlan,[6,12] Corey Cunningham,[13,14] Tomas Drobny,[15,16] Francois Gazzano,[17] Lance Gill,[18,19] Roger Hawkes,[1,20] Tom Hospel,[21,22] Robert Neal,[23] Jonathan Lavelle,[24,25] Antony Scanlon,[26] Patrick Schamash,[27,28] Bruce Thomas,[29] Mike Voight,[19,30] Mark Wotherspoon,[31,32] Jiri Dvorak[15,33]

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For numbered affiliations see end of article.

Correspondence to
Dr Andrew Murray, Medical Commission, International Golf Federation, Lausanne EH1 3DG, Switzerland; doc.andrewmurray@gmail.com

Accepted 5 July 2020

ABSTRACT
Epidemiological studies of injury in elite and recreational golfers have lacked consistancy in methods and definitions employed and this limits comparison of results across studies. In their sports-generic statement, the Consensus Group recruited by the IOC (2020) called for sport-specific consensus statements. On invitation by International Golf Federation, a group of international experts in sport and exercise medicine, golf research and sports injury/illness epidemiology was selected to prepare a golf-specific consensus statement. Methodological stages included literature review and initial drafting, online feedback from the consensus group, revision and second draft, virtual consensus meetings and completion of final version. This consensus statement provides golf-specific recommendations for data collection and research reporting including: (i) injury and illness definitions, and characteristics with golf-specific examples, (ii) definitions of golf-specific exposure measurements and recommendations for the calculation of prevalence and incidence, (iii) injury, illness and exposure report forms for medical staff and for golfers, and (iv) a baseline questionnaire. Implementation of the consensus methodology will enable comparison among golf studies and with other sports. It facilitates analysis of causative factors for injuries and illness in golf, and can also be used to evaluate the effects of prevention programmes to support the health of golfers.

INTRODUCTION

to our scoping review of the associations between golf and health.[1] Very few studies report on epidemiology of illness in golfers.[12–15] A recent systematic review of professional golf injuries showed 60% of included studies failed to give a definition of injury and 80% did not report the mechanism of the injury.[6]

While epidemiological studies on golfers vary considerably in methods and quality,[7 8] consensus statements on recording and reporting of injury/illness have been published for other sports[16–24] and for multisport events[25 26] since 2006. In 2020, the IOC published a consensus statement: Methods for recording and reporting of epidemiological data on injury and illness in sports 2020[27] (referred from now on as the '2020 IOC Consensus Statement') and called for "… sport-specific statements with more detailed recommendations relevant for the sports and/or setting(s)."[27]

In 2019, the International Golf Federation (IGF) invited a working group to develop golf-specific guidelines based on the 2020 IOC Consensus Statement.[27] This consensus aims to guide and provide tools for researchers on how to collect data, and report injury and illness in golf. This will, in turn, help golfers, coaches, medical practitioners and policy makers to understand the typical pattern, severity and burden of health problems. It will provide a strong foundation for injury prevention programmes for golfers.

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Consensus statement

Para sport translation of the IOC consensus on recording and reporting of data for injury and illness in sport

Wayne Derman,[1,2,3] Marelise Badenhorst,[1,2,4] Cheri Blauwet,[3,5] Carolyn A Emery,[6,7] Kristina Fagher,[8] Young-Hee Lee,[9,10,11] James Kissick,[3,12] Jan Lexell,[3,8,13] Ian Stuart Miller,[14,15] Babette M Pluim,[16,17,18] Martin Schwellnus,[2,19] Kathrin Steffen,[20,21,22] Peter Van de Vliet,[23,24] Nick Webborn,[3,25,26] Richard Weiler[17,27]

► Additional supplemental material is published online only. To view, please visit the journal online (http://dx.doi.org/10.1136/bjsports-2020-103464).

For numbered affiliations see end of article.

Correspondence to
Professor Wayne Derman, Institute of Sport and Exercise Medicine, Division of Orthopaedic Surgery, Department of Surgical Sciences, Stellenbosch University Faculty of Medicine and Health Sciences, Cape Town, South Africa; ewderman@iafrica.com

ABSTRACT
In 2020, the IOC proposed a universal methodology for the recording and reporting of data for injury and illness in sport. Para sport is played by individuals with impairment, and they have a unique set of considerations not captured by these recommendations. Therefore, the aim of this addendum to IOC consensus statement was to guide the Para sport researcher through the complexities and nuances that should be taken into consideration when collecting, registering, reporting and interpreting data regarding Para athlete health. To develop this translation, experts in the field of Para sports medicine and epidemiology conducted a formal consensus development process, which began in March 2020 with the formation of a consensus group that worked over eight phases, incorporating three virtual consensus meetings to finalise the translation. This translation is consistent with the IOC

The collection and reporting of accurate health data constitutes the first step in this process and has been identified as a target for improvement in the Para sport setting.[1 2 13]

To gain consistency in definitions, collection and subsequent reporting of injury and illness data, the IOC produced a consensus statement early in 2020,[16] with several follow-up papers to detail sport specific nuances in data collection and reporting (tennis translation[17]; golf translation[18]). The translation of the IOC consensus statement guides the Para sport researcher through the complexities of describing athlete impairment types, classifications and the health problems associated with sport participation. This harmonisation will allow the science to develop and facilitate a more accurate understanding of injury and illness patterns, for tailoring evidence-informed, preven-

Consensus statement

OPEN ACCESS

International consensus statement: methods for recording and reporting of epidemiological data on injuries and illnesses in golf

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TMB
TOULOUSE METROPOLE BASKET

FFBB

APPLICATION DES PRINCIPES DE SURVEILLANCE À VOTRE ÉQUIPE

Handbook of
Sports Medicine
and Science
Sports Injury
Prevention
An IOC
Medical Commission
Publication
EDITED BY
Roald Bahr
Lars Engebretsen
WILEY-BLACKWELL

McIntosh & Roald Bahr (chap 3) Sport Injury Prevention 2008

McIntosh & Roald Bahr (chap 3) Sport Injury Prevention 2008

1

Identifier les risques

Quels sont les risques dans mon équipe?

McIntosh & Roald Bahr (chap 3) Sport Injury Prevention 2008

1 Identifier les risques ← *Quels sont les risques dans mon équipe?*

2 Analyse de la saison ← *Est-ce que les risques changent au cours de la saison?*

McIntosh & Roald Bahr (chap 3) Sport Injury Prevention 2008

1 Identifier les risques ← *Quels sont les risques dans mon équipe?*

2 Analyse de la saison ← *Est-ce que les risques changent au cours de la saison?*

3 Analyse des facteurs de risques de l'athlète ← *Est-ce que certains athlètes ont un plus grand/ moins grand risques de blessures?*

McIntosh & Roald Bahr (chap 3) Sport Injury Prevention 2008

1	Identifier les risques	*Quels sont les risques dans mon équipe?*
2	Analyse de la saison	*Est-ce que les risques changent au cours de la saison?*
3	Analyse des facteurs de risques de l'athlète	*Est-ce que certains athlètes ont un plus grand/ moins grand risques de blessures?*
4	Analyse des facteurs de risques de l'athlète	*Devrions-nous faire quelque chose à ce sujet?*

McIntosh & Roald Bahr (chap 3) Sport Injury Prevention 2008

LES DEUX APPROCHES

1. Collecte systématique des données dans le cadre du suivi médical normal

- choisir les méthodes consensuelles les plus pertinentes pour votre sport (basket-ball)
- collecter les données pendant la consultation avec l'athlète
- certains systèmes de dossiers médicaux électroniques spécifiques au sport facilitent les choses

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LIMITES

→ *dépend d'une saisie rigoureuse des données par l'ensemble du staff*

→ *pas idéal pour les* ***blessures de sur-utilisation***

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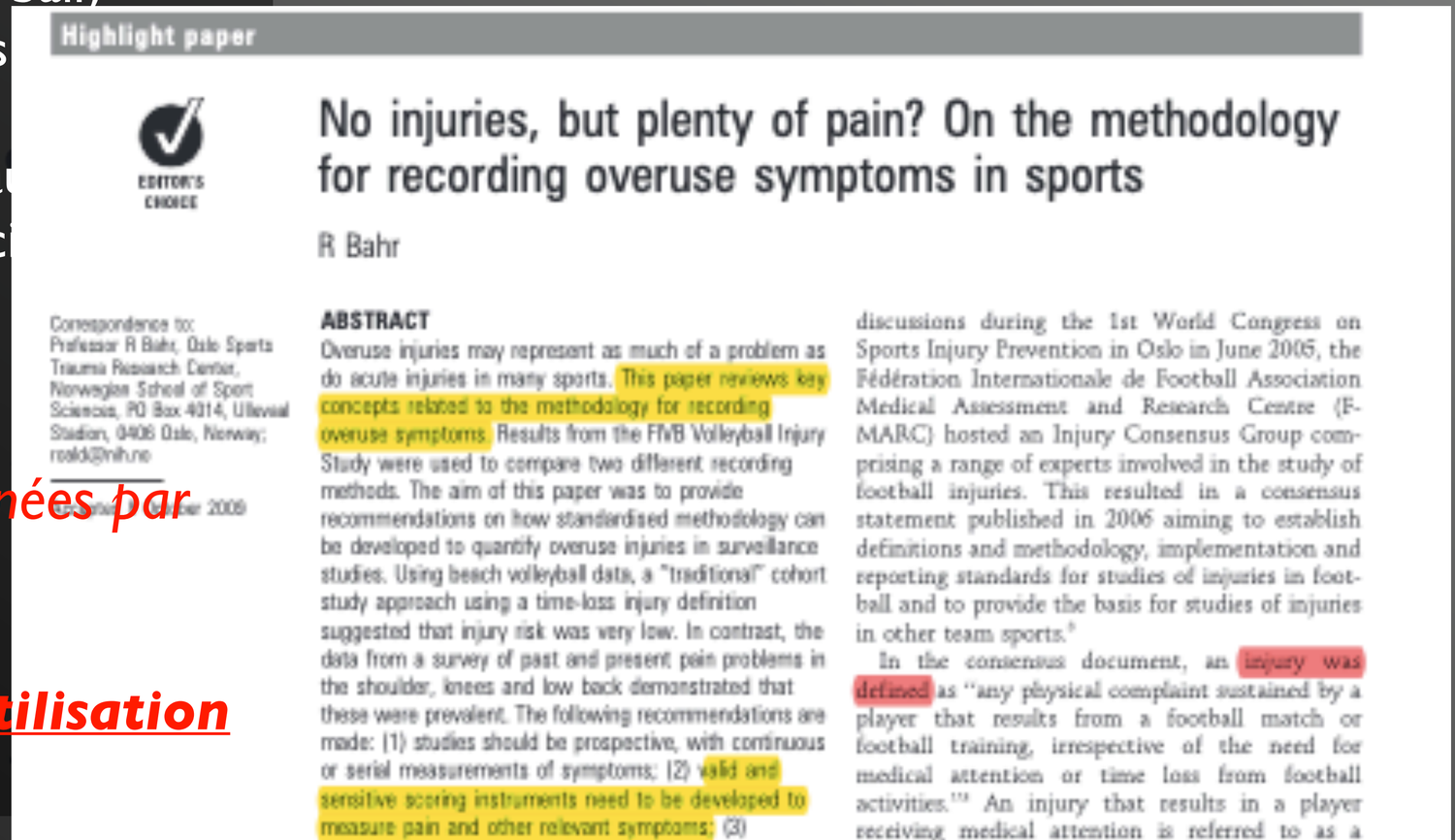

Highlight paper

EDITOR'S CHOICE

No injuries, but plenty of pain? On the methodology for recording overuse symptoms in sports

R Bahr

Correspondence to: Professor R Bahr, Oslo Sports Trauma Research Center, Norwegian School of Sport Sciences, PO Box 4014, Ullevaal Stadion, 0806 Oslo, Norway; roald@nih.no

ABSTRACT

Overuse injuries may represent as much of a problem as do acute injuries in many sports. This paper reviews key concepts related to the methodology for recording overuse symptoms. Results from the FIVB Volleyball Injury Study were used to compare two different recording methods. The aim of this paper was to provide recommendations on how standardised methodology can be developed to quantify overuse injuries in surveillance studies. Using beach volleyball data, a "traditional" cohort study approach using a time-loss injury definition suggested that injury risk was very low. In contrast, the data from a survey of past and present pain problems in the shoulder, knees and low back demonstrated that these were prevalent. The following recommendations are made: (1) studies should be prospective, with continuous or serial measurements of symptoms; (2) valid and sensitive scoring instruments need to be developed to measure pain and other relevant symptoms; (3)

discussions during the 1st World Congress on Sports Injury Prevention in Oslo in June 2005, the Fédération Internationale de Football Association Medical Assessment and Research Centre (F-MARC) hosted an Injury Consensus Group comprising a range of experts involved in the study of football injuries. This resulted in a consensus statement published in 2006 aiming to establish definitions and methodology, implementation and reporting standards for studies of injuries in football and to provide the basis for studies of injuries in other team sports.[5]

In the consensus document, an injury was defined as "any physical complaint sustained by a player that results from a football match or football training, irrespective of the need for medical attention or time loss from football activities."[1] An injury that results in a player receiving medical attention is referred to as a

LES DEUX APPROCHES

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- choisir les méthodes consensuelles les
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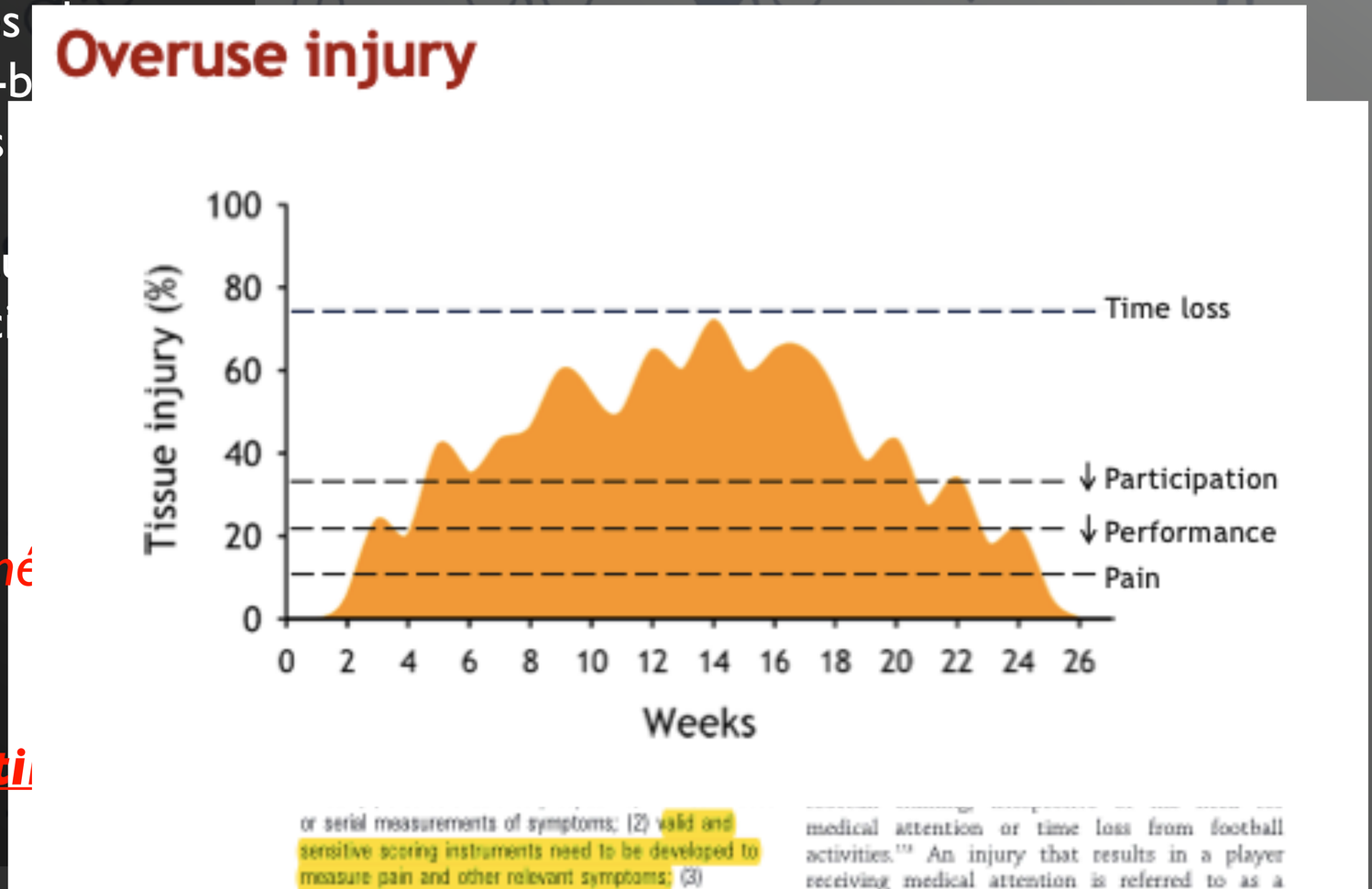
l'ensemble du staff

pas idéal pour les ***blessures de sur-uti***



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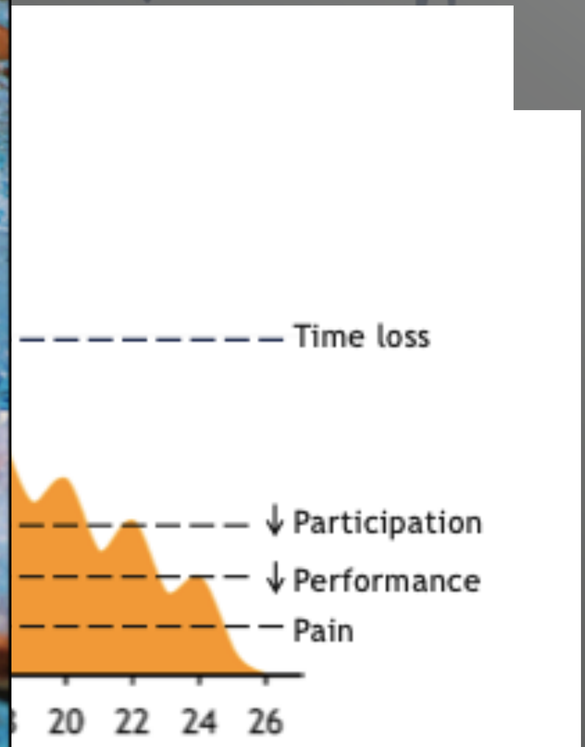

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OVERUSE INJURIES

OVERUSE INJURIES

Original article

Development and validation of a new method for the registration of overuse injuries in sports injury epidemiology: the Oslo Sports Trauma Research Centre (OSTRC) Overuse Injury Questionnaire

Benjamin Clarsen, Grethe Myklebust, Roald Bahr

► An additional data is published online only. To view this file please visit the journal online (http://dx.doi.org/10.1136/bjsports-2012-091524)

Oslo Sports Trauma Research Center, Norwegian School of Sport Sciences, Oslo, Norway

Correspondence to
Benjamin Clarsen, Oslo Sports Trauma Research Center, Norwegian School of Sport Sciences, PO Box 4014 Ullevål Stadion, Oslo 0806, Norway; ben.clarsen@nih.no

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ABSTRACT

Background Current methods for injury registration in sports injury epidemiology studies may substantially underestimate the true burden of overuse injuries due to a reliance on time-loss injury definitions.

Objective To develop and validate a new method for the registration of overuse injuries in sports.

Methods A new method, including a new overuse injury questionnaire, was developed and validated in a 13-week prospective study of injuries among 313 athletes from five different sports, cross-country skiing, floorball, handball, road cycling and volleyball. All athletes completed a questionnaire by email each week to register problems in the knee, lower back and shoulder. Standard injury registration methods were also used to record all time-loss injuries that occurred during the study period.

Results The new method recorded 419 overuse problems in the knee, lower back and shoulder during the 3-month-study period. Of these, 142 were classified as substantial overuse problems, defined as those leading to moderate or severe reductions in sports performance or participation, or time loss. Each week, an average of 39% of athletes reported having overuse problems and 13% reported having substantial problems. In contrast, standard methods of injury registration registered only 40 overuse injuries located in the same anatomical areas, the majority of which were of minimal or mild severity.

Conclusion Standard injury surveillance methods only capture a small percentage of the overuse problems

acute, traumatic injuries such as anterior cruciate ligament ruptures and lateral ankle-ligament sprains, overuse injuries have received very little attention in the sports injury prevention literature.[11] Valid and reliable data on their magnitude and severity are scarce in almost all sports, and there are very few studies specifically aiming to prevent overuse injuries in sport.[12]

One possible explanation for the lack of knowledge on overuse injuries is that their typical presentation and characteristics make them difficult to record in epidemiological studies, when currently accepted methods of injury registration are used.[13] Symptoms such as pain or functional limitation most often appear gradually and may be transient in nature, and therefore it is likely that athletes will continue to train and compete despite the presence of overuse conditions, at least in the early phase. In the face of a worsening problem, athletes may try to adapt their training, for example, by refraining from the most aggravating activities or choosing an alternative form of exercise, and at some stage it is also likely that medical treatment will be sought for the injury. It is typically only after these attempts at injury management have failed that athletes will cease participation in training and competition. Furthermore, athletes may choose to defer time loss if possible, for example, by postponing rest or treatment until off-season periods which are not always covered in injury surveillance studies. Thus, it is likely that few overuse injuries lead to time loss

OVERUSE INJURIES

Original article

Development and validation of a new method for the registration of overuse injuries in sports injury epidemiology: the Oslo Sports Trauma Research Centre (OSTRC) Overuse Injury Questionnaire

Benjamin Clarsen, Grethe Myklebust, Roald Bahr

▸ An additional data is published online only. To view this file please visit the journal online (http://dx.doi.org/10.1136/bjsports-2012-091524)

Oslo Sports Trauma Research Center, Norwegian School of Sport Sciences, Oslo, Norway

Correspondence to
Benjamin Clarsen, Oslo Sports Trauma Research Center, Norwegian School of Sport Sciences, PO Box 4014 Ullevål Stadion, Oslo 0806, Norway; ben.clarsen@nih.no

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ABSTRACT
Background Current methods for injury registration in sports injury epidemiology studies may substantially underestimate the true burden of overuse injuries due to a reliance on time-loss injury definitions.
Objective To develop and validate a new method for the registration of overuse injuries in sports.
Methods A new method, including a new overuse injury questionnaire, was developed and validated in a 13-week prospective study of injuries among 313 athletes from five different sports, cross-country skiing, floorball, handball, road cycling and volleyball. All athletes completed a questionnaire by email each week to register problems in the knee, lower back and shoulder. Standard injury registration methods were also used to record all time-loss injuries that occurred during the study period.
Results The new method recorded 419 overuse problems in the knee, lower back and shoulder during the 3-month-study period. Of these, 142 were classified as substantial overuse problems, defined as those leading to moderate or severe reductions in sports performance or participation, or time loss. Each week, an average of 39% of athletes reported having overuse problems and 13% reported having substantial problems. In contrast, standard methods of injury registration registered only 40 overuse injuries located in the same anatomical areas, the majority of which were of minimal or mild severity.
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Original article

The Oslo Sports Trauma Research Center questionnaire on health problems: a new approach to prospective monitoring of illness and injury in elite athletes

Benjamin Clarsen,[1] Ola Rønsen,[2] Grethe Myklebust,[1] Tonje Wåle Flørenes,[1] Roald Bahr[1]

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[1]Oslo Sports Trauma Research Center, Norwegian School of Sport Sciences, Oslo, Norway
[2]The Olympic Elite Sports Program (Olympiatoppen), Oslo, Norway

Correspondence to
Benjamin Clarsen, Department of Sports Medicine, Oslo Sports Trauma Research Center, Norwegian School of Sport Sciences, PB 4014 Ullevål Stadion, Oslo 0806, Norway; ben.clarsen@nih.no

ABSTRACT
Background Little information exists on the illness and injury patterns of athletes preparing for the Olympic and Paralympic Games. Among the possible explanations for the current lack of knowledge are the methodological challenges faced in conducting prospective studies of large, heterogeneous groups of athletes, particularly when overuse injuries and illnesses are of concern.
Objective To describe a new surveillance method that is capable of recording all types of health problems and to use it to study the illness and injury patterns of Norwegian athletes preparing for the 2012 Olympic and Paralympic Games.
Methods A total of 142 athletes were monitored over a 40-week period using a weekly online questionnaire on health problems. Team medical personnel were used to classify and diagnose all reported complaints.
Results A total of 617 health problems were registered

patterns of illness and injury in their normal training and preparation phases.

Among the possible explanations for this lack of knowledge are the methodological challenges faced when conducting longer term studies in this group of athletes. The methods currently employed in a majority of prospective surveillance studies are based on those developed for recording football injuries,[16] and while they may work well for team sports, they are difficult to implement among groups of individual athletes or those without a centralised team structure.[17] Standard methods of injury surveillance may also be poorly suited to collecting information on overuse conditions, which represent the predominant injury type in many Olympic sports.[10 18-20] We have recently discussed these limitations in detail,[21] made general recommendations for more appropriate methodology[21]

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Consensus statement

Improved reporting of overuse injuries and health problems in sport: an update of the Oslo Sport Trauma Research Center questionnaires

Benjamin Clarsen,[1] Roald Bahr,[1] Grethe Myklebust,[1] Stig Haugsboe Andersson,[1] Sean Iain Docking,[2] Michael Drew,[3] Caroline F Finch,[4] Lauren Victoria Fortington,[4] Joar Harøy,[1] Karim M Khan,[5] Bill Moreau,[6,7] Isabel S Moore,[8] Merete Møller,[9] Dustin Nabhan,[1,10] Rasmus Oestergaard Nielsen,[11] Kati Pasanen,[12,13] Martin Schwellnus,[14] Torbjørn Soligard,[15] Evert Verhagen[16]

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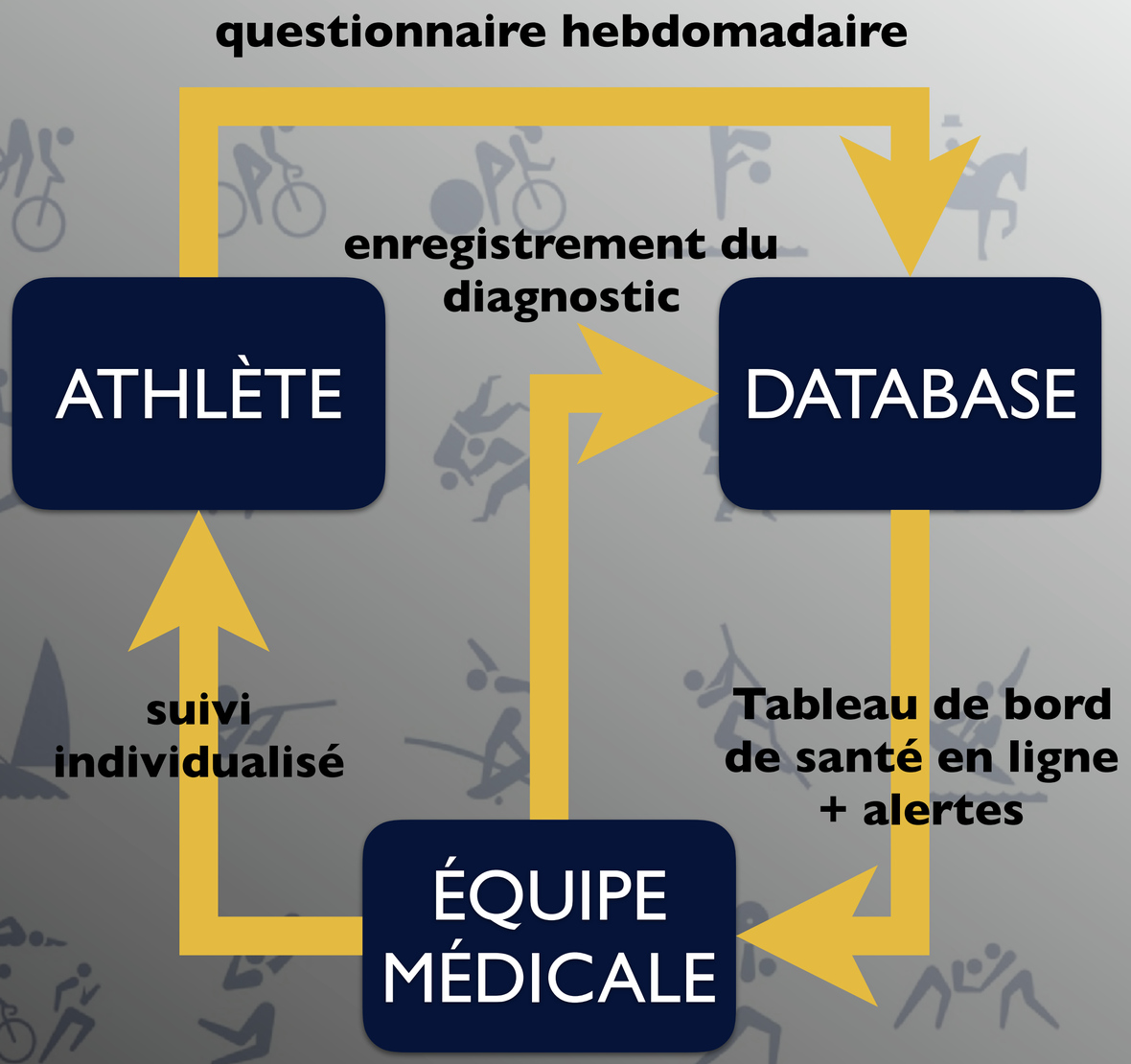
LES DEUX APPROCHES

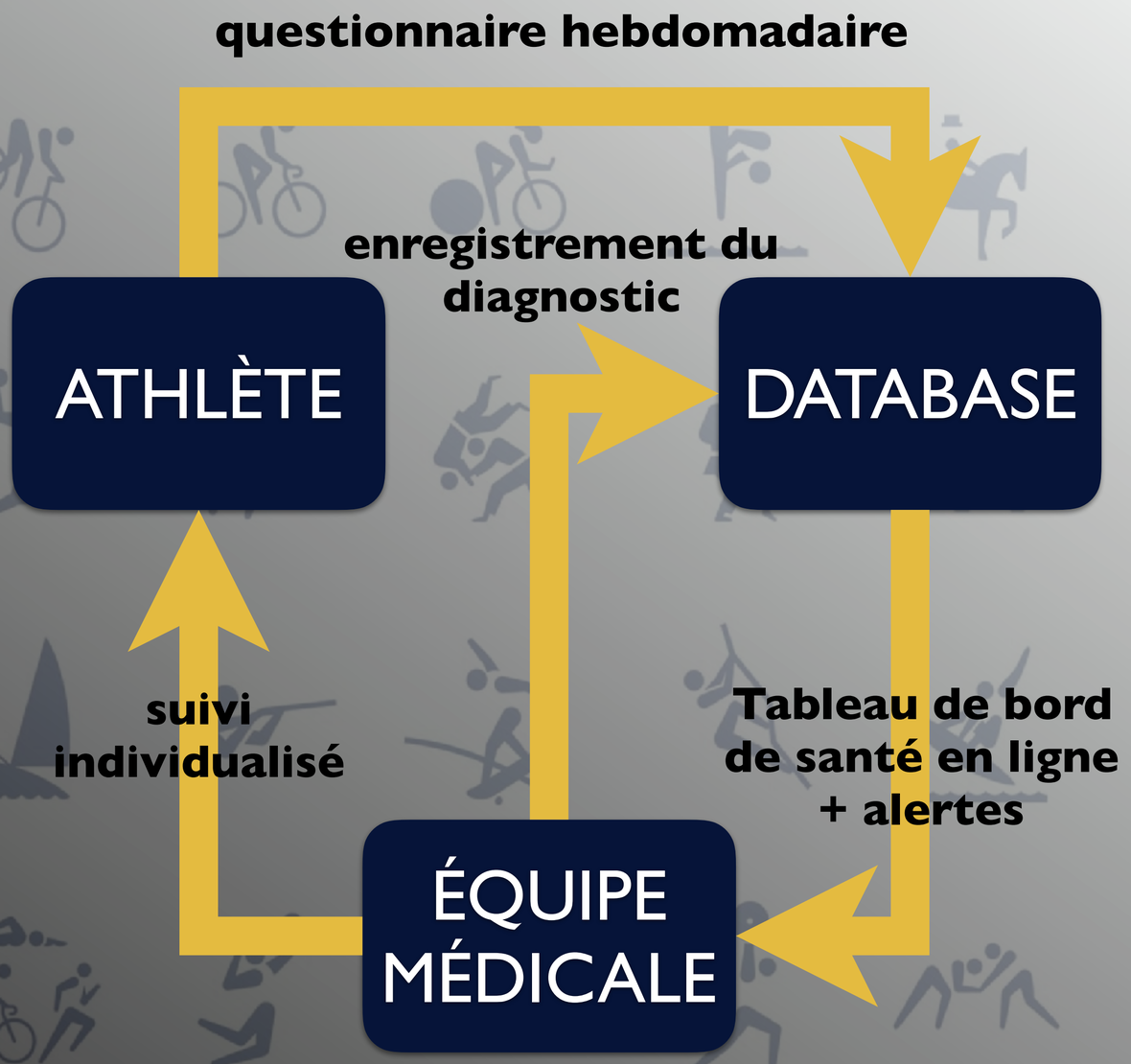
2. Suivi actif de la santé de l'athlète



LES DEUX APPROCHES

2. Suivi actif de la santé de l'athlète

- établir un système de communication régulier avec les athlètes *(SMS/email quotidien/hebdomadaire)*



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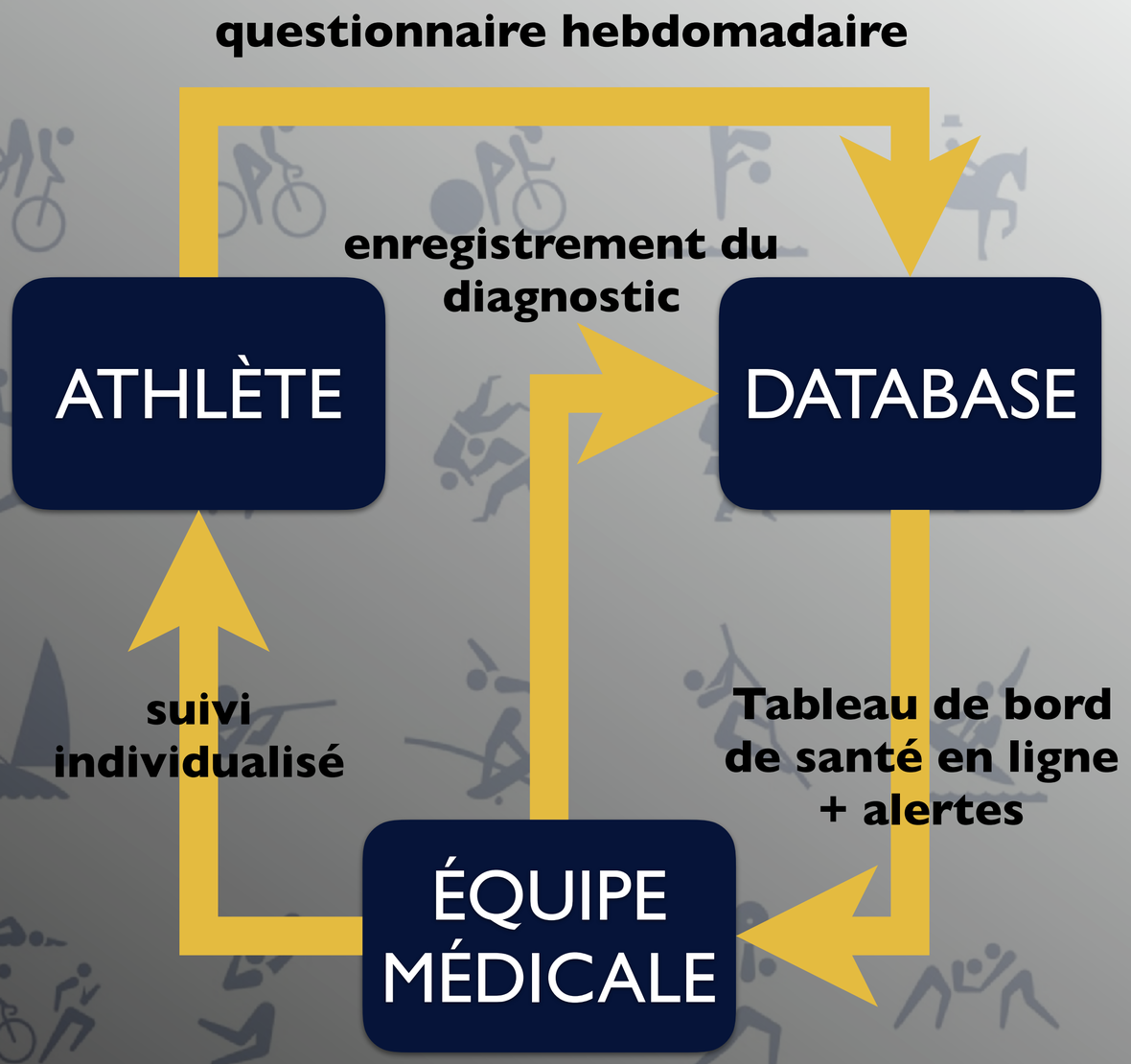

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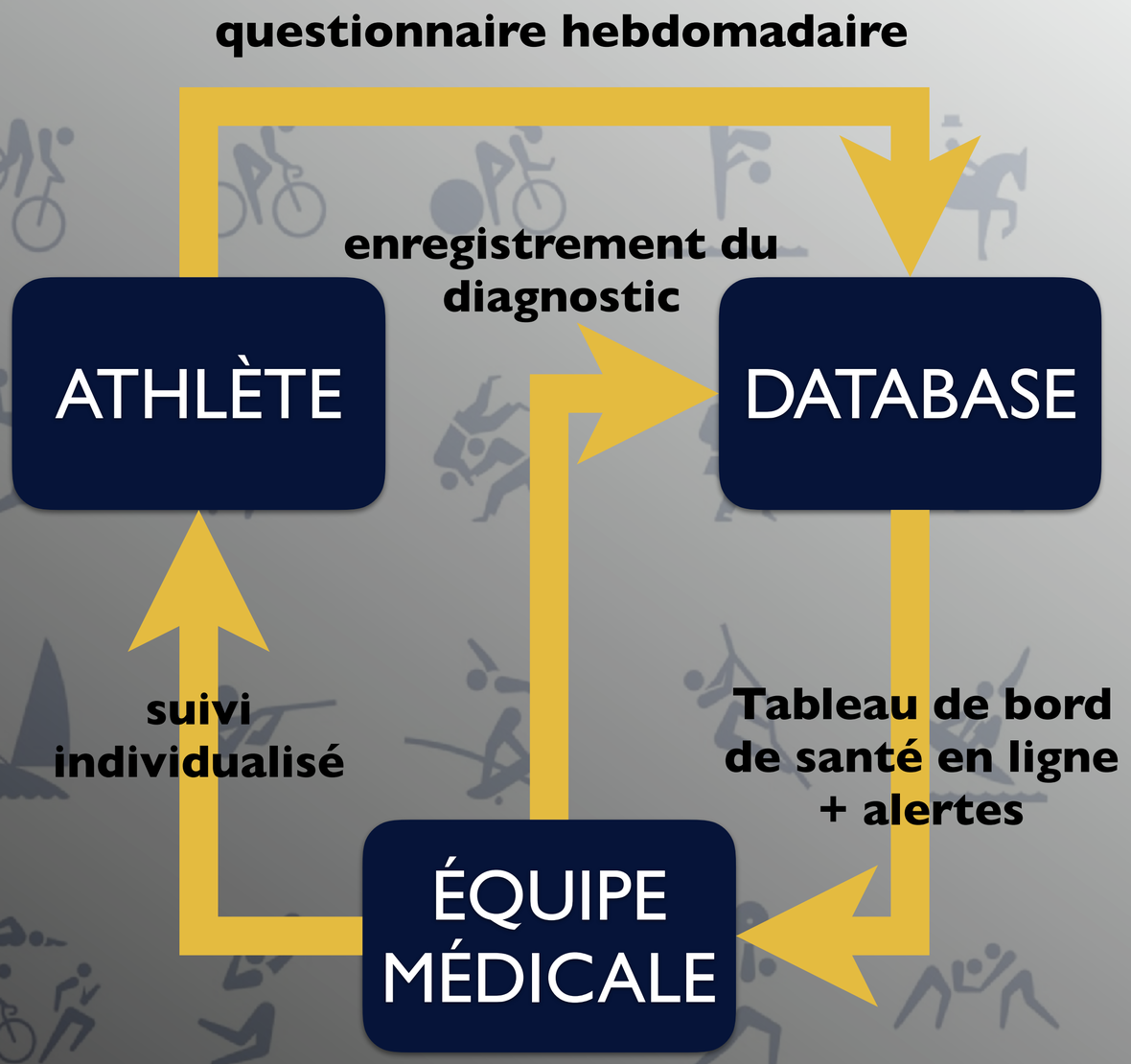
→ bon suivi des problèmes à long terme
→ mieux pour les blessures de surutilisation



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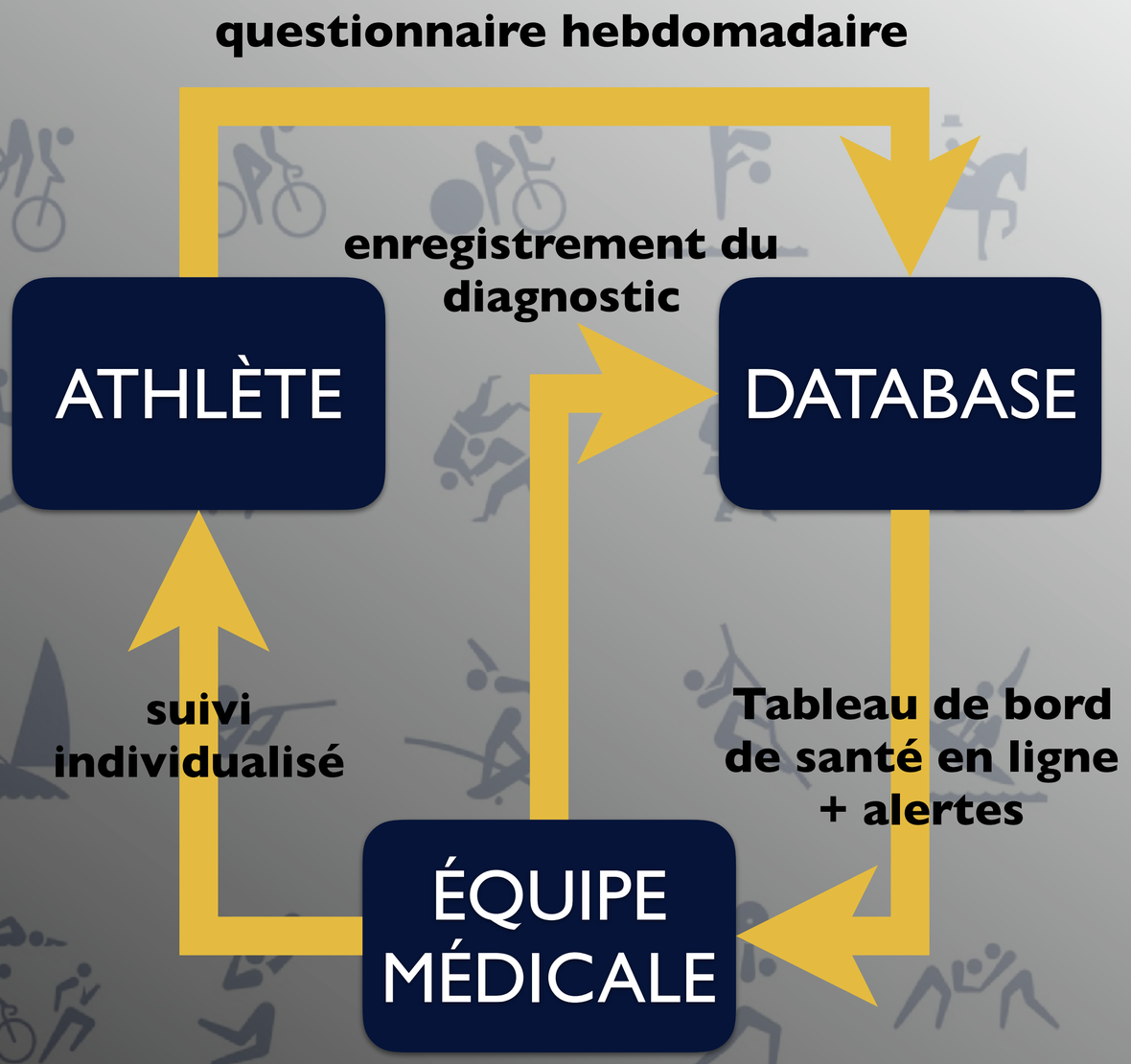
LIMITES

→ *charge de travail beaucoup plus importante pour les athlètes et le personnel médical*



BÉNÉFICES

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Facilite la communication entre l’athlète et le staff

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Indentifie de manière précoce les nouveaux problèmes

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Facilite la communication entre l’athlète et le staff

Indentifie de manière précoce les nouveaux problèmes

Contrôle continue des problèmes connus

« BIG PICTURE »

Évaluation Des Risques

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Identifie le mécanisme des blessures et des maladies

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« BIG PICTURE »

Évaluation Des Risques

Identifie le mécanisme des blessures et des maladies

Indentifie les priorités en terme de prévention

Évalue les effets des interventions de prévention

ÉQUIPE OLYMPIQUE ET PARALYMPIQUES NORVÉGIENNE

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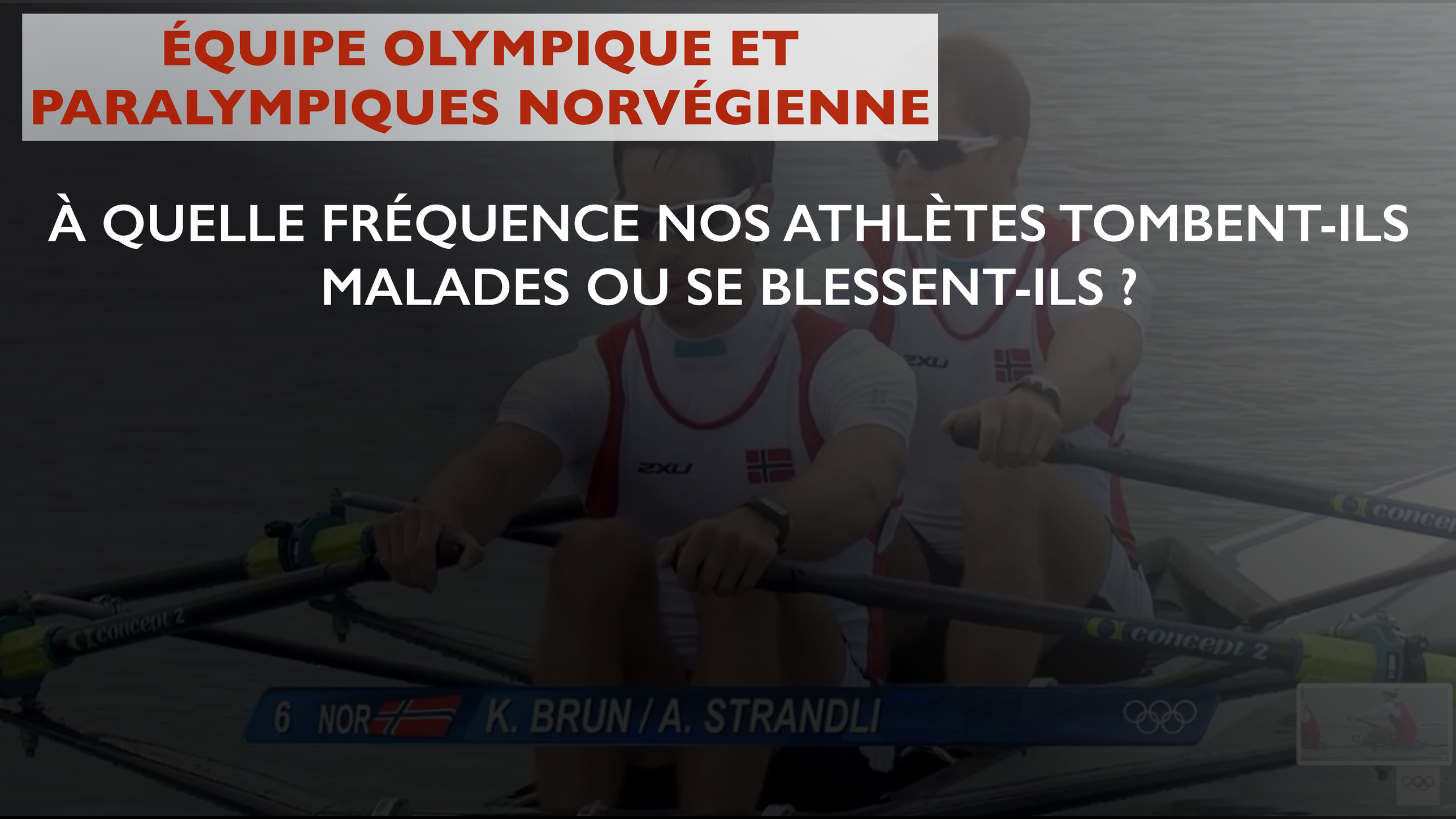
628 athlètes

30 sports olympiques & 17 paralympiques

31600 réponses aux questionnaires

ÉQUIPE OLYMPIQUE ET PARALYMPIQUES NORVÉGIENNE

À QUELLE FRÉQUENCE NOS ATHLÈTES TOMBENT-ILS MALADES OU SE BLESSENT-ILS ?



ÉQUIPE OLYMPIQUE ET PARALYMPIQUES NORVÉGIENNE

À QUELLE FRÉQUENCE NOS ATHLÈTES TOMBENT-ILS MALADES OU SE BLESSENT-ILS ?

en moyenne, chacun des athlètes ont reporté

6 problèmes de santé par an

3 blessures
3 maladies

ÉQUIPE OLYMPIQUE ET PARALYMPIQUES NORVÉGIENNE

COMBIEN D'ATHLÈTES ONT ÉTÉ MALADE OU BLESSÉ À UN MOMENT DONNÉ ?

ÉQUIPE OLYMPIQUE ET PARALYMPIQUES NORVÉGIENNE

COMBIEN D'ATHLÈTES ONT ÉTÉ MALADE OU BLESSÉ À UN MOMENT DONNÉ ?

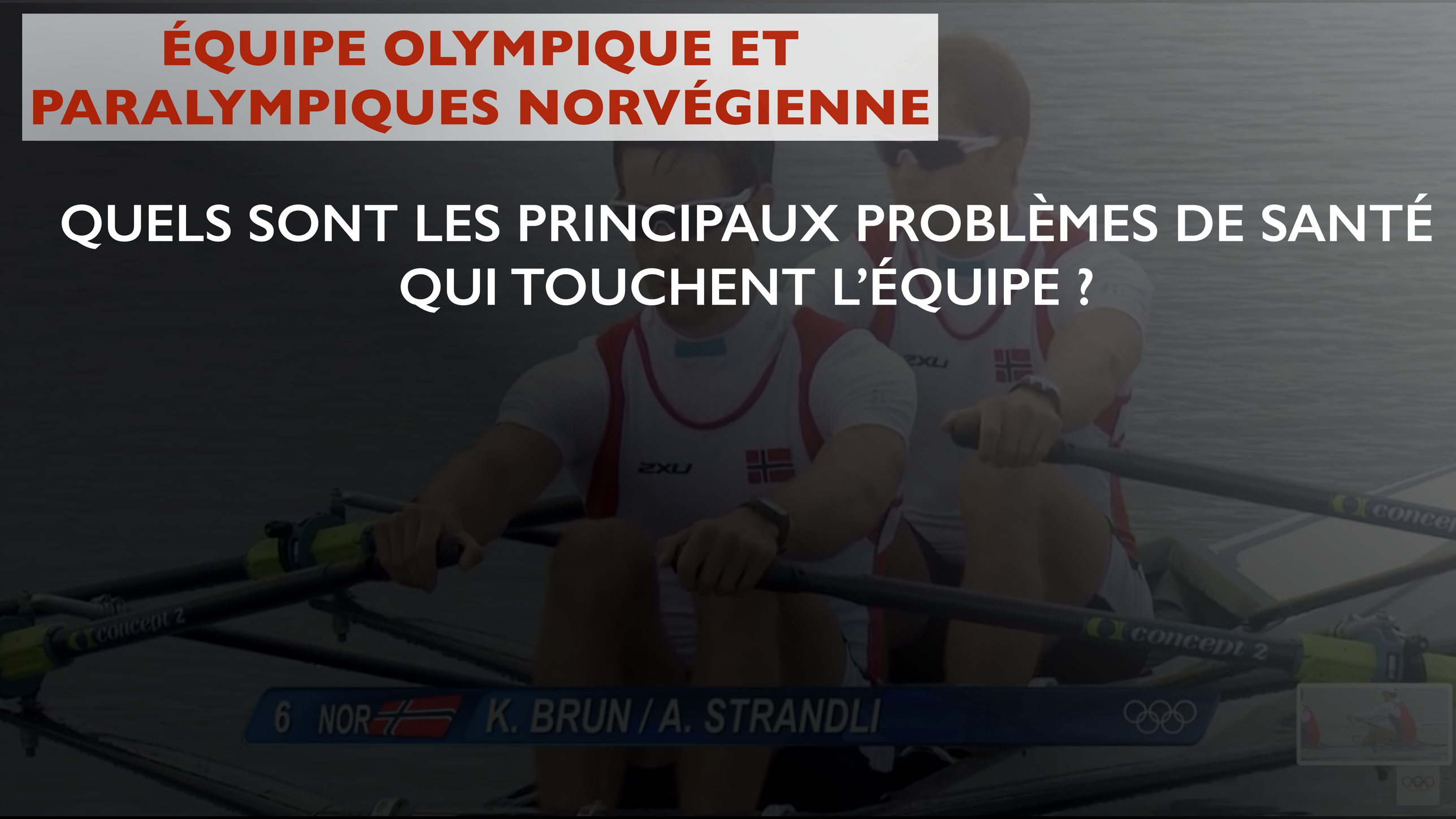
à chaque instant,

32% des athlètes ont un problème de santé

24% blessures
9% maladies

ÉQUIPE OLYMPIQUE ET PARALYMPIQUES NORVÉGIENNE

QUELS SONT LES PRINCIPAUX PROBLÈMES DE SANTÉ QUI TOUCHENT L'ÉQUIPE ?



ÉQUIPE OLYMPIQUE ET PARALYMPIQUES NORVÉGIENNE

QUELS SONT LES PRINCIPAUX PROBLÈMES DE SANTÉ QUI TOUCHENT L'ÉQUIPE ?

Temps d'entraînement moyen perdu par athlète et par an,

27 jours manqués en raison d'un problème de santé

18 jours en raison de blessures
9 jours en raison de maladies

ÉQUIPE OLYMPIQUE ET PARALYMPIQUES NORVÉGIENNE

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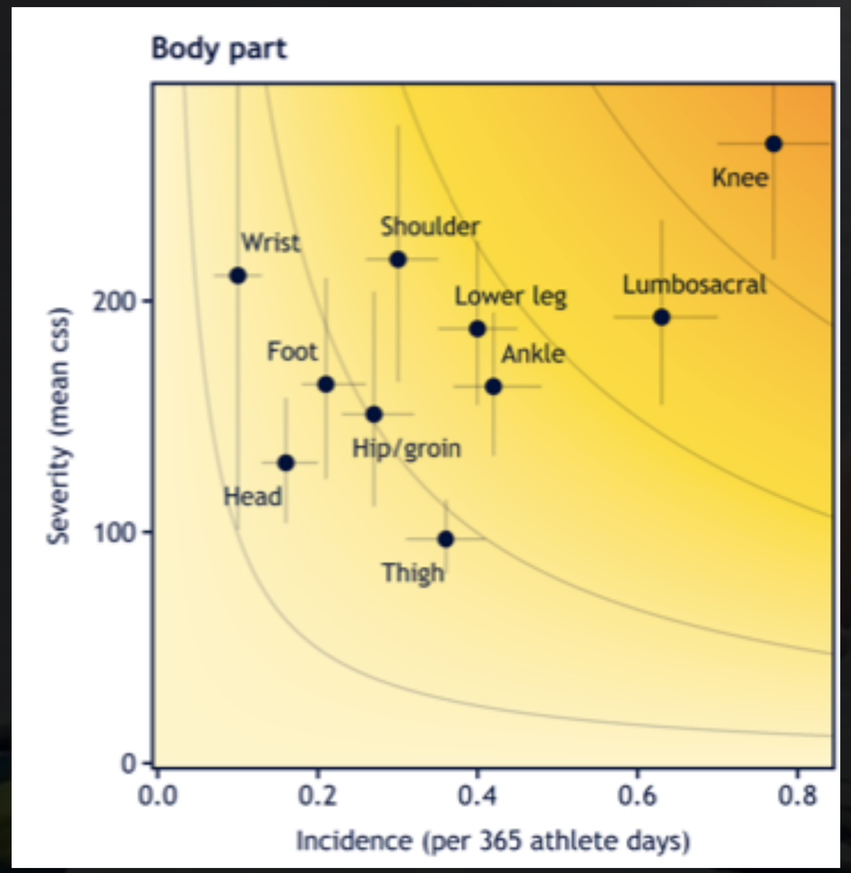

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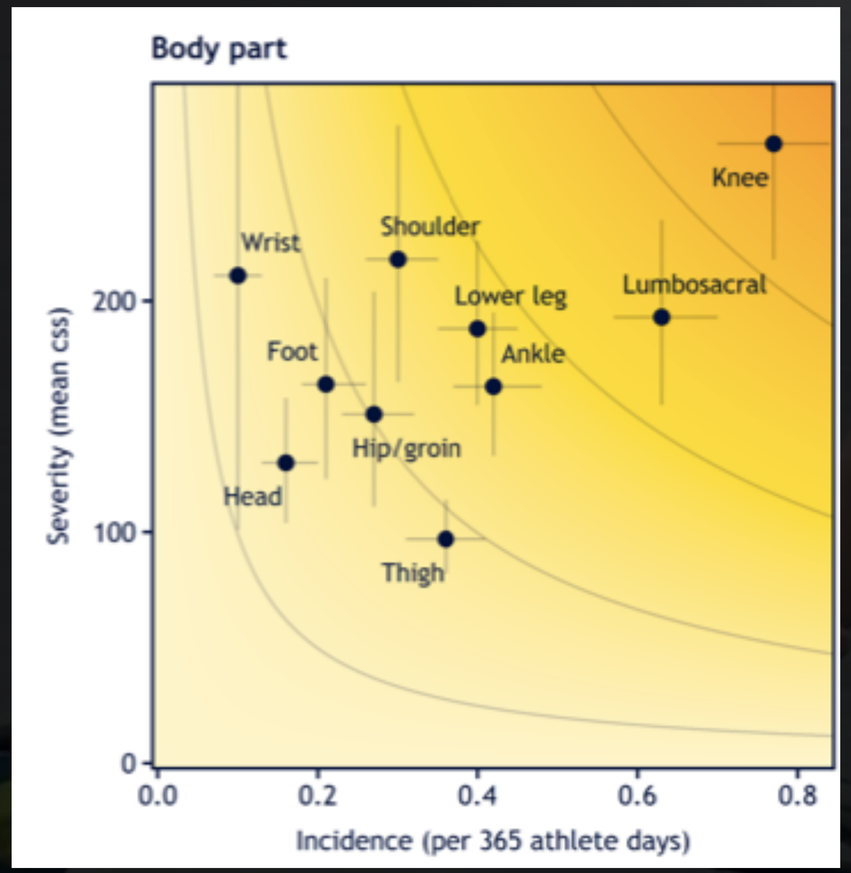

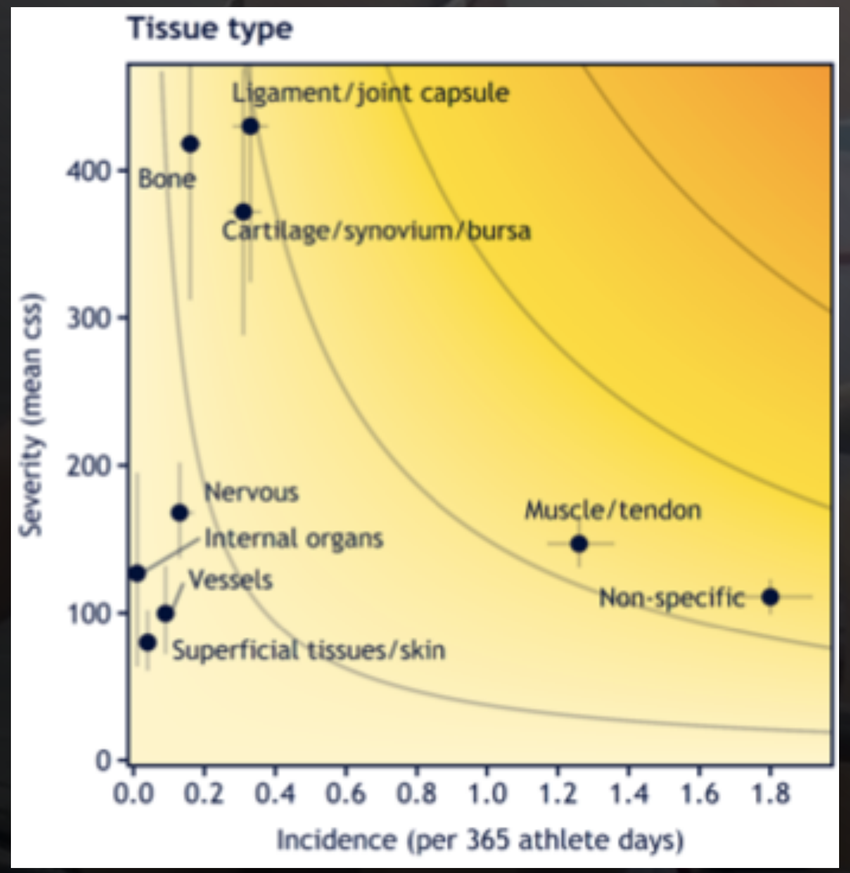

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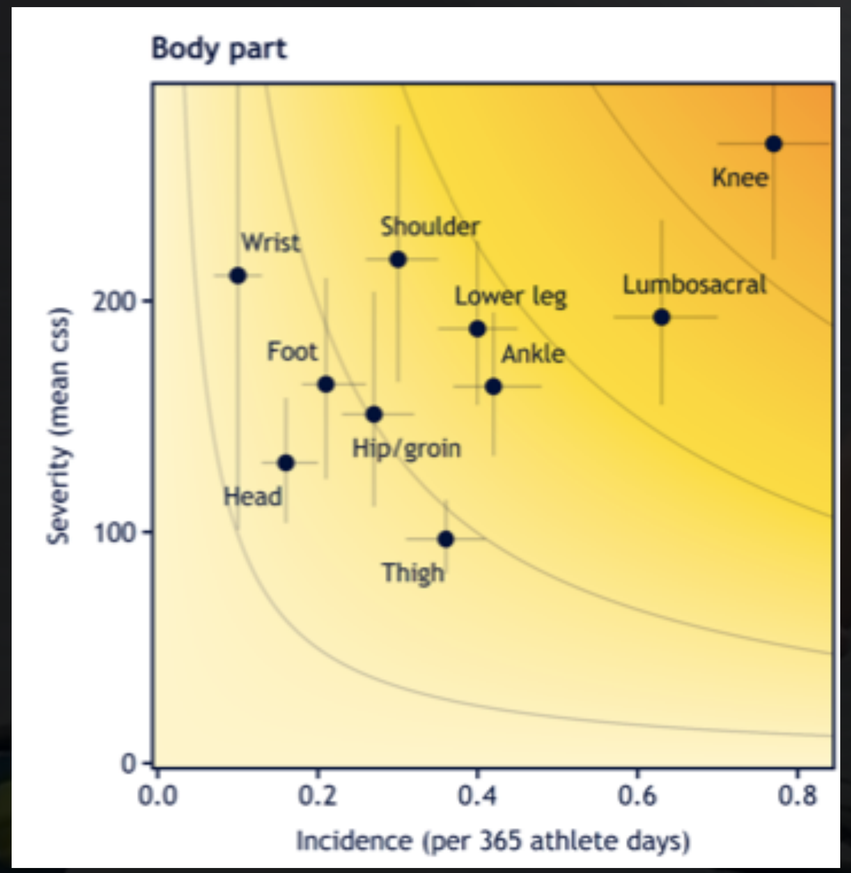

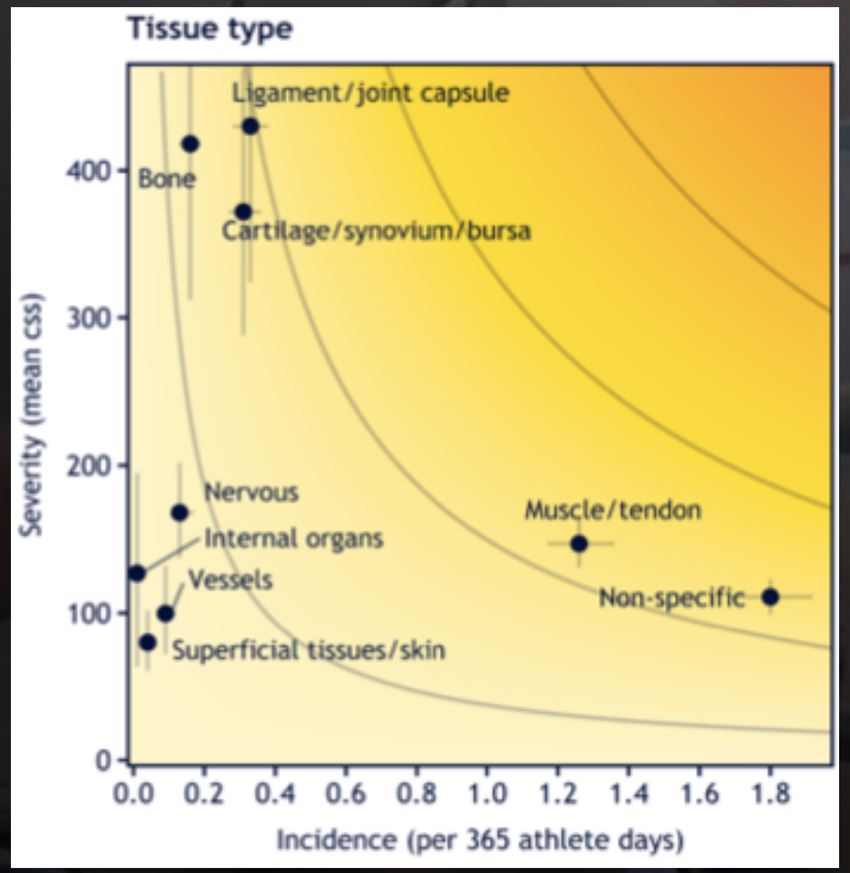

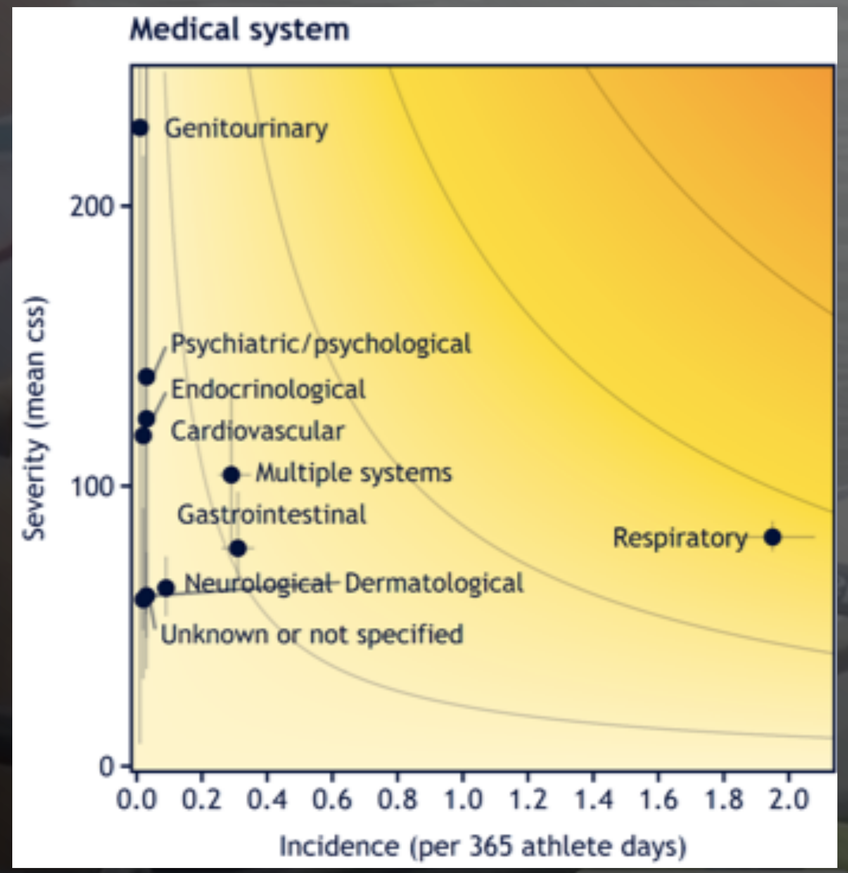

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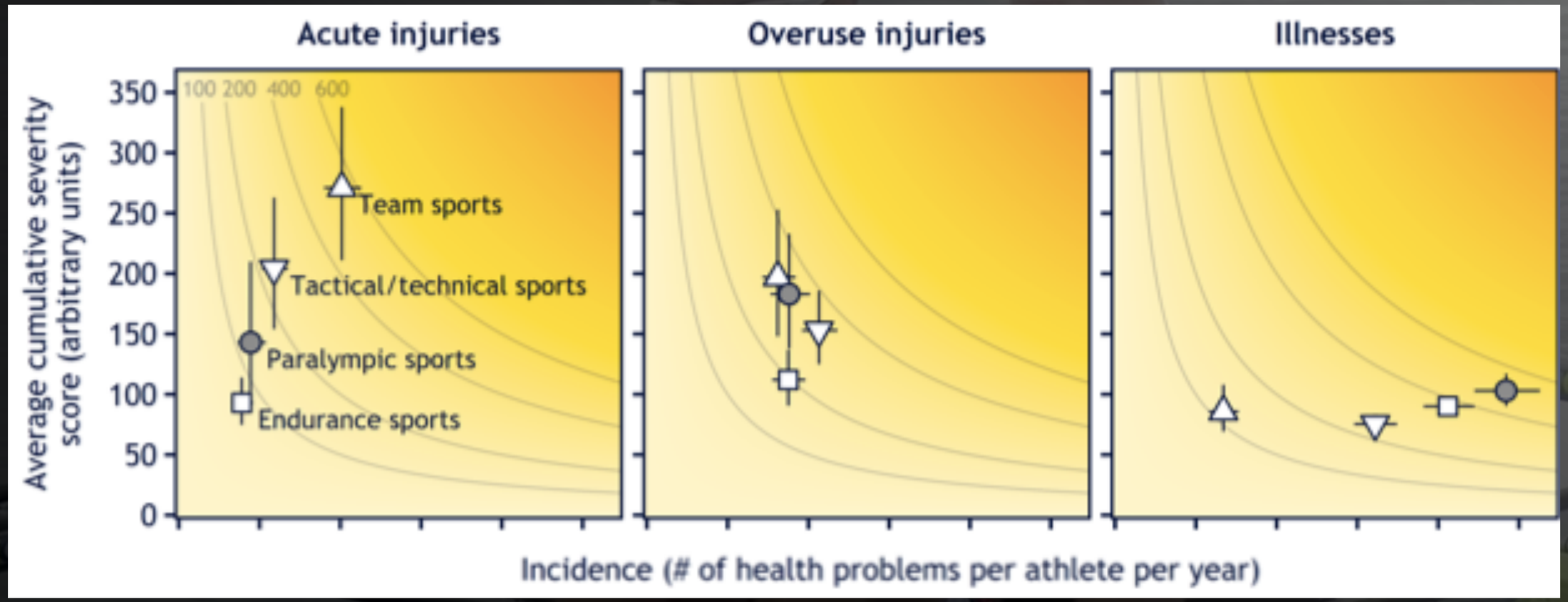

Plutôt que cela soit perçu comme un programme de recherche ou de récolte de donnée, le système de surveillance a des effets bénéfiques directs et immédiats pour tous les intervenants

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TMB
TOULOUSE METROPOLE BASKET
FFBB

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Qu’est-ce que j’y gagne?

UNE MEILLEURE PRISE EN CHARGE MÉDICALE

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TOULOUSE METROPOLE BASKET
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TOULOUSE METROPOLE BASKET
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Qu’est-ce que j’y gagne?

FACILITE LE BON TRAVAIL

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TOULOUSE METROPOLE BASKET
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Qu’est-ce que j’y gagne?

MOINS D’INDISPONIBILITÉ DES JOUEURS

AMÉLIORER LA PERFORMANCE

« LES ÉQUIPES QUI SE BLESSENT MOINS RÉUSSISSENT MIEUX »

Mario Bizzini

Gaëtan BOLPAIRE
Kinésithérapeute

bolpaire.gaetan@gmail.com

MERCI

Gaëtan BOLPAIRE
Kinésithérapeute

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