



Pre-participation health study at IAAF World Championships 2015 in Beijing

A development group set out to determine a protocol for studies that aim to describe the self-reported health status (recent injury complaints and illnesses) of athletes before the start of an international Athletics championship and to identify risk factors for sustaining an injury and illness at such championships. The protocol has been defined by first identifying the requirements on studies of this type and thereafter outline the study design according to the requirements.

The study protocol will be implemented at IAAF World Athletics Championships 2015 in Beijing.

The long-term purpose is to minimize the athletes' risk of injury and/or illness during regular season and major championships by introducing a simple health screening instrument to be used by team medical personnel.

This document contains the study requirements and the study protocol specification. The survey form template and protocol development plan are provided as enclosures.

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Beijing 2015 study requirements

The Beijing 2015 study requirements are divided into those addressing the study design and the practical management of the survey questionnaire and data entry procedures, respectively.

Requirements on study design

R1.1 Clear study purpose and scientific aims, i.e. the results should

R1.1.1 provide IAAF an evidence base for injury and illness prevention in association to athletics championships

R1.1.2 describe for IAAF and national teams the pre-participation health of athletes

R1.1.2 be based on a minimal data set that can predict individuals or groups of athletes at risk for injury or illness

R1.2 The scientific methods should adhere to highest standards in sports medicine and epidemiology

R1.3 The study is to be clearly linked with active IAAF outreach to athletes on Injury and Illness prevention

R1.4 IAAF outreach has designated/responsible person and its planning starts in due time

R1.5 The study must not harm or intimidate athletes during their preparations and performances in association to the championships

R1.6 A primary investigator (PI) and research team is designated (including statisticians) to execute the study

R1.7 Thorough ethical and cultural considerations on how to reach the athletes from 200+ nations

R1.8 National teams should be provided possibilities to influence study implementation by that preparations are initiated and information distributed at an early stage before the championships.

R1.9 Study participation should be as little time consuming as possible for athletes and teams

Requirements on survey questionnaire and data entry procedures

R2.1 Data entry procedure and genuine subject identification procedures are determined before collecting data

R2.2 Emphasis on information on confidentiality and secure data handling (which also is communicated to the teams)

R2.3 Prepare online electronic version of the questionnaire(s)

R2.4 Pilot/ feasibility studies performed to test the athlete information and questionnaire in several languages (English, French, Spanish, Chinese, Arabic, Russian, German, etc.)

R2.5 The study materials should communicate a clear "take-away benefit" to the athletes.

R2.6 Data collection forms must be straightforward and easy to complete for athletes and medical teams.

R2.7 Data collection forms must be validated with regard to errors and misunderstandings before the championships.

R2.8 A clear "take-away" message should be communicated to the medical teams at the medical meeting.

R2.9 The study team should arrive well in time before the championships in order to get the study logistics in place.



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R2.10 Special precautions should be taken in order to involve athletes from national teams traveling without medical practitioners.



Study protocol specification

Study objectives

To study the health status (recent injury complaints and illnesses) of athletes before the start of an international athletics championship (IAAF 2015 in Beijing) (Objective 1) and to examine risk factors for sustaining injury and illness at the championship (Objective 2).

Operationalization of study objectives

The operationalization of the study objectives into a study protocol is divided into sections addressing data collection, data analyses, and study logistics.

Data collection

The data collection is described by study objective. Each category of data is associated with a survey query coded from A1 to C4 (see enclosed survey form draft).

Objective 1: Describe study participants (and non-participants) and the participants' pre-participatory health problems

Data will be collected for the following descriptive variables

- - athlete identification (Survey item 1)
- - Age (2)
- - Gender (3)
- - Event (4)
- - Country (5)
- - Athlete medical support (6-8)
- - Injury complaints four weeks before the championships (9-15)
- - Illness symptoms four weeks before the championships (16-19)

Objective 2: Build model that can be used by national teams and the IAAF to identify athletes at risk for in-championship injury and illness

Data will be collected by national teams and Local Organizing Committee (LOC) physicians for the following outcome variables

- Injury sustained at the championships described by
 - - date and time
 - - mode of onset
 - - bodily location
 - - type
 - - cause
 - - contributing factors
 - - severity (estimated time loss (days of absence))
- Illness sustained at the championships described by
 - - date and time
 - - diagnosis
 - - bodily location/Body system affected
 - - severity (estimated time loss (days of absence))

Data from the following explanatory variables will be collected by a pre-participation health questionnaire (PHQ) for the explanatory models of in-championship injury



- - Age (survey item 2)
- - Gender (3)
- - Event (4)
- - Country (5)
- - Athlete medical support (6-8)
- - injury complaints four weeks before championships (9, 13.1-13.3)
- - - gradual/sudden onset (10)
- - - injury complaint duration (11)
- - - anxiety/worry (13.3)
- - - injury complaint severity score/training adjustment (13.1-13.2), performance impact (15)
- - team medical personnel/coach informed about injury complaint (14)

Data from the following explanatory variables will be collected for the explanatory models of in-championship illness

- - Age (survey item 2)
- - Gender (3)
- - Event (4)
- - Country (5)
- - Athlete medical support (6-7)
- - Illness symptoms four weeks before championships (16,17)
- - - worst illness symptom (16.1)
- - - illness symptom duration (16.2)
- - - anxiety/worry (17.3)
- - - illness symptom severity score/training adjustment(17.1-17.2), performance impact (19)
- - team medical personnel/coach informed about illness symptom (18)

Data analyses

For the pre-participation health questionnaire (PHQ) data, the response rate and completeness of the PHQs will be assessed, and the athletes' characteristics and injury complaints will be analysed using descriptive statistics. Analysis of the non-responders will be performed by comparing their distribution of home continent, event group, gender and age with the responders.

For the in-championship injury and illness surveillance, the response rate, coverage, and incidence calculations and comparisons will be analysed in accordance with previous surveillance studies in Athletics using a list of athletes provided by the IAAF and the internet database.

For the risk factor analyses, the PHQ data collected for the explanatory variables will first be recoded into the variables "any injury complaints" (y/n), "reduced participation injury complaints" (y/n), "gradual-onset injury complaints" (y/n), an injury complaint severity score, "any illness symptoms" (y/n), "reduced participation illness symptoms" (y/n), an illness symptoms severity score (0–16, and medical support available before championships (y/n). We will then perform analyses with simple models (logistic regression analyses with one explanatory variable) and thereafter analyses with multiple models (logistic regression analyses with several explanatory variables) with any in-championship injury (y/n), in-championship time-loss injury (y/n), any in-championship illness (y/n) and in-championship time-loss illness (y/n) as outcomes. The explanatory variables will be gender, age, home continent, event group (following event group categories from Timpka et al. 2014), medical support available, and pre-participation injury complaints or pre-participation illness symptoms, respectively. The multiple models will be calculated using backward elimination of non-significant variables (i.e. variables with $P \geq 0.05$ were stepwise eliminated). The Statistical Package for the Social Sciences (SPSS) for Windows version 23.0 will be used for the analyses. All statistical tests will be two-sided and outcomes with $P < 0.05$ regarded as statistically significant.

References



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Study logistics

The study logistics at the IAAF World Athletics Championships 2015 in Beijing will in the main be based on the same routines as those used in Moscow 2013. However, a number of changes need to be implemented in the general routines and the organization of the medical meeting.

Upon arrival at the championships, all registered athletes will be invited to complete a pre-participation health questionnaire (PHQ) including individual pre-participation data (personal and training characteristics and health status during the month preceding the championship). The PHQ will be available on the Internet and on a paper form (in English, French, Spanish, Russian). An invitation pamphlet (containing an Internet flash code to the survey website <http://www.mediathle.com/health.nsf>) will be distributed to the athletes in association to the accreditation process. A list of all participating athletes and their accreditation/participation number will be prepared by the IAAF and sent to the researchers. Upon arrival and following custom clearance, the pamphlets printed in Monaco are transported to the main IAAF Championships office at Hotel Intercontinental in Beijing. From there, 2000 pamphlets (in English) are to be transported to the Accreditation Center for distribution to the athletes. In addition, 300 pamphlets in each of the other official IAAF languages are to be printed at the main IAAF Championships office and distributed to the Accreditation Center.

Distribution to athletes at the Accreditation Center: The English paper version of the invitation/survey pamphlet should be supplied to the athletes in association to the accreditation process. The athletes are asked to read the information in the pamphlet as it is handed over to them. They are also asked if they request a survey form in any of the other IAAF languages and supplied such a pamphlet upon demand.

Drop-off boxes are to be prepared (pending) at the Accreditation Center and in the lobby of all three athlete hotels. The drop-off boxes should be marked with IAAF Injury Prevention Research prints and/or banner. Volunteers are to be stationed at the Accreditation Center and at the hotels to support athletes willing to responding to the survey and collect paper forms.

In parallel, newly incurred injuries will during the period of the championships be recorded by the IAAF through the national medical teams (physicians and/or physiotherapists) and/or by physicians on the local organizing committee (LOC) using the injury surveillance system (definitions and methods) previously used during international Athletics championships. This system will during the Beijing championships be provided on the Internet (the daily report form: <http://www.mediathle.com/prevblessure.nsf>). To maintain anonymity and enable linking of the PHQ and injury surveillance data, each participant in the study will receive a specific identification code (the accreditation number). All national medical teams and LOC physicians will be informed about the study one month before the championships by e-mail and two days before the championships in association to medical and anti-doping meetings.

Timeline for Beijing 2015 study

February 15th: Beijing study requirements defined

March 15th: Preliminary Beijing 2015 study design defined

March 30th: Study materials sent for review by research ethics board.

April 1st: External review of Beijing 2015 study design by national team representatives completed

April 15th: Pilot tests of survey completed

April 20th: Contact with Team Physicians to explain the rationale behind both surveys in advance and improve athletes participation.

April 25th: Agreement IAAF –ARC on staff on site and budget. Staff appointment. Travel and accommodation booking. Start of VISA procedure. Staff pre-accreditation.

April 30th: Update of the Team Physicians Informative Booklet. Translation into French. Preparation of a brief version to be translated to Chinese and distributed to LOC Physicians



May 15th: Survey translated to relevant languages

June 1st: Study materials sent for print

July 1st: Basic on-site study logistics defined (and confirmed by the LOC)

July 1st-15th: Second iteration of information to Team Physicians

August 10th List of all participating athletes and their accreditation/participation numbers as well as of the participating medical teams and LOC physicians is prepared by the IAAF and sent to the research team.

August 13th List of all medical teams, and LOC physicians and their system login-ID and passwords are sent to the researchers from the French partner delivering the IT system

August 15th The Accreditation Centre in Beijing opens. Start of data collection

August 17/18th Travel and Arrival of research teams.

August 18/19th Bumping-/Set Up, testing

August 20th. Medical Meeting

August 22nd Championships starts

August 22-30th In-competition Surveillance

August 30th Championships ends. Bumping-out. Departures

September 1st PHQ/In-competition Surveillance data input/filtering. Start of statistical analysis.

October-November End of Statistical Analysis. Manuscript draft. Individual reports to teams.

December-January Manuscript submission

Notable changes in general study logistics (compared to IAAF 2013 in Moscow)

Responsibilities are clearly defined. Juan Manuel Alonso is the overall co-ordinator at the IAAF and Pierre-Yves Garnier deputy co-ordinator of the studies. One designated IAAF person (from Office or Commission) is in charge of the study logistics and IAAF outreach at the Championships. Toomas Timpka is the Primary Investigator of the pre-participation health study and a senior researcher from ASPETAR the Primary Investigator of the heat stress study. Jenny Jacobsson coordinates the planning and conducts the distribution to the medical teams at the medical meeting before the championships.

A strong effort is made to inform the participating teams about the planned studies beginning at least two months before the championships

The pre-participation health survey and the in-championship injury and illness registration will be performed electronically.

Provision of data is performed at will (with a given deadline) by the athletes and physicians/physios.

A heat stress study will be performed in parallel with the pre-participation health survey and the in-championship injury and illness registration.

The pre-participation health study and heat stress survey will be jointly delivered together with the Anti-doping outreach present at each Athletes' Hotel.

Five researchers and 6 volunteers (with basic medical background and proficient in the native language and English) implement the study logistics at the championships

The researchers and volunteers arrive at a minimum 2 days prior to the medical meeting



2 volunteers are designated to each screening station/hotel and provide thorough information to athletes

2 volunteers are designated at site to enter paper-based PHQ data (in duplicate) into computer records

A running record of PHQ response will be maintained on daily basis and the record used to approach teams with high non-response rates

A stand visible and conveniently accessible for the medical teams at the warm-up area will be prepared.

Provide relevant IAAF medical and nutritional information at the study stand

Only researchers should approach the medical teams outside the stand/office

Provide hands-on training at stand on how to fill out the forms on paper and electronically

Athletes will never be approached directly during training or warm-up

Daily "rounds" to the medical teams will be made

A kiosk/computer for direct data entry at stand will be provided.

A self-evaluation of the study routines will be performed and the results used to inform future surveillance and prevention.

Changes in medical meeting organization

One person (Jenny Jacobsson) will coordinate the communication with medical teams and the LOC physicians.

Attractive incentives for the medical teams to attend the medical meeting are formulated.

Integrate scientific meeting (30 min practical talk on injury/illness prevention) with the technical meeting to reach out to coaches/team leaders of nations that do not have medical teams (Jenny Jacobsson coordinates the integration).

Continue directly with "National team medical meeting" with emphasis on practical procedures on "what to do when and where" for medical teams

Pre-designated translators will be used for simultaneous translations into several languages

Issues of confidentiality associated with the study will be emphasized

Hand out of all material is prepared in due time at tables inside the meeting room

Hands-on training after the meeting is provided on how to fill out the forms on paper and in electronic format (both PHQ and injury surveillance)

A list of medical personnel is updated (paper and electronic)



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ENCLOSURES

Notes from pre-championships teleconferences

Survey.

**IAAF Beijing 2015 teleconference July 30, 2015****Meeting notes**1. Participants

Jenny Jacobsson, Pascal Edouard, Julien Periard, Juan Manuel Alonso, Toomas Timpka

2. Comments on meeting notes from July 16.

The meeting notes were approved.

3. Pre-participation survey and in-championship injury registration

The general progress of the study preparations is still basically on the track (pun unintended). The user interface of the IT tool provided by the St Etienne team has been (positively) evaluated by computer science experts and modifications are ongoing. The critical issue is thus the correspondence between the paper and web versions of the pre-participation health survey and in-championship injury registrations form. The English printed version of the survey and form is used as the "gold standard" in the final review of the web version and all translations. The paper version of the pre-participation survey in English has been printed and has been shipped to Beijing (3200 copies of the 4pp leaflet). The injury registration form and the injury registration information booklet are available in final branded versions in English. The survey and injury registration form have been translated to all IAAF languages except Arabic (in progress) and Chinese, and the translations are provided as options in the web survey. Printing of the translated versions is to be decided. The status of translation and printing of the study materials will be updated on the web (see enclosure for present status).

The final translations, branding, printing, and supply at site of the study materials constitute an outstanding issue. It is essential that the research team gains access to printing facilities (A5, A4) at the IAAF office in Beijing. Printing of materials that have been branded can proceed immediately. At this time, 150 copies of the information booklet, 200 copies of the pre-participation survey in French, and 300 copies of the in-championship injury registration form in English be printed at the IAAF office in Beijing.

The English paper version of the invitation/survey will be supplied to the athletes in association to the accreditation process (and later, if need be, through their team managers). Survey forms in the other IAAF languages will be made available for supply to athletes upon demand. Drop-off boxes will be prepared (pending) at the accreditation center and in the lobby of all three athlete hotels. The drop-off boxes will be marked with IAAF Injury Prevention Research prints and/or banner. Volunteers will be stationed at the accreditation center and at the hotels to support athletes willing to responding to the survey. The availability of volunteers as well as access to power outlets and Internet connections in the outreach areas must be assured.

The second outstanding issue is that information about the research activities (in particular the pre-participation health study) must now be distributed to the national teams (preferably as an IAAF newsletter). Juan Manuel will draft a letter to the teams and send to Toomas for comments. Veronique will then be asked to distribute the letter (with enclosures) next week (about August 6th). Detailed information about the in-championship injury registration will be provided at the medical meeting August 20th. At this meeting, each team will also be provided with login identities and passwords to the web system (to be supplied by the St. Etienne team next week).

4. Heat stress study

The general progress of the study follows plans. Recruitment of athletes is the crucial issue and both teams will support Julien and Sebastian in their efforts. The selection of the many teams is in progress and the athletes cannot still be approached.

5. Educational injury prevention intervention in Beijing

The ASPETAR team will make a short (5-10 min) presentation about prevention of health illness at the medical meeting Thursday August 20th. They will also offer participation in "mini-workshops" (about 30-45 minutes) at each athlete hotel during the championships.

6. Next meeting

Next meeting will take place Thursday August 13th 12.15 Qatar/11.15 Swe-Fra. (dial +46 8 5000 99 09 and press code 899308).

IAAF Beijing 2015 teleconference July 16, 2015**Meeting notes**1. Participants



Jenny Jacobsson, Pascal Edouard, Toomas Timpka, Veronique Noe (by email)

2. Comments on meeting notes from July 2.

The meeting notes were approved.

3. Pre-participation survey and in-championship injury registration

The general progress of the study preparations is still satisfactory. The ARC team has been accredited and visa applications are in progress. A preliminary version of the IT tool has been provided by the St Etienne team and evaluation is ongoing (Toomas will return final comments to Pascal early next week at latest). The critical issue is the cognitive correspondence between the paper and web versions of the pre-participation health survey. The paper version of the pre-participation survey has been sent for print (4000 copies of the 4pp leaflet). This version will be used as the "gold standard" in the final review of the web version. The paper version of invitation/survey will be supplied to the athletes in association to the accreditation process (and later, if need be, through their team managers).

The in-championship injury registration form is available in its final version (in English) and the injury registration information booklet is in the final review stage with Toomas. These materials will thereafter be sent for print. The survey and injury registration forms have been translated to all IAAF languages except Arabic (in progress) and Chinese, and the translations are provided as options in the web survey. Printing of the translated versions is to be decided.

Drop-off boxes will be prepared (pending) in the lobby of all three athlete hotels and marked with IAAF Injury Prevention Research banners (to be placed in the respective athlete outreach area). Confirmation is needed from the LOC that IAAF Injury Prevention Research banners and drop-off boxes will be available at all three athlete hotels.

Information about the research activities (in particular the pre-participation health study) should from now on be included in IAAF newsletters distributed to the national teams. Detailed information about the in-championship injury registration will be provided at the medical meeting August 20th. At this meeting, each team will also be provided with login identities and passwords to the web system

4. Heat stress study

The general progress of the study follows plans. Recruitment of athletes is the crucial issue and both teams will support Julien and Sebastian in their efforts. The ASPETAR team will separately on outstanding issues.

5. Next meeting

Next meeting will take place Thursday July 30th 12.15 Qatar/11.15 Swe-Fra. (dial +46 8 5000 99 09 and press code 899308).

IAAF Beijing 2015 teleconference July 2, 2015

Meeting notes

1. Participants

Jenny Jacobsson, Veronique Noe, Julien Periard, Pascal Edouard, Juan Manuel Alonso, Toomas Timpka

2. Comments on meeting notes from June 16.

The meeting notes were approved.

3. Pre-participation survey and in-championship injury registration

The general progress of the study preparations is satisfactory. A preliminary version of the IT tool has been provided by the Lyon team and evaluation is ongoing (do review the web survey and return comments to Pascal). The survey has been translated to all IAAF languages except Arabic (in progress) and the translations will be provided as options in the web survey. The information booklet is in the final review stage with Juan Manuel.

We plan on a preliminary basis to print 4000 copies of the survey invitation and paper forms (provided as 4pp leaflet). Toomas will supply the materials and Veronique will come back to the team with a draft of the printed version. The invitation/survey will be supplied to the athletes in association to the accreditation process (and later, if need be, through their team managers). Drop-off boxes will be prepared (pending) in the lobby of all three athlete hotels and marked with IAAF Injury Prevention Research banners (to be placed in the respective athlete outreach area). Veronique and Juan Manuel contact the LOC regarding the particularities of this arrangement.

4. Heat stress study

The general progress of the study follows plans. Recruitment of athletes is the crucial issue and both teams will support Julien and Sebastian in their efforts.

5. Next meeting

Next meeting will take place Thursday July 16th 12.15 Qatar/11.15 Swe-Fra. (dial +46 8 5000 99 09 and press code 899308).

**Teleconference regarding planning of Beijing 2015 Heat stress and Injuries and Illnesses Surveys**

June 16, 2015 11.30-12.30

Short meeting notes (Veronique's comments in *italics*)

1. Participants

Veronique Noe, IAAF
Juan-Manuel Alonso, ASPETAR
Julien Periard, ASPETAR
Sebastien Racinais, ASPETAR
Pascal Edouard, ARC/Université de Lyon
Toomas Timpka, ARC/Linköpings Universitet

2. Final research teams at site in Beijing

The ARC team will consist of five researchers, three with their main responsibilities directed at the pre-participation health survey and IT feasibility study (Toomas Timpka, Karin Halje, Victor Bargaría) and two with main responsibilities directed at in-championship injury registration (Jenny Jacobsson, Christer Andersson). The team will during the championships be supported from Europe by Pascal Edouard (IT system) and Örjan Dahlström/Armin Spreco (data management/statistics). The ASPETAR team will also consist of five researchers (Juan-Manuel Alonso, Julien Periard, Sebastien Racinais, and two PhD students). All researchers will stay at the V Continent hotel, except for dr Alonso who will stay at the Intercontinental. The ARC team will arrive August 17th, the ASPETAR team August 18th.

3. Pre-participation survey and in-championship injury registration

General progress

The planning process basically follows the schedule presented for the IAAF in the early spring. IRB approval has been received for the Swedish and Qatari parts of the studies in Beijing.

- IT support (including hardware at site)

The IT system developed by dr Pascal Edouard will be modified for use in Beijing. A first version will be made available for evaluation about June 22nd. It has one module for data collection from the athletes, and one module for injury registration by team medics.

The athlete survey will be made available in the five official IAAF languages. The athletes will receive an invitation with a flash code in their welcome bag. When they flash the code to their cell phone, they will be redirected to a website where they can complete the survey. The athletes will also receive paper versions of the survey in the bag and choose to return these at collection spots. The surveys will ask for participant ID, age, sex, national team, and event. A feasibility study will be performed during the championships in order to identify procedural or usability issues.

For the injury recording during the championships, each team will receive a login ID and password. Data can be entered at any time of the day. Also here, the teams will receive paper versions.

A "pressure test" of the system modules (to ensure function with many parallel users) will be performed as soon as first versions have been circulated.

- survey translations

Survey and injury recording form translations into all five IAAF languages are ongoing. The resulting versions will be conveyed into to paper and electronic forms.

- information booklet

A preliminary version has been sent from dr Edouard to dr Alonso. Following his revisions, the document will be sent to dr Jacobsson, who will coordinate the injury registration in Beijing. When she has approved the version, it will be sent for print. *Printing to be organised on site - (e.g. the Medical Delegate's office at the Intercontinental)*

- printing of paper materials

Preliminary versions of all documents that are to be printed have to be sent to Veronique Noe by June 26th at latest. She will return her comments and revisions have to be finished by July 3rd. Veronique will organize the printing with IAAF logotypes (in China or Europe). *Have contacted the IAAF's Marketing Department – will go over documents with them for branding / logos - Printing to be organised on site as mentioned above.*



- participant approach/invitations

Information of all research that is planned for Beijing will be sent to the teams with next IAAF championship newsletter and repeated until the start of the championships. Athletes will receive an invitation with a flash code in their welcome bag together with paper versions of the survey. *Marketing Dept. is checking this with the LOC– I will advise you asap of delivery place, date and contact person re the athletes welcome bags.*

Information to the medics will be provided at medical meetings. For the heat stress study, the athletes will be recruited before the championships on a personal basis.

Veronique will investigate the possibility to produce IAAF banners for “Research spots” at hotels and the stadium. *The IAAF will not be able to supply banners – however if you go ahead with these, we will need to approve them beforehand. Please advise what exactly will be displayed on these banners .*

- logistics at site

The research teams will in their accreditation need access to athlete hotels , warm-up areas, the stadium terraces dedicated for athletes and teams, (*this is known at the “Athletes’ Stand*) and, preferably, the VIP section at the stadium. *Access is given to all these areas.*

The ASPETAR team also needs access to the finish area at the stadium in order to be able to collect heat stress data. *Talked to Paul Hardy – Director of the Competitions Department on 23/06 and he confirms that he will do the necessary so that the ASPETAR team will have access to the post-event control area.*

Bicycles are needed for all researchers for rapid movement between data collection positions. *Have asked whether this is an option – no response yet.*

- outstanding issues

The study preparations follow (in the main) plans. The IT system requires tests and final papers version of all documents need to be produced (deadline July 3rd) and printed with IAAF logotypes. Information of the studies need to be delivered to all participating teams. *Printing to be organised on site.*

4. Heat stress study

general progress

The preparations follow plans. At site, the ARC and ASPETAR teams will support each other with practical matters.

- participant approach/invitations

Athletes will be approached about participation before arrival in Beijing. The ARC team will investigate possible candidates and provide contact information .

5, Next teleconference

Next teleconference will take place **Thursday July 2nd 12.15 Qatar/11.15 Sweden-France**. Do press +46 8 5000 99 09 and use code 899308.