



REPORT OF THE
**INDEPENDENT
OBSERVERS**

PARALYMPIC WINTER GAMES
PYEONGCHANG 2018

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1. Acronyms & Abbreviations

AAF	Adverse Analytical Finding
ABP	Athlete Biological Passport
ABP SRF	Athlete Biological Passport Supplementary Report Form
ADAMS	Anti-Doping Administration and Management System
ADRV	Anti-Doping Rule Violation
APMU	Athlete Passport Management Unit
ASP	Athlete Support Personnel
BCO	Blood Collection Officer
CAS	Court of Arbitration for Sport
CM	Chaperone Manager
Code	World Anti-Doping Code
DCCC	Doping Control Command Center
DCF	Doping Control Form
DCO	Doping Control Officer
DCS	Doping Control Station
DCSC	Doping Control Station Coordinator
DCSM	Doping Control Station Manager
ESAs	Erythropoiesis Stimulating Agents
Games	PyeongChang 2018 Paralympic Winter Games
GH	Growth Hormone
GHRFs	Growth Hormone Releasing Factors
IC	In-Competition
IF	International Federation
IO	Independent Observer
IOC	International Olympic Committee
IPC	International Paralympic Committee
IPC ADC	International Paralympic Committee Anti-Doping Committee
IPC AD Code	IPC Anti-Doping Code
IPC MC	International Paralympic Committee Medical Committee
ISTI	International Standard for Testing and Investigations
IRMS	Isotope Ratio Mass Spectrometry
ISTUE	International Standard for Therapeutic Use Exemptions
Laboratory	WADA-Accredited Laboratory
LOC	Local Organizing Committee
MEO	Major Event Organization
MLA	Minimum Level of Analysis
M&S	Medical and Scientific
NADO	National Anti-Doping Organization
NPC	National Paralympic Committee
OOC	Out-of-Competition
POCOG	PyeongChang 2018 Organizing Committee for the Olympic and Paralympic Games
PLV	Paralympic Athlete Village
RA	Risk Assessment
RMA	Results Management Authority
RTP	Registered Testing Pool
SCP	Sample Collection Personnel
SRF	Supplementary Report Form
TA	Testing Authority
TDP	Test Distribution Plan
TDSSA	Technical Document for Sport Specific Analysis
TUE	Therapeutic Use Exemption
WADA	World Anti-Doping Agency

2. Acknowledgements

The WADA Independent Observer Team (IO Team) in PyeongChang would like to thank the International Paralympic Committee (IPC) Anti-Doping Committee (ADC) members and especially Mr. Joseph de Pencier, who was the main point of contact with the IO Team; Dr. Cheri Blauwet, Chairperson of the IPC Medical Committee (MC) and all its members; Dr. Peter Van de Vliet, IPC Medical and Scientific (M&S) Director; Ms. Vanessa Webb, IPC Anti-Doping Senior Manager; Ms. Minjung Seo, the PyeongChang 2018 Organizing Committee for the Olympic and Paralympic Games (POCOG) Head of Doping Control and her team; and the Games' volunteers, allocated to the IO Team. They all committed strongly to their mission and helped the IO Team to fulfill its responsibilities smoothly and efficiently.

3. Executive Summary

The IO Team would like to commend the IPC and POCOG for taking on board a number of recommendations from previous WADA IO reports and those provided on site by the IO Team. The IPC should also be commended for its strong commitment to clean sport and for the high standards of its anti-doping policies and procedures when dealing with athletes with impairments.

The IO Team observed all components of the PyeongChang 2018 Paralympic Winter Games (Games) anti-doping program including the Test Distribution Plan (TDP), sample collection sessions, Therapeutic Use Exemptions (TUEs), results management (RM) rules and procedures with the exception of hearings as none were held during the Games, the work of the Doping Control Personnel (DCP) and education. The IO Team did not observe laboratory sample analysis. This report contains details on all relevant observations and subsequent IO Team recommendations.

The IPC prepared its TDP based on the analysis of the doping risks for each Paralympic winter sport, resulting in a dynamic plan that evolved intelligently throughout the Games. During the Games, 842 samples were collected – 319 IC and 523 OOC samples (526 urine, 156 blood and 160 hematological ABP samples). All analyses were conducted at the Seoul WADA-accredited laboratory (Laboratory).

The out-of-competition (OO) program covered five of six sports, excluding only wheelchair curling. OOC testing started on the opening of the Paralympic Village (PVL) on 3 March 2018 and continued throughout the Games, until 17 March 2018. The in-competition (IC) program covered all sports and was run from the opening of the Games on 10 March 2018 until the end of the Games on 18 March 2018. The IO Team would like to commend POCOG for having a mobile Doping Control Station (DCS) that was used for both OOC and IC testing when needed.

OO and IC testing included both urine and blood testing. Blood testing was conducted in all sports except wheelchair curling. In addition, the IPC carried out Hematological Athlete Biological Passport (ABP) OOC testing in the sports of para biathlon and para cross-country skiing.

The sample collection process was in line with the International Standard for Testing and Investigation (ISTI), and generally undertaken in a professional manner. Some challenges were, however, observed. The IPC and POCOG could in particular have given more attention to the training of chaperones and Doping Control Officers (DCOs).

Athlete notification is a challenging task and in many cases chaperones lacked experience that sufficient practical training would have addressed. Notification improved during the Games as chaperones learned from practice.

The DCOs were usually quite professional, although some lacked suitable language skills. Furthermore, greater emphasis could have been placed on informing the less experienced athletes of the sample collection process.

The IO Team observed that a number of practical measures could have simplified the sample collection process. For example, in many instances, listing the athletes' medication on the Doping Control Forms (DCF) was a time-consuming task. Developing new tools and methods could streamline this part of the process.

Ten Adverse Analytical Findings (AAFs) were reported during the Games. Out of these, four did not constitute ADRVs after the initial review and the remaining six AAFs are still in the RM phase.

This report contains 43 recommendations, covering all aspects of the doping control process, and intends to support the IPC and future Local Organizing Committees (LOC)s in their efforts to further improve Games anti-doping programs. Continuous improvements contribute to fostering a level playing field and the protection of clean athletes, whilst enhancing the quality of the athletes' experience.

Although all recommendations provided in this document are important, the IO Team would like to highlight 14 recommendations in this Executive Summary, which are replicated within the body of the report.

- The IPC is strongly encouraged to document its Risk Assessment (RA) process to ensure consistency and objectivity. The IPC is also encouraged to share its methodology with other ADOs, as an example of best practice. (recommendation N° 1)
- The IPC is encouraged to develop a targeted, intelligence-based sample retention and re-analysis strategy, based on the outcomes of its RA, and to incorporate such strategy into its TDP. (recommendation N° 7)
- The LOC should conduct a practical assessment of the DCOs' sample collection skills prior to their selection for the Games. In addition, chaperone training should include practical sessions where different scenarios are presented and practiced. Lastly, the LOC could provide doping control training material to chaperones in advance of the Games so they can practice and become familiar with it. (recommendations N° 13 & 14)
- In order to speed up the sample collection process, athletes could be requested to write, in advance of starting the formal sample collection process, their medication/supplements in capital letters on a piece of paper in the waiting room prior to entering the processing room. The legibility of this information could also be checked by SCP prior to entering the processing room. Other innovative ways to collect this information from athletes could be explored (e.g. using an electronic device). (recommendation N° 19)
- DCOs should assess the athletes' familiarity with the sample collection process upon their arrival in the processing room and provide information as necessary. (recommendation N° 20)
- The IPC should continue its efforts to educate athletes and athlete support personnel (ASP) on how TUE applications must be adequately documented and provided with the relevant medical records in order to be reviewed. For example, the IPC could organize a TUE webinar for NPCs in the lead-up to the Games and refer athletes' physicians to the supporting medical information and guidance available on WADA's website to support TUE applications. (recommendation N° 30)
- If a separate, independent judicial committee cannot be envisaged in the near future, the IPC should at least establish procedural rules for the setting up of hearing panels and the management of potential conflicts of interest. (recommendation N° 32)
- The IPC should update (in several key languages) and systematically use the "I tested positive" flyer, an athlete information pamphlet explaining the results management process, and, in particular, how to prepare for a hearing for athletes who return an AAF. (recommendation N° 33)
- With a new WADA International Standard for Education set to come into force in 2021, the IO Team recommends that the IPC addresses education as a priority and examines all possible options to finance this essential part of their anti-doping program. (recommendation N° 38)
- The IPC should consider the benefits of introducing a requirement that all athletes complete a mandatory online anti-doping education course as part of confirming their participation at future Paralympic Games. (recommendation N° 39)
- The IPC should reinforce to all NPCs the importance of implementing anti-doping education programs and consider supporting them in cooperation with their respective NADOs. (recommendation N° 40)
- For future Games, WADA, the IPC and LOCs could consider using appropriate methods to collect feedback from Sample Collection Personnel (SCP) during and after the Games with the purpose of improving their overall anti-doping experience and addressing any issues, that may have been overlooked. (recommendation N° 42)
- WADA, the IPC and LOCs could consider using appropriate methods to collect feedback from athletes on the anti-doping program with a view to improve the anti-doping services provided at future Games. (recommendation N° 43)

4. Introduction

4.1 IO Program

WADA established the IO program to enhance athlete and public confidence in the quality, effectiveness, and reliability of anti-doping programs in major sports events. The IO Team consists of experts appointed by WADA who are responsible for observing all aspects of the doping control process and contribute to the overall implementation of the anti-doping program by providing daily feedback to the IPC and the LOC. Lastly, the WADA IO Team is responsible for producing a report, which is then published by WADA. The report includes a summary of all IO Team observations, assessment of compliance to the relevant rules and recommendations to improve the effectiveness of anti-doping programs for future Games.

4.2 Approach

The IPC and WADA cosigned an agreement authorizing and approving the presence of an IO Team appointed by WADA for the Games. The composition of the IO Team is presented in Annex I.

Under this agreement, the formal observation period started on 5 March 2018. This was four days before the Opening Ceremony held on 9 March 2018, allowing the IO Team to follow all preparatory activities of the anti-doping program as well as the OOC testing program prior to the competition period starting. After the Opening Ceremony, the IO Team mainly observed IC testing until the Closing Ceremony on 18 March 2018. However, some OOC testing was also monitored during this period.

The IPC ADC and the POCOG Head of Doping Control held a meeting every morning with the IO Team. Subsequently, the POCOG Head of Doping Control forwarded information or points of clarification to all SCP, immediately after the meeting, as required.

4.3 Areas of Observation

Under the IPC/WADA Agreement, the IO Team had access to all aspects of the doping control process during the Games including:

- RA and TDP
- Selection of athletes
- Athlete whereabouts information
- Implementation of OOC and IC programs
- TUE procedures
- Athlete notification process
- Sample collection procedure
- Transport and chain of custody of samples
- Sample analysis at the laboratory
- Results management process including hearings during the Games
- Any other relevant areas

The IO Team's observations covered all of the above, with the exception of sample analysis in the laboratory because none of the IO Team members were qualified for that task. In addition, the IO Team had the opportunity to participate in the National Paralympic Committee (NPC) Team Physicians' Meeting and the DCO transition workshop¹ before the Games started.

The IO Team observations followed an audit-style approach. Comments and observations were based on the World Anti-Doping Code (Code) and relevant International Standards, the IPC Anti-Doping Code (IPC AD Code), the IPC PyeongChang 2018 Doping Control Guide, the Olympic and Paralympic Winter Games PyeongChang 2018 Technical Procedures for Doping Control, and the IPC Medical & Scientific Department Procedural Guidelines on Results Management for an Adverse Analytical Finding (version February 2018). The IO Team reviewed also the recommendations from previous WADA IO reports to assess the progress achieved.

¹ Two DCO "transition workshops" took place on 1 and 7 March 2018, in the period between the PyeongChang 2018 Olympic and Paralympic Games. The focus of the workshops was to remind SCP of the modifications related to the doping control process when dealing with athletes with impairments.

The WADA IO Team wishes to congratulate the IPC and POCOG for their efficient and constructive communication with the IO Team throughout the Games. Recommendations were communicated effectively and timely, resulting in the swift implementation of program improvements. This practice should be noted and continued for future Games.

5. Rules and Regulations

The IPC is the global governing body for the Paralympic Movement as well as the Major Event Organiser (MEO) for the Games and the International Federation for several Winter and Summer sports. Consequently, the IPC AD Code applies to the Games and to all other events and competitions under the jurisdiction of the IPC and for which the IPC has anti-doping authority (including the time of preparation for competition). The IPC AD Code is in line with the Code and is complemented by other IPC documents that so identify themselves in the IPC Handbook.

All NPCs, athletes and ASP participating in the Games have a responsibility to be aware of and comply with the IPC AD Code and other IPC Anti-Doping regulations. To facilitate this, the IPC is encouraged to develop any information and education material with the specific needs of the end user in mind, as further outlined in section 10.

6. Test Distribution and Whereabouts

6.1 Risk Assessment and Test Distribution Planning

The IPC developed a TDP based on the outcomes of its RA. Test allocation per sport was based primarily on doping and athlete population risk. Athlete selection was the result of a country and sport risks analysis including previous doping history and pre-Games testing activities by National Anti-Doping Organization (NADO). Other factors taken into consideration were credible intelligence received, past performance history, rankings and athlete classifications. As a result, target testing was the priority and testing resources were focused where most needed. The IPC also took into consideration that many winter sport nations have strong NADO anti-doping programs, and, therefore, a high number of athletes was tested before the Games. It is evident that the IPC's TDP was based on a well-thought risk assessment; however, the IO Team suggests that such a RA process be documented, for future reference, to ensure consistency and objectivity.

The IPC's TDP incorporated the requirements of the Technical Document for Sport Specific Analysis (TDSSA). Erythropoiesis Stimulating Agents (ESAs) and Growth Hormone Releasing Factors (GHRFs) analyses were applied on urine samples based on the IPC's RA and aimed to exceed the sport-discipline requirements of the TDSSA. Blood samples were analyzed for Growth Hormone (GH) with both the Isoform and Biomarkers analysis methods. Additional specific analysis (e.g. large peptides, insulin and blood transfusion) was also applied on a number of samples (see Annex II).

In total, 567 athletes participated at the Games. The TDP was agreed between POCOG and the IPC in advance of the Games. It included testing on athletes and guides in six Paralympic sports and disciplines, and 798 samples (72% urine and 28% blood) were planned to be collected. The spread between OOC and IC tests was 51% vs 49% for urine samples and 85% vs 15% for blood samples. The TDP was monitored constantly through WADA's Anti-Doping Administration and Management System (ADAMS) reports and revised a number of times during the Games – the IO Team was made aware of at least seven revisions. The TDP updates were based on recommendations from the IPC's Athlete Passport Management Unit (APMU) – the Ghent Laboratory, feedback from the Seoul Laboratory and any other information/intelligence received that required further action (see Annex II for final testing numbers).

According to the IPC PyeongChang 2018 Doping Control Guide, the standard definition of 'in-competition' and 'out-of-competition' as per the IPC AD Code applied to the Games. The definition of 'in-competition' meant "the period commencing 12 hours before a competition in which the athlete is scheduled to participate through to the end of such competition and the sample collection process related to such competition." The definition of 'out-of-competition' was "any doping control which is not in-competition."

Prior to the start of the IC period of the Games, the IPC was informed by the Seoul Laboratory that it could not analyze more than 20 urine or blood samples for ESAs per day due to limited staffing resources. The IPC had to adjust their initial testing plan accordingly and transfer a number of blood samples, which would be analyzed for ESAs, into their IC plan. In addition, shortly after the start of the competition, the Laboratory reported that they had a limited number of kits left for the GH Isoforms method, due to their miscalculation, and expected to receive more from the Tokyo Laboratory as soon as possible. This did not affect the IPC's blood collections, however, it delayed the analysis and results reporting for the GH Isoforms method.

6.2 Out-of-Competition Testing

OOC testing began on the day of the opening of the PVL in PyeongChang and continued throughout the competition period as necessary. The IPC's risk-based approach identified the two nordic para-sports (para biathlon and para cross-country skiing) as primary focus, with flexibility to add athletes from other sports based on intelligence based criteria. As a result, all sports – disciplines of the Games were included in the OOC testing plan apart from wheelchair curling due to its low doping risk, as identified in the IPC's risk assessment.

All para biathlon and para cross-country skiing athletes were tested OOC, including the collection of blood samples for the purpose of the Athlete Biological Passport (ABP) in order to either establish or enhance existing hematological profiles that the IPC is developing. However, even though being the priority, the list of final target selections for para biathlon and para cross-country skiing athletes was only given to POCOG two days after the opening of the PVL, and therefore, no para biathlon and para cross-country skiing athletes were tested during the first two days of the OOC period. Approximately 40 athletes, who were not tested until the start of the Games, were tested during the period of the competition at appropriate OOC testing windows, identified by the IPC.

The majority of the OOC testing was undertaken in the PVL. In addition to rooming lists, POCOG utilized data from the POCOG Games Management System (GMS) to be informed of whether athletes were located in the PVL. However, this system could only inform POCOG of when athletes would enter the PVL but not of their exit. The WADA IO Team identified a small number of athletes whose submission in ADAMS indicated that they were residing outside the PVL for the period of the Games. The IPC, in coordination with POCOG, located and tested athletes at their overnight residence outside the PLV.

No athletes were notified during the official training schedule. Each delegation in the sport of para ice hockey had a short and set official training time and, therefore, it was easier to locate athletes of this sport during the day. In other sports, however, the official training schedule was open to all athletes for a duration of up to seven hours e.g. in para biathlon. This resulted in a long time window where testing did not take place.

In addition to the GMS data from the PVL, the IO Team suggested that POCOG utilize GMS data of athletes entering training venues, as well as the most up-to-date welcome ceremonies' plan, to locate and test athletes throughout the day and not only either very early in the morning or late in the afternoon/evening.

6.3 In-Competition Testing

The IPC took a dynamic approach towards IC selections. The focus was on the medalists, however, the IPC ADC members were overseeing the program closely and constantly making recommendations to POCOG in order to limit repeat athlete testing for multiple-medalists.

Daily meetings between the IPC and POCOG were used to debrief, update and address any challenges. The IPC utilized a sophisticated, spreadsheet-based selection tool, which identified priority level athletes to be target tested.

It was the IPC's decision not to test guides during the IC program and focus only on competing athletes. Increased testing on guides was undertaken as part of the IPC's OOC testing. It is the opinion of the IO Team that limited IC testing could have been planned among the participating guides to increase the unpredictability of IPC's IC testing program, particularly in the sports where the guide's performance could have an impact on the athlete's performance.

6.4 Whereabouts

The IPC requested all NPC delegations to provide rooming lists setting out where their athletes were residing in the PVL. The submission of rooming lists as an effective way to locate athletes for OOC could be considered realistic and sufficient, since all NPCs provided these lists on time, and therefore, POCOG did not have any significant issues finding athletes.

The IPC did not use ADAMS to locate athletes for OOC testing. The WADA IO Team identified nine out of 49 delegations whose athletes currently filed whereabouts in ADAMS, in addition to rooming lists, for the period of the Games. It is the opinion of the IO Team that to supplement POCOG's effective way of locating athletes via rooming lists, ADAMS or other whereabouts systems could also be utilized to locate and test athletes outside the PVL and increase the unpredictability of IPC's OOC testing program.

6.5 Sample Retention and Reanalysis Strategy

As part of the IPC's agreement with the International Olympic Committee (IOC), all samples collected from all sports will be stored following the end of the Games.

Ahead of the Games, the IPC completed the reanalysis program for the samples from the Vancouver 2010 Paralympic Winter Games, and found no AAFs. Out of the 440 blood and urine samples taken, all 370 urine samples (84% of all samples) were analyzed before the end of the statute of limitations (March 2018).

As far as the IO Team is aware, however, the IPC does not have a targeted reanalysis plan other than the general reanalysis of the urine samples before the expiration of the statute of limitations. The IPC is therefore encouraged to develop a targeted, intelligence-based sample retention and reanalysis strategy, based on the outcomes of its RA, and to incorporate such strategy into its TDP.

Recommendations N° 1-7:

- The IPC is strongly encouraged to document its RA process to ensure consistency and objectivity. The IPC is also encouraged to share its methodology with other ADOs, as an example of best practice.
- The laboratory appointed for the Games should ensure that a sufficient number of kits is available to accommodate the analyses requested by the IPC and included in its TDP.
- The IPC should ensure that the full list of selected athletes for OOC testing is sent to the LOC before the start of the OOC program to ensure that priority athletes are tested upon arrival in the PVL.
- OOC testing for all sports should happen throughout the day and not only in specific timeframes e.g. very early in the morning or late in the afternoon/evening. The LOC could utilize all the available information – e.g. GMS data from the PVL and the training venues, welcome ceremonies' plan, etc. – to locate athletes for OOC testing.
- In addition to the IPC's effective way of locating athletes via rooming lists, the IPC could also consider using ADAMS or other whereabouts systems to locate and test athletes outside the PVL and increase the unpredictability of the IPC's OOC testing program.
- The IPC should ensure that a limited number of IC tests is planned among the participating athletes' guides to increase the unpredictability of IPC's IC testing program.
- The IPC is encouraged to develop a targeted, intelligence-based sample retention and reanalysis strategy, based on the outcomes of its RA, and to incorporate such strategy into its TDP.

7. Sample Collection and Documentation

7.1 Doping Control Stations (DCS)

The IO Team commends POCOG for taking into consideration a number of recommendations made in previous WADA IO reports in relation to the set up and management of DCSs. The IO Team made the following positive observations:

- DCSs were staffed with adequate SCP to carry out tests in accordance with the IPC's TDP.
- DCSs were strategically located to have ease of accessibility to para athletes with the exception of the para biathlon/para cross-country skiing venue, which was located at a significant distance from the field of play and the mixed zone.
- DCSs were equipped with the necessary furniture and technical equipment, including a TV in the waiting room with live coverage of the competition at the venue or other events of the Games.
- Access to the DCSs was controlled by SCP at all times.
- Signs on the doors of each processing room were indicating 'closed' when a sample collection process was in progress or 'open' when the room was available.

Overall, the majority of the DCSs had sufficient space and operated well. However, the two DCSs used for para snowboarding and wheelchair curling would have benefited from some extra space in the waiting room.

The DCSs in the mountain venues had a separate room, dedicated for the chaperones. This was not the case at the indoor coastal venues where chaperones stayed either inside or at the entrance of the DCS, while waiting to be allocated their athlete selection or after the completion of their duties. At times, this made the DCS crowded, especially when athletes and their ASP were present.

The presence of a TV in the waiting room, showing live coverage of Games' events, assisted the Doping Control Station Manager (DCSM) to follow the competition and ensured the chaperones were ready, dispatched or scheduled to notify athletes at the appropriate time. The TV coverage also provided the athletes with an opportunity to follow the events while waiting for their sample collection session. Hydration points with both cold and room temperature drinks were sufficient and located in a conspicuous place. However, athletes' consumption was not monitored by SCP to avoid over hydration and dilute samples.

Processing rooms had fridges for temporary storage of partial samples and were equipped with a telephone, in case DCOs needed to call the DCSM. The IO Team observed that the use of cellphones by athletes and ASP was done in excess in the processing rooms. Although the use of cellphones is not prohibited in the processing room, at occasions, it delayed the sample collection process.

7.2 Sample Collection Personnel

7.2.1 Doping Control Officers

A combination of 15 national and 21 international DCOs was recruited for the Games. International DCOs were required to participate in a webinar before their selection for the Games would be confirmed. However, POCOG did not conduct a formal assessment of the DCOs' knowledge of the sample collection process on arrival in PyeongChang.

DCOs were also requested to attend one of the two mandatory transition workshops provided on site by the IPC. POCOG invited all Doping Control Station Managers (DCSM)s, Doping Control Station Coordinators (DCSC)s, Chaperone Managers (CM)s and Blood Collection Officers (BCO)s to attend these workshops. The focus of the transition workshops was to remind SCP of the modifications related to the doping control process when dealing with athletes with impairments.

Although the performance of the DCOs during the Games was satisfactory, the IO Team observed that some national DCOs were not fluent in English and therefore, were not always clearly understood by athletes. In this sense, the presence of international DCOs (a mixture of Asian and other nationalities) was helpful, particularly when dealing with an athlete who spoke the same language.

7.2.2 Chaperones

POCOG recruited and trained 169 national and international chaperones for the Games. The CMs would undertake a briefing/refreshing training with the chaperones before the start of their first shift. However, inexperienced chaperones still required close guidance by the CM. In addition, a number of international chaperones who did not participate in face-to-face training and only undertook an e-learning module before the Games, were observed to not be fully competent in their role (see section 7.3).

7.2.3 Use of Uniforms

The IO Team believes that, when on duty, SCP should wear the official uniform at all times to maintain professionalism and to avoid any real or perceived conflict of interest during the sample collection process. On a number of occasions, the IO Team observed DCSMs or CMs wearing their personal clothes (e.g. jeans and t-shirts) or a team uniform of their country.

7.3 Notification and Chaperoning of Athletes

There was a sufficient number of chaperones during the Games to notify and chaperone the athletes selected for testing. As recommended in previous IO reports, DCSMs/CMs used the athletes' photo database to assist chaperones in the identification of athletes. In addition to their Games accreditation, chaperones were equipped with a doping control armband (during the IC period only) and DCS access passes (see section 7.4.1).

The IO Team observed the following issues:

- On multiple occasions, chaperones were observed to be touching or holding the athlete's wheelchair even though SCP were specifically encouraged to refrain from doing so during the transition workshops².
- Athletes were not informed of the type of sample required (urine and/or blood) until their entry in the DCS.
- Chaperones were not pressing hard when filling in the notification section of the seven-copy DCF. As a result, athlete's copies were not always legible – a practical issue which should be addressed in training.
- Chaperones were not documenting unsuccessful attempts when athletes could not be found in their room for OOC testing. They were only reporting the attempt verbally to the PVL DCSM.

7.4 Sample Collection Process

Overall, the sample collection process and related procedures were generally in line with the ISTI, and athletes and their representatives were satisfied with the services provided by POCOG.

Below are the IO Team's observations at the various stages of the sample collection process at the DCS.

7.4.1 Arrival at the DCS

Chaperones provided athletes and their ASP with a DCS access pass prior to their entry into the DCS. At the reception desk, SCP monitored access to the DCS. However, the filling of the DCS Entry/Exit log lacked consistency among DCSs. In some DCSs, athletes and ASP were requested to sign the DCS Entry/Exit log upon entry, whereas in other DCSs it was a requirement only upon exit.

7.4.2 Coordination in the DCS

The flow of athletes within the DCS was well managed. Athletes were requested to inform the SCP when they were ready to provide their urine sample. During their waiting time, athletes received a sheet of paper on which they were requested to list the medications/supplements taken in the last seven days and the name of their coach and doctor, prior to providing a sample in the processing room. Whilst the WADA IO Team supports such an initiative, the legibility of the completed sheets was not checked prior to entering the processing room and on multiple occasions, DCOs had to repeat this stage of the sample collection process in the processing room.

7.4.3 Collection of Urine Samples

DCOs conducted the sample collection procedures well and within a reasonable time. However, the IO Team observed a few areas in need of improvement:

² An athlete's wheelchair is considered part of their body. SCP should not be touching or holding an athlete's wheelchair without the athlete's permission.

- DCOs would not always ask athletes about their previous testing experience and would often proceed with the sample collection process without any further explanation. In the opinion of the IO Team, a brief explanation of the process is necessary, in particular for athletes who are being tested for the first time.
- DCOs did not always check the sealing of the bottles once closed by the athlete, as required by ISTI Article D.4.15.
- The IO Team observed a confusion among DCOs on how to dispose properly of the unused numbered bar code stickers of the sample collection kit.

7.4.4 Dilute Samples Policy

The IPC had set detailed instructions for DCOs in the event an athlete provides a dilute sample i.e. a urine sample that does not meet the requirement for suitable specific gravity for analysis. The ISTI requirement that the athlete shall be advised to not hydrate any further until a suitable sample is provided, was applied in almost all cases.

Where a second dilute sample was produced, DCOs were required to refer the decision on whether to proceed with a request for a third sample to the IPC ADC member present in the DCS. If no IPC ADC member was present, the DCO would inform the DCSM, who would call the IPC Anti-Doping Senior Manager or another member of the IPC anti-doping management team. In order for the IPC to make a decision, the DCSM was required to have in-hand a list of precise information regarding the athlete, such as the specific gravity of the first and the second dilute sample and the collection time between both dilute samples (the IPC did not set a time limit between the first and second dilute sample). Based on the information provided, the IPC ADC member, the IPC Anti-Doping Senior Manager or the member of IPC anti-doping management team would decide whether a third sample would be requested from the athlete or whether the sample collection session would conclude. In most cases, DCSMs were instructed to end the sample collection session after the second dilute sample.

The IO Team observed that follow-up testing was arranged by the IPC on the following day for a few athletes whose sample collection session was ended after two dilute samples.

The IO Team commends the flexibility and the pragmatic approach of dealing with dilute samples. However, based on the IO team's observations it was evident that the decision to end the sample collection session after the second dilute sample is more standard practice than exceptional. The IO Team would therefore encourage the IPC to review such policy for future Games and consider its compliance with ISTI Article G.4.6.

7.4.5 Collection of Blood Samples

Overall, BCOs were very professional and performed their role well. However, the IO Team made the following observations:

- Athletes selected for both urine and blood testing who were not ready to provide a urine sample were not always requested to provide a blood sample first.
- Instructions to athletes to sit for 10 minutes before providing a blood sample were not always provided by the DCO/BCO as required by ISTI Article E.4.5.
- DCOs did not always check the sealing of the blood containers as required by ISTI Article E.4.14.
- When collecting a blood sample for ABP purposes, not all athletes would understand the metric system (e.g. 1500 meters) of the questions on the ABP Supplementary Report Form (SRF).
- ASP were observed to be answering the questions on the ABP SRF on behalf of an athlete, without reading or translating them to the athlete.

7.4.6 Modifications for Athletes with Impairments

DCOs performed all required modifications for athletes with impairments during the sample collection session in accordance with the ISTI. Among the modifications implemented, the IO Team observed DCOs assisting visually impaired athletes to sign in the specific box of the DCF, DCOs requesting the athlete's permission to help with the sample collection process and ASP assisting with the pouring of urine and the sealing of the bottles.

In addition, SCP gave athletes the option of using their own catheter or one that POCOG would provide. As required by the ISTI, athletes who used their own urine collection or drainage system were requested to eliminate existing urine prior to providing their urine sample.

The IPC provided the DCOs with a list of standard statements to reflect modifications to the procedure on the DCF.

7.4.7 Storage of Samples in the DCS

Upon the completion of each sample collection session, the DCOs delivered the samples and relevant documentation to the DCSM, who stored them in a refrigerator in their office. In some instances, samples were firstly stored in a refrigerator in the processing room and later transferred to the DCSM's office.

7.4.8 Transport of Samples and Chain of Custody

The samples were kept refrigerated in the DCSM's office until the arrival of POCOG representatives from the Doping Control Command Center (DCCC). Samples were then placed in unsealed cardboard and cooler boxes, which were put in a carrier bag and transferred to the DCCC. Two samples deliveries were planned each day from the DCCC to the Seoul Laboratory.

The chain of custody process (COC) was well executed at the DCCC. In addition to the signing of documents, a 24-hour close circuit television monitored the delivery and storage of samples at the DCCC.

Recommendations N° 8-28:

- The LOC should take into consideration the daily requirements of the IPC's TDP to ensure that DCSs are spacious enough to accommodate a high number of athletes and ASP.
- When a high number of athletes and ASP are present in the waiting area, chaperones who are not on duty should not be present in the DCS, and DCOs should remain in their respective processing rooms, in order to avoid unnecessary crowding.
- SCP should monitor the amount of drinks consumed by athletes in the DCS and report to the CM/DCSM any excessive consumption.
- The use of cell phones by athletes and ASP in the processing room should not be permitted by DCOs, except in exceptional circumstances, to avoid delays in the sample collection process.
- The LOC should ensure that all SCP have excellent verbal and written skills in English.
- The LOC should conduct a practical assessment of the DCOs' sample collection skills prior to their selection for the Games.
- Chaperone training should include practical sessions where different scenarios are presented and practiced. In addition, the LOC could provide doping control training material to chaperones in advance of the Games so they can practice and become familiar with it.
- SCP should always wear the official Games uniform when on duty to maintain professionalism and to avoid any real or perceived conflict of interest during the sample collection process.
- Chaperones should notify athletes in writing as soon as possible after their competition. When initial contact is made, athletes shall be informed of their rights and responsibilities including (but limited to) the type of sample collection requested.
- Unsuccessful attempts to locate athletes should be documented.
- The LOC should ensure consistency in completing the DCS Entry/Exit log across all the DCSs.
- In order to speed up the sample collection process, athletes could be requested to write, in advance of starting the formal sample collection process, their medication/supplements in capital letters on a piece of paper in the waiting room prior to entering the processing room. The legibility of this information could also be checked by SCP prior to entering the processing room. Other innovative ways to collect this information from athletes could be explored (e.g. using a paperless system).
- DCOs should assess the athletes' familiarity with the sample collection process upon their arrival in the processing room and provide information as necessary.
- DCOs shall check the sealing of the urine and blood samples once closed by the athlete, as required by ISTI Articles D.4.15 and E.4.14.
- The LOC should communicate to DCOs a consistent approach as to how the unused numbered bar code stickers of the sample sealing kit are disposed of to avoid confusion among athletes.

- Athletes selected for both urine and blood testing who are not ready to provide a urine sample could be requested to provide a blood sample first.
- The IPC is encouraged to review its dilute samples policy for future Games and consider its compliance with ISTI Article G.4.6.
- The DCO/BCO shall instruct the athlete to remain in a normal seated position with feet on the floor for at least 10 minutes prior to providing a blood sample as required by ISTI Article E.4.5.
- The LOC could translate the questions on the ABP SRF in different languages, including conversion information from the metric to the imperial measurement system.
- The LOC should implement a consistent approach on sample storage in the DCS upon completion of the sample collection session.
- It is recommended that the containers used to transport the samples have a sealing system or are placed in sealed bags when transported from one location to another as part of their COC, to ensure the highest level of security and integrity.

8. Therapeutic Use Exemptions

Under the provisions of the IPC AD Code, the IPC MC is responsible for TUE assessment. The IPC MC consists of six physicians whose mandate lasts for four years. At the start of their mandate, all members sign a conflict of interest and confidentiality agreement. The current IPC MC members have vast experience in the care and treatment of athletes with impairments.

Some of the main challenges that the IPC MC has to deal with are incomplete applications, poor medical supporting documentation and submitted documentation that is not translated into English.

In the summer of 2017, the IPC published the PyeongChang 2018 Doping Control Guide in which the IPC described the process that athletes who would participate in the Games had to follow to have their existing TUE (issued by their IF or NADO) recognized or to apply for a new TUE.

From 1 February 2018, all athletes registered to compete at the Games were considered international-level athletes through the duration of the Games period, as defined in the IPC AD Code. In addition, from 1 February 2018, the IPC became responsible for TUEs and, therefore, Games period TUE rules applied to all athletes.

The IPC publishes on their website a list of NADOs and IFs from which TUEs are automatically recognized. For athletes that already had a valid TUE certificate of approval, a copy of their valid TUE and the supporting medical documentation had to be submitted to the IPC MC for review by 1 February 2018. Submissions had to be in English and entered into ADAMS or sent by email.

From 1 February 2018, all athletes that required a new TUE had to apply to the IPC MC and submit a completed TUE application with supporting medical documentation either through ADAMS or by email. Submissions had to be in English. If approved, the TUE would only be valid for the duration of the Games.

For retroactive TUEs, athletes and their supporting personnel were referred to the ISTUE and the IPC AD Code to obtain information on the TUE application process, the supporting medical documentation and the criteria for receiving a TUE.

Details of the above procedures for the Games-related applications were, however, not found under the TUE section of IPC's website. The PyeongChang 2018 Doping Control Guide was published under the Paralympics Guides and Policies section of the IPC website. Following a discussion with the IO Team, the IPC agreed that the information related to TUE applications could have been posted in a more conspicuous place on its website.

By the time of the opening of the Games, nine NPCs had informed the IPC that their athletes did not have any TUEs, and eight NPCs had informed the IPC of a total of 22 TUE certificates granted to their athletes by a NADO or already recognized by the IPC. All TUE requests were reviewed by the IPC MC and a decision was communicated to the athlete via their NPC within a maximum of 24 hours. During the Games, three additional TUE applications were submitted and approved by the IPC MC.

Recommendations N° 29-30:

- The IPC should ensure that all Games related information is posted on a conspicuous place on its website.
- The IPC should continue its efforts to educate athletes and ASP on how TUE applications must be adequately documented and provided with the relevant medical records in order to be reviewed. For example, the IPC could organize a TUE webinar for NPCs in the lead-up to the Games and refer athletes' physicians to the supporting medical information and guidance available on WADA's website to support TUE applications.

9. Results Management

The IO Team observed two AAF notifications.

No hearing was observed, as none was held during the Games. Therefore, The IO Team's point of focus in PyeongChang was to examine whether and to which extent the IPC had taken on board the main points made in previous IO reports with respect to results management. The IPC ADC members' views were sought and the frankness of the discussion was appreciated.

The IPC ADC's role, which is outlined in the IPC AD Code and Anti-Doping Committee bylaws, combines policy-making, operational, and results management responsibilities. At Paralympic Games the IPC ADC oversees all doping control activities conducted, including IC and OOC selection policies; TDP development, implementation and review; and sample collection oversight in the DCSs. The IPC ADC members (who, for the most part, do not have a legal background) also act the IPC's anti-doping hearing body. Depending on caseload, external lawyers are also occasionally used for hearing panels

The IO Team observed that the IPC ADC members handled their mission with integrity, pragmatism and efficiency, with the athlete's rights an ever-present consideration. Having said that, the accumulation of roles on the same individuals, sometimes beyond their field of expertise, may prove a challenge in the event of an increased results management workload or a more complex case. It may also create conflicts of interest, and could be perceived as a general lack of transparency (as a matter of fact the precise allocation of roles between IPC ADC members was never entirely clear to the IO Team during the Games). An answer to these considerations could be to systematically use external lawyers for hearing panels. It would, of course, involve significant costs.

The IO Team discussed these points with the IPC ADC members, who are currently reflecting on the best service to provide to the Paralympic Movement. As the sole anti-doping resource for 10 different para sports, for the Para-Pan American Games and Paralympic Games, and for the various components of the Paralympic movement (NPCs, member IFs, etc.), the IPC ADC's mission requires greater financial and human resources than currently available.

In order to effectively address the issues outlined in this results management section, as a preliminary consideration the IO Team recommends that the IPC investigates additional funding options for their anti-doping program, including, for example, sponsorship.

9.1 Absence of Separate Hearing Body and Hearing Panels Procedural Rules

The IPC AD Code states that *"The IPC Anti-Doping Committee is responsible for establishing policies, guidelines and procedures with respect to the fight against doping, including anti-doping rule violation management and compliance with internationally accepted regulations, including the Code. Members of the Committee will also sit as members of the hearing body required when the IPC is the results management authority"*.

In practice, the IPC ADC Chair, unless conflicted, chairs hearings. If the caseload is high, three IPC ADC members, who are "trained" for this task (but are not necessarily lawyers), can act as panel chairs. Panel selection is based on availability, making sure not to include members from the athlete's country.

This approach is reasonable, and the absence of an independent judicial committee separate from the IPC ADC does not in itself raise a Code compliance issue. It does not constitute an infringement on the athlete's rights, either, since decisions are appealable to CAS (IPC AD Code Article 8.4.2). The IO Team notes, however, the absence of written procedural rules for hearing panels. Because Anti-Doping has evolved into a complex system which places strict and numerous demands on athletes, it is desirable that sport-governing bodies are also bound by clear regulatory requirements. Therefore if a separate, independent judicial committee is not envisaged for the near future by the IPC, the IO Team is of the view that procedural matters such as hearing panel setting up and conflicts of interest should be governed by formal rules.

9.2 Notification Process

The pre hearing results management and notification processes closely followed the IPC's "Procedural Guidelines on Results Management for Adverse Analytical Findings" – a well-drafted document for which the IPC should be commended.

The Notice of Charge was delivered personally to the athletes' NPC Chef de Mission by the IPC M&S Director. Great care was taken to explain the document, answer any questions, and make sure the information was well understood. It was also mentioned that in order to protect the athlete, the IPC's policy is to not issue a statement on the case before any final determination has been made.

The Notice of Charge recommended that the athlete takes legal advice regarding its contents, and this point was reiterated during the meetings in which the M&S Director notified the athletes' Chefs de Mission. The IPC M&S Director also highlighted that the athlete should submit a written, documented explanation in order to give a clear picture of his case.

Along with the Notice of Charge, copies of the IPC AD Code and WADA Prohibited List were provided to the relevant Chef de Mission in printed form.

While notifications were well handled and obvious consideration was given to the athlete's rights, the IO Team can only encourage the IPC to update and systematically use their "I tested positive" flyer – an athlete information pamphlet explaining the process, and, in particular, how to prepare for a hearing. This document, which was commended in previous IO reports, was not updated after the 2015 Code came into force and has not been used since that time. An updated version (available in several key languages) would be of great value to athletes, who usually need help in order to fully measure the implications of the points made in the Notice of Charge.

9.3 Translation Services

The IO Team notes that the IPC did not follow recommendations from previous IO reports to modify IPC AD Code Article 8.1.3 *"such that the IPC arranges for professional translation to be available at pre-hearing meetings and hearings where requested by an athlete or where it appears necessary at least during the Paralympic Games"*. Translation services remain to be arranged by the athlete, at his/her own costs, which can be a deterrent.

9.4 Anti-Doping Education

When asked about their main challenges during results management, the IPC ADC members mentioned the athletes' lack of knowledge and understanding of the anti-doping rules, which (often added to an absence of legal representation) precludes them from exercising their rights to a full extent. NPCs too are frequently under-educated, as their structure, which relies mainly on volunteers, does not always make it possible to assign specific staff members to anti-doping matters.

The IPC ADC explained that in the hearing phase they try to compensate this weakness in the system by guiding athletes as much as possible for their submissions. Panel decisions often include a clause requiring a follow-up on the athlete's anti-doping education by the NPC.

The need to address insufficient anti-doping knowledge was already highlighted in previous IO reports and is discussed in more detail in section 10.

9.5 Filing Failures Results Management

For Games time, NPCs are required to provide training slots and rooming lists information for all participating athletes. This information, added if necessary to the data obtained thanks to the GMS, a new accreditation scanning technology, usually enables the IPC to locate athletes for testing during the Games. Consequently, the IPC does not rely on the whereabouts information available in ADAMS and does not pursue ADAMS filings failures during Games time if the information requested from the athlete's NPC was provided to them. In the IPC's view, there is no need to pursue a filing failure if the athlete could be located for testing.

While this pragmatic approach is understandable from a logical standpoint, the IPC AD Code (Article 7.6) does not give the IPC the flexibility to decide whether to pursue a filing failure when the criteria set in the ISTI are all present in a specific case. The IO Team therefore reminds the IPC that their obligations in connection with filing failures results management continue to apply during the Games, whether or not the filings are actually used to locate athletes for Games testing purposes.

9.6 Documented Processes

The IO Team and IPC ADC discussed the fact that the IPC's only available documented process for results management is the "Procedural Guidelines on Results Management for Adverse Analytical Findings" mentioned in section 9.2 above. For the results management of non-analytical ADRVs, the IPC ADC indicated that WADA's Results Management Guidelines are generally used.

Recommendations N° 31-36:

- In order to improve results management processes the IPC should investigate additional funding options for its anti-doping program and finance education as a priority.
- If a separate, independent judicial committee cannot be envisaged in the near future, the IPC should at least establish procedural rules for the setting up of hearing panels and the management of potential conflicts of interest.
- The IPC should update (in several key languages) and systematically use the "I tested positive" flyer, an athlete information pamphlet explaining the results management process, and, in particular, how to prepare for a hearing for athletes who return an AAF.
- The IPC should reconsider its policy of leaving to the athletes to arrange for translations services at their own cost. Options for translation services (even if only on a remote basis) should be explored, possibly in partnerships with NPCs, LOCs of upcoming Paralympic Games, and perhaps also with the IOC.
- The IPC should be mindful that its obligations in connection with filing failures results management continue to apply during the Games.
- The IPC should consider documenting general results management processes for non-analytical cases (in particular for investigations of Failure to Comply as per ISTI Article A.3.1), identifying task owners to make sure that action is initiated as necessary. Documented processes would also be helpful in minimizing the risk of errors in situations of heavy workload.

10. Athlete Information and Education

The IO Team observed at the DCSs, and learned from the WADA Outreach Team that athletes and ASP often lacked basic anti-doping knowledge. This was demonstrated, for example, by the low scores at the Outreach quiz and the fact that athletes often needed to take the quiz multiple times in order to pass it.

As already mentioned in other sections of this report, a limited knowledge and understanding of the anti-doping rules and procedures may delay the sample collection process, prevent athletes from fully exercising their rights during results management, and create extra workload for the IPC (e.g. when receiving incomplete TUE applications). Well-informed athletes are therefore key to a successful anti-doping program.

While it was noted that the IPC and POCOG made an effort to provide anti-doping information in the DCS, the IO Team encourages the IPC to take these measures one step further for an optimal effect. For example, most DCSs featured laminated posters detailing the sample collection process in seven languages, a very useful initiative. However, most of these posters were not located in a suitable place in the DCS e.g. they were placed behind the DCO in the processing room or not at the level of an athlete in a wheelchair. Also, while a significant amount of information material was available to athletes and ASP in the DCSs, none of this material was suitable for athletes with a visual impairment.

More importantly, and from a broader perspective, with a new WADA International Standard for Education set to come into force in 2021, the IO Team recommends that the IPC addresses education as a priority and examines all possible options to finance this essential part of their anti-doping program, keeping in mind that education requires a strategic approach combining various supports.

In order to ensure that all athletes taking part in future Paralympic Games possess a basic level of anti-doping knowledge, the IPC could also introduce a requirement that athletes complete a mandatory online anti-doping course before confirming their participation.

Additionally, as per IPC AD Code Article 20.2.12, the IPC should reinforce to all NPCs the importance of having anti-doping education programs and consider supporting them in developing such programs in cooperation with their respective NADOs.

Finally, having observed that members of the media sometimes requested to film athletes during notification, the IO Team suggests that the IPC also takes into account the need to educate and inform the media.

Recommendations N° 37-41:

- The language barrier is an ongoing issue during the doping control process. Therefore, it is recommended that existing material produced by WADA, the IPC and ADOs is used in a more proactive and systematic fashion during the Games. The IPC should also consider developing a mobile application to aid with translation and other components of its education program, including appropriate material for visually impaired athletes.
- With a new WADA International Standard for Education set to come into force in 2021, the IO Team recommends that the IPC addresses education as a priority and examines all possible options to finance this essential part of their anti-doping program.
- The IPC should consider the benefits of introducing a requirement that all athletes complete a mandatory online anti-doping education course as part of confirming their participation at future Paralympic Games.
- The IPC should reinforce to all NPCs the importance of implementing anti-doping education programs and consider supporting them in cooperation with their respective NADOs.
- The IPC could consider educating and informing the media on anti-doping procedures.

11. Feedback from Athletes and Sample Collection Personnel

11.1 Sample Collection Personnel

The role of DCOs and Chaperones is fundamental to the integrity and quality of the sample collection process.

SCP are a critical component of the testing process, and, subsequently, of the entire anti-doping system. It is therefore valuable to gather their feedback frequently in relation to their experience of the sample collection process. This feedback should be carefully analyzed and interpreted with the purpose of making practical improvements to the process.

During these Games, the IO Team – with the approval of the IPC and POCOG – thought appropriate to distribute a survey to DCOs and POCOG administrators at the end of the Games (see Annex IV). The survey had the objective of gathering feedback on the challenges faced and potential improvements for future Games.

The responses received were not sufficient in numbers to make useful conclusions over the entire anti-doping program of the Games. However, the IO Team wishes to thank those who sent their comments and encourages future WADA IO missions, the IPC and future LOCs to continue gathering information from SCP.

11.2 Athletes

Although no feedback was requested from athletes during these Games, the occasional, informal feedback received by the IO Team from both athletes and their representatives was informative. The IO Team strongly believes that efforts should be made in future missions to collect feedback from athletes on their experience throughout the anti-doping process. Athletes are the most important part of the Games, and all processes should be designed to protect their rights and improve their overall experience. Their feedback, if obtained and analyzed systematically, would provide invaluable information that could be used to improve the different stages of the doping control process.

Recommendations N° 42-43:

- For future Games, WADA, the IPC and LOCs could consider using appropriate methods to collect feedback from SCP during and after the Games with the purpose of improving their overall anti-doping experience and addressing any issues that may have been overlooked.
- WADA, the IPC and LOCs could consider using appropriate methods to collect feedback from competing athletes on the anti-doping program with a view to improve the anti-doping services provided at future Games.

Annexes

Annex I: WADA IO Team

WADA IO TEAM MEMBERS, PYEONCHANG PARALYMPIC GAMES			
Role	Name	Position	Nationality
Chair	Pirjo Ruutu	Senior Counsellor, Finnish Center for Integrity in Sports (FINCIS)	Finland
Vice Chair	George Tsamis	Manager, Standards and Harmonization, WADA	Greece
Team Manager	Francisco Leon	Manager, NADO/RADO Relations, WADA	Peru
Member	Catherine Bollon	Athletes Services & Human Anti-Doping Advisor, International Equestrian Federation (FEI)	France
Member	Gobinathan Nair	Director General, South East Asia Regional Anti-Doping Organization (SEARADO)	Singapore

Annex II: Games Testing Figures

Table II.1: Summary of the Games Testing Figures

Type	Total
Samples collected	842
Athletes/guides tested	380
In-Competition samples	319
Out-of-Competition samples	523
Dilute samples	56
Urine samples	526
Blood samples	156
ABP samples	160
ESAs analysis (urine and blood)	215
GHRFs analysis	558
GH analysis	80
Blood transfusions analysis	76
Insulin analysis	18
AAFs	10

Table II.2: Number of Samples by Day and Type of Test (IC vs OOC)

Date	In-Competition	Out-of-Competition	Total Tests
3/3/2018	–	8	8
3/4/2018	–	25	25
3/5/2018	–	46	46
3/6/2018	–	101	101
3/7/2018	–	111	111
3/8/2018	–	114	114
3/9/2018	–	40	40
3/10/2018	43	8	51
3/11/2018	31	19	50
3/12/2018	41	18	59
3/13/2018	39	2	41
3/14/2018	39	4	43
3/15/2018	11	22	33
3/16/2018	43	4	47
3/17/2018	46	1	47
3/18/2018	26	–	26
Total	319	523	842

Table II.3: Number of Samples by Sport and by Type of Test

Sport	In-Competition	Out-of-Competition	Total
Wheelchair curling	24	–	24
Para alpine skiing	67	85	152
Para biathlon	66	144	210
Para cross-country skiing	82	245	327
Para ice hockey	54	26	80
Para snowboard	26	23	49
Total	319	523	842

Table II.4: Number and Type of Samples by Sport

Sport	Urine	Blood ABP	Blood	Total Tests
Wheelchair curling	24	–	–	24
Para alpine skiing	140	–	12	152
Para biathlon	85	51	74	210
Para cross-country skiing	168	109	50	327
Para ice hockey	64	–	16	80
Para snowboard	45	–	4	49
Total	526	160	156	842

Annex III: Adverse Analytical/Non-Analytical Findings

No.	Type of Test	AAF	Non-Analytical Finding	Substance	Outcome
1	OOC	1	–	Dolorzolamide ¹	Permitted use of administration
2	IC	1	–	Methadone	Case ongoing
3	IC	1	–	Oxycodone ²	TUE
4	IC	1	–	Chlorothiazide ³	Case ongoing
5	IC	1	–	Dolorzolamide ¹	Permitted use of administration
6	IC	1	–	Dolorzolamide ¹	Permitted use of administration
7	IC	1	–	Oxycodone ²	Initial review ongoing
8	–		1	Methadone	Case ongoing
9	IC	1	–	Furosemide	Initial review ongoing
10	IC	1	–	Chlorothiazide ³	Case ongoing
11	IC	1	–	IRMS confirmation	Initial review ongoing

^{1,2,3}. Same athlete

Annex IV: Feedback Form for DCOs and POCOG Administrators

FEEDBACK to the WADA Independent Observers (IO) Team

Name: _____ (optional)

Venue: _____ (optional)

Thank you very much for being part of the Anti-Doping Team for the 2018 PyeongChang Paralympic Games. The success of the Games is achieved with all your concerted effort. We would like to seek your feedback to improve for future Games. Your valuable inputs given will be recorded and handled on anonymous basis.

Please e-mail your answers to this questionnaire by the end of the Games to Francisco.Leon@wada-ama.org

1. Please tell us what role you played during the Games:
 - a. POCOG Administrator
 - b. Doping Control Officer
2. What are the three main challenges you faced in your position during the 2018 PyeongChang Paralympic Games?

3. What are three improvements that can be made for future Games?

4. Any other comments/suggestions?
