INTERNATIONAL
OLYMPIC
COMMITTEE

Rio2016

Rio 2016 Olympic Summer Games

Injury & Illness Surveillance Study

Detailed information for NOC medical staff

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Foreword

Dear Colleagues,

It is with great pleasure that we welcome you to Rio de Janeiro for the 2016 Summer Olympic Games. We are pleased to provide you with this introductory booklet, which will explain to you the details of the IOC Injury & Illness Surveillance Study. As you may know, the IOC is increasingly emphasizing work on the protection of the athletes' health and prevention of injuries and illnesses.

During the 2004 Olympic Games, injuries in all team sport tournaments (football, handball, basketball, field hockey, baseball, softball, water polo and volleyball) were surveyed, and the IOC extended the project to all sports events during the 2008 Olympic Games in Beijing. Further improvements were made in the 2010 Winter Olympic Games in Vancouver, where also illnesses were recorded. With successful implementation in the 2012 Summer Olympic Games in London and 2014 Winter Olympic Games in Sochi, the injury and illness surveillance study has become a staple of the Olympic Games. The surveillance study provides the sports world with invaluable data on injury and illness frequencies, risk factors and mechanisms, that, in turn, are used to develop and implement prevention measures and thus create safer sports for the athletes' benefit.

You, as the team physicians and physiotherapists, are crucial to the success of the project, and we kindly ask you to **report all injuries and illnesses of your athletes on a daily basis** on the provided report forms and return them to the IOC research team. All information will be treated with the strictest **confidentiality**.

This booklet provides comprehensive information on how to fill in and return the daily report form. The IOC research group will process the data, and you will receive a formal report of the study in due course after the end of the Olympic Games. Our goal is to transfer the science into practice to provide you with valuable information that will enable you to organise your work in a more efficient way to prevent sports injuries among your athletes.

Thank you very much for your valuable contribution!

Dr Richard Budgett

Medical & Scientific Department Director

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Introduction

Injury surveillance provides not only important epidemiological information, but also direction for injury prevention. During the 2004 Olympic Games, the eight international team sports federations (FIBA, FIFA, FINA, the FIH, the FIVB, IBAF, the IHF and the ISF) participated in a study on the frequency and characteristics of injuries in all 14 team sport tournaments using an established injury-surveillance system. The acceptance and compliance of the project was excellent, as demonstrated by the response rate exceeding 90% for almost all tournaments. The findings, which were consistent with previous studies, demonstrated the high quality of the data obtained.

In Beijing 2008 the injury surveillance system was slightly modified to be applicable for both individual and team sports, and in Vancouver 2010, London 2012 and Sochi 2014 to also monitor illnesses. Thanks to the collaboration with you, the NOC physicians and physiotherapists, the quality of the data reported in these Games was excellent. The results from the IOC injury surveillance system have been published in the renowned peer-reviewed journals British Journal of Sports Medicine and American Journal of Sports Medicine.

The aims of the present study are to record newly acquired illnesses and sports injuries incurred in competitions and/or training during the 2016 Summer Olympic Games in Rio de Janeiro.

Confidentiality

The accreditation number of the athletes will be used only to avoid double reports from NOC and Rio 2016 physicians and to obtain information on age, gender, nationality and national federation of the athlete from the IOC database. **The accreditation number of the athletes will not be entered into the injury and illness database**; all injury & illness report forms will be stored in a locked filing cabinet and will be made anonymous after the 2016 London Olympic Games. All reporting will be either for groups of athletes, or in a way that **no individual athlete or team can be identified**.

Confidentiality of all information will be ensured.

Methods

This injury and illness-reporting system can be briefly summarised as follows:

During the 2016 Summer Olympic Games, the NOC physicians or physiotherapists of all participating teams are requested to report all injuries newly incurred in competitions and/or training and all illnesses (or the non-occurrence of injuries/illnesses) daily using a specially designed, single-page report form. Injury and illness data will also be obtained from the medical staff of the local organizing committee. The report form is available in eight languages (English, French, Arabic, Chinese, German, Japanese, Russian and Spanish) **on paper form and electronically**. All information will be treated as strictly confidential. The team physicians will receive a formal report of the study in due course after the Olympic Games.

1 What should be reported?

All newly acquired injuries of athletes

An injury is defined as any musculoskeletal complaint, concussion or other medical condition newly incurred due to competition and/or training during the 2016 Summer Olympic Games in Rio de Janeiro that received medical attention regardless of the consequences with respect to absence from competition and/or training.

This injury definition includes four aspects:

1. all injuries that received medical attention (not only time-loss injuries);
2. newly incurred (pre-existing, not fully rehabilitated injuries should not be reported);
   re-injuries (injuries of the same location and type) should be reported only if the athlete has returned to full participation after the previous injury;
3. in-competition or training injuries;
4. during the period of the Olympic Games (5 to 21 August 2016).

All newly acquired illnesses of athletes

An illness is defined as any physical complaint (not related to injury) newly incurred during the 2016 Summer Olympic Games that received medical attention regardless of the consequences with respect to absence from competition and/or training.

This illness definition includes three aspects:

1. all illness that received medical attention (not only those resulting in time-loss);
2. newly incurred (pre-existing and chronic illnesses should not be reported except the athlete suffers an acute exacerbation);
3. during the period of the Olympic Games (5 to 21 August 2016).

2 Who reports?

National Olympic Committee medical staff (team physician, physiotherapist, etc., i.e. qualified medical staff)

Injuries and illnesses should be diagnosed and reported by qualified medical personnel (team physician, physiotherapist, etc.) to ensure valid information on the characteristics of the injury and/or illness and a comparable standard of the data. It is advantageous if each team designates one contact person who will take part in the Team Physicians' meeting and will be accessible for questions during the period of the Olympic Games.

In order to receive information about injured/ill athletes of teams without a physician or medical personnel, injuries and illnesses will also be reported by the medical personnel of Rio 2016.

3 When to report?

On a daily basis

Acute injury and illness should be reported daily. The IOC injury & illness surveillance system requires a daily report regardless of whether or not any injury has occurred. This procedure is important to distinguish between the non-occurrence of injuries and illnesses from a missing report of a team.

4 What details should be reported?

Newly acquired injury

The injury component of the report form requires documentation of the following information: accreditation number of the athlete, sport and event, round / heat / training, date and time of injury, injured body part, type and cause of injury and an estimate of the expected duration of subsequent absence from competition and/or training.

athlete's accreditation no.		sport and event		round, heat or training		date and time of injury
1234569587979		athletics – 100m (women)		quarter final – 1st heat		7.08.2016, 14:35
injured body part, side	code	type of injury	code	cause of injury	code	absence in days
wrist, left	15	sprain	8	slipped and fell	21	10

Definitions and codes are given on the back page of the report form (see appendix 2, page 13).

In the situation when the diagnosis (or the duration of absence) is revised later as more information about the injury becomes available, the team physician should report the injury again (with the previous data and location of injury to indicate that this is a revised report) and state the corrected information. You will find more examples on how to fill in the injury report form in appendix 2.

Newly acquired illness

The illness component of the report form requires documentation of the following information: accreditation number of the athlete, sport and event, diagnosis, date of first occurrence, affected system, main symptom(s), cause of illness and an estimate of the expected duration of subsequent absence from competition and/or training.

athlete's accreditation no.		sport and event		diagnosis		occurred on (date)
1564579587979		football (men)		cystitis		2.08.2016
affected system	code	main symptom(s)	code	cause of illness	code	absence in days
uro-genital	3	pain	2	infection	2	0

Definitions and codes are given on the back page of the report form (see appendix 2, page 13).

5 How to return the report forms?

The completed report forms should be submitted to the injury and illness study researchers at the IOC Medical Commission office in the Olympic Village polyclinic, or sent by email to torbjorn.soligard@olympic.org.

Appendix 1:
Examples of how to record acute injuries

1. A female hammer-thrower developed shoulder instability during training and sought medical attention; the condition did not prevent the athlete from taking full part in training or competition even though it caused the player some pain. The team physiotherapist recommended an individual training programme for the athlete to avoid aggravating the condition.

athlete's accreditation no.		sport and event		round, heat or training		date and time of injury
1234569587979		*hammer throw (women)*		*training*		*10.08.2016, 08:00*
injured body part, side	code	type of injury	code	cause of injury	code	absence in days
shoulder, left	*11*	*instability*	*5*	*overuse (gradual onset)*	*1*	*0*

2. A decathlete sustained an ankle sprain during competition but continued to compete; the athlete received medical attention following the competition. The athlete completed full competition using ankle taping (with some pain) but aggravated the injury the following day; the athlete then required rehabilitation and stopping from training. Estimated duration of treatment = 15 days.

athlete's accreditation no.		sport and event		round, heat or training		date and time of injury
1234569587979		*decathlon (women) – high jump*		*competition – first day*		*7.08.2016, 17:00*
injured body part, side	code	type of injury	code	cause of injury	code	absence in days
ankle, right, medial	*27*	*sprain*	*8*	*non contact trauma*	*3*	*0*

Second Incident should be recorded as another injury

athlete's accreditation no.		sport and event		round, heat or training		date and time of injury
1234569587979		*decathlon – 1500m*		*competition – second day*		*8.08.2016, 12:00*
injured body part, side	code	type of injury	code	cause of injury	code	absence in days
ankle, right, medial	*27*	*sprain*	*8*	*recurrence of injury*	*4*	*15*

3. Male football player is hit in the head by arm of another player. He suffers from a contusion to his cheek, a laceration to his eyelid and a concussion.

athlete's accreditation no.		sport and event		round, heat or training		date and time of injury
1234569587979		*football (men)*		*competition – preliminary round*		*18.08.2016, 12:00*
injured body part, side	code	type of injury	code	cause of injury	code	absence in days
head	*1, 2*	*concussion, laceration, contusion*	*1, 11, 16*	*contact with other player*	*11*	*7*

4. A beach volley player sprained her left ankle during training. She received treatment by the PT, and was then taken to the hospital for MRI and secondary treatment.

athlete's accreditation no.		sport and event		round, heat or training		date and time of injury
1234569587979		beach volleyball (women)		training		9.08.2016, 10:45
injured body part, side	code	type of injury	code	cause of injury	code	absence in days
ankle, left, lateral	27	sprain	8	non contact trauma	3	2

Revised diagnosis (after MRI) should also be provided on the injury report form.

athlete's accreditation no.		sport and event		round, heat or training		date and time of injury
1234569587979		beach volleyball (women)		training		14.08.2016, 10:45
injured body part, side	code	type of injury	code	cause of injury	code	absence in days
ankle, left, lateral	27	ligament rupture without instability	7	already reported		>20

5. A football player sustained a rotation injury to his right knee during the first game of the Games.

athlete's accreditation no.		sport and event		round, heat or training		date and time of injury
TAM 1234569587979		football (men)		match against Germany		5.08.2016, 18:42
injured body part, side	code	type of injury	code	cause of injury	code	absence in days
knee, right, medial	24	sprain	8	contact with other player	11	>14

6. A marathon runner suffers a muscular cramp in the gastrocnemius and has to quit the race. Expected to not miss time.

athlete's accreditation no.		sport and event		round, heat or training		date and time of injury
1234569587979		marathon		competition		9.08.2016, 11:35
injured body part, side	code	type of injury	code	cause of injury	code	absence in days
gastrocnemius	25	cramps	19	overuse (sudden onset)	2	0

7. A male 10000m runner slipped on wet ground and sustained a laceration to the leg during a morning training session; the physician sutured the cut but the athlete missed the afternoon training session. The athlete was able to take a full part in competition on the following day.

athlete's accreditation no.		sport and event		round, heat or training		date and time of injury
1234569587979		10000m (men)		training – morning session		11.08.2016, 10:00
injured body part, side	code	type of injury	code	cause of injury	code	absence in days
calf, left	25	cut	16	slipped on wet ground	3	0

8. A table tennis player fell down and sprained his ankle when getting off the bus on his way to the venue.

Incident should not be recorded as an injury.

Examples of how to record acute illness

1. A female basketball player develops sudden onset of fever and a sore throat for 2 days. On examination, she is found to have acute tonsillitis. She is expected to miss 2 days of training and competition.

athlete's accreditation no.		sport and event		diagnosis		occurred on (date)
1234569587979		basketball (women) – preliminary		tonsillitis, cold		17.08.2016, 12:15
affected system	code	main symptom(s)	code	cause of illness	code	absence in days
respiratory	1	fever, pain	1, 2	infection	2	2

2. A female weightlifter suddenly becomes ill after dinner with abdominal cramping, vomiting and diarrhea. A diagnosis of acute gastroenteritis was made. She is expected to miss 3 days of training.

athlete's accreditation no.		sport and event		diagnosis		occurred on (date)
1234569587979		weightlifting (women, 53kg)		gastroenteritis		6.08.2016, 19:00
affected system	code	main symptom(s)	code	cause of illness	code	absence in days
gastrointestinal	2	abdominal cramping, vomiting, diarrhoea	2, 3	dinner	4	3

3. A male 5000m runner with known stable asthma suddenly becomes acutely short of breath upon arrival in the competition venue. He complains of cough and shortness of breath. He requires medical intervention for stabilization. He is expected to miss 1 day of competition.

athlete's accreditation no.		sport and event		diagnosis		occurred on (date)
1234569587979		5000m (men) – semi-final		asthma		5.08.2016, 10:45
affected system	code	main symptom(s)	code	cause of illness	code	absence in days
respiratory	1	cough and shortness of breath	4	asthma, environmental	1, 4	1

4. A female race walker collapses at the finish line after the 20k race. She complains of dizziness, weakness and confusion. She requires medical intervention for stabilization. She is not expected to miss time from competition as her event is complete.

athlete's accreditation no.		sport and event		diagnosis		occurred on (date)
1234569587979		*racewalking – 20k (women)*		*dehydration*		*9.08.2016, 13:00*
affected system	code	main symptom(s)	code	cause of illness	code	absence in days
cardiovascular	*4*	*dizziness, weakness and confusion*	*8, 11*	*exercise induced*	*3*	*0*

5. A female hockey player with known diabetes presents to the medical clinic for a renewal of her insulin prescription. Her sugars are stable and she does not require any medical intervention.

This illness should not be reported.

Appendix 2:
Report form for acute injuries & illnesses

INTERNATIONAL OLYMPIC COMMITTEE

Daily Report on Injuries and Illnesses

Rio2016

NOC | **Report by** (name) | **Date of report** /2016

Contact details (e-mail/tel.)

Please report: **(1) All injuries (traumatic and overuse) and (2) all illnesses newly incurred in competition or training during the Olympic Games regardless of the consequences with respect to absence from competition or training.** The information provided is for medical and research purposes and will be treated confidentially.

1. Injury – Example

Definitions and codes of 1 to 6 see reverse

athlete's accreditation no.		sport and event 2		round, heat or training 3		date and time of injury
123456789		*athletics, 100m (women)*		*quarter final / 1st heat*		*7.8.2016 - 14:35*
injured body part, side 4	code	type of injury 5	code	cause of injury 6	code	absence in days
wrist, left	*15*	*sprain*	*8*	*slipped and fell*	*21*	*10* 1

athlete's accreditation no.		sport and event		round, heat or training		date and time of injury
injured body part	code	type of injury	code	cause of injury	code	absence in days

athlete's accreditation no.		sport and event		round, heat or training		date and time of injury
injured body part	code	type of injury	code	cause of injury	code	absence in days

athlete's accreditation no.		sport and event		round, heat or training		date and time of injury
injured body part	code	type of injury	code	cause of injury	code	absence in days

athlete's accreditation no.		sport and event		round, heat or training		date and time of injury
injured body part	code	type of injury	code	cause of injury	code	absence in days

2. Illness – Example

Definitions and codes of 1 2 7 8 and 9 see reverse

athlete's accreditation no.		sport and event 2		diagnosis		occurred on (date)
1564579587979		*football (men)*		*tonsillitis, cold*		*02.08.2016*
affected system 7	code	main symptom(s) 8	code	cause of illness 9	code	absence in days
respiratory	*1*	*fever, pain*	*1, 2*	*infection*	*2*	*2* 1

athlete's accreditation no.		sport and event		diagnosis		occurred on (date)
affected system	code	main symptom(s)	code	cause of illness	code	absence in days

athlete's accreditation no.		sport and event		diagnosis		occurred on (date)
affected system	code	main symptom(s)	code	cause of illness	code	absence in days

☐ **No injury or illness in any athlete of our team today**

Please use additional forms if needed.

Front page

Codes and classifications

1 Estimated duration of **absence from training or competition** (in days)

Please provide an estimate of the number of days that the athlete will not be able to undertake his/her normal training programme or will not be able to compete.

0 = 0 days
1 = 1 day
2 = 2 days
7 = 1 week
14 = 2 weeks
21 = 3 weeks
28 = 4 weeks
> **30** = more than 4 weeks
> **180** = 6 months or more

2 Sport and event

Please state the event. For example: swimming – 4x100m freestyle relay (women); track – 110m hurdles (men); taekwondo – under 58kg (men); cycling – team sprint (women)

For Injuries

3 Round, heat or training

If the injury occurred during **competition**, please state the **round** (e.g. heats, qualification B, final).
If the injury occurred on **another occasion**, please specify whether it was training, warm-up or other.

4 Injured body part (location of injury)

Head and trunk

1 face (incl. eye, ear, nose)
2 head
3 neck / cervical spine
4 thoracic spine / upper back
5 sternum / ribs
6 lumbar spine / lower back
7 abdomen
8 pelvis / sacrum / buttock

Upper extremity

11 shoulder / clavicle
12 upper arm
13 elbow
14 forearm
15 wrist
16 hand
17 finger
18 thumb

Lower extremity

21 hip
22 groin
23 thigh (a: anterior / p: posterior)
24 knee (m: medial / l: lateral)
25 lower leg (a: anterior / p: posterior)
26 Achilles tendon
27 ankle (m: medial / l: lateral)
28 foot / toe

5 Type of injury (diagnosis)

1 concussion (regardless of loss of consciousness)
2 fracture (traumatic)
3 stress fracture (overuse)
4 other bone injuries
5 dislocation, subluxation
6 tendon rupture
7 ligamentous rupture
8 sprain (injury of joint and / or ligaments)
9 lesion of meniscus or cartilage
10 strain / muscle rupture / tear
11 contusion / haematoma / bruise
12 tendinosis / tendinopathy
13 arthritis / synovitis / bursitis
14 fasciitis / aponeurosis injury
15 impingement
16 laceration / abrasion / skin lesion
17 dental injury / broken tooth
18 nerve injury / spinal cord injury
19 muscle cramps or spasm
20 other

6 Cause of injury

1 overuse (gradual onset)
2 overuse (sudden onset)
3 non-contact trauma
4 recurrence of previous injury
11 contact with another athlete
12 contact: moving object (e.g. puck)
13 contact: stagnant object (e.g. pole)
14 violation of rules (obstruction, pushing)
21 field of play conditions
22 weather condition
23 equipment failure
24 other

For Illnesses

7 Affected system

1 respiratory / ear, nose, throat
2 gastro-intestinal
3 uro-genital / gynaecological
4 cardio-vascular
5 allergic / immunological
6 metabolic / endocrinological
7 haematological
8 neurological / psychiatric
9 dermatologic
10 musculo-skeletal
11 dental
12 other

8 Main symptom(s)

1 fever
2 pain
3 diarrhoea, vomiting
4 dyspnoea, cough
5 palpitations
6 hyper-thermia
7 hypo-thermia
8 dehydration
9 syncope, collapse
10 anaphylaxis
11 lethargy, dizziness
12 other

9 Cause of illness / symptom(s)

1 pre-existing (e.g. asthma, allergy)
2 infection
3 exercise-induced
4 environmental
5 reaction to medication
6 other

Back page

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If in doubt, please do not hesitate to contact any of the above.

Thank you very much indeed

for your valuable contribution!