Report of the

INDEPENDENT OBSERVERS

Paralympic Games
Tokyo 2020

world anti-doping agency

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1.0 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
ADEL	Anti-Doping Education and Learning platform
ADO	Anti-Doping Organization
ADRV	Anti-Doping Rule Violation
APMU	Athlete Passport Management Unit
ASP	Athlete Support Personnel
ATF	Atypical Finding
BCO	Blood Collection Officer
CM	Chaperone Manager
Code	World Anti-Doping Code
DCF	Doping Control Form
DCO	Doping Control Officer
DCS	Doping Control Station
DCSM	Doping Control Station Manager
ESAs	Erythropoietin Stimulating Agents
Games	Tokyo 2020 Paralympic Games
GH	Growth Hormone
GHRFs	Growth Hormone Releasing Factors
GnRH	Gonadotropin-Releasing Hormone
IC	In Competition
IF	International Federation
IO	Independent Observer
IPC	International Paralympic Committee
IPC AD	International Paralympic Committee 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
NADO	National Anti-Doping Organization
NPC	National Paralympic Committee
OOC	Out of Competition
PLV	Paralympic 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
TOCOG	Tokyo 2020 Organizing Committee for the Olympic and Paralympic
TUE	Therapeutic Use Exemption
WADA	World Anti-Doping Agency

2.0 Acknowledgements

The Independent Observer Team (the IO Team) in Tokyo would like to thank the International Paralympic Committee's (IPC's) Anti-Doping Team, and especially Mr. James Sclater, Director of Anti-Doping, who was the main point of contact with the IO Team. Our gratitude is also extended to Dr James Kissick, Chairperson of the IPC Medical Committee, and all of its members; and Ms. Chika Hirai, the Tokyo 2020 Organizing Committee for the Olympic and Paralympic Games' Head of Doping Control, and her team. Special thanks also to all the volunteers that made these Games such a great experience.

3.0 Executive Summary

The IPC should be commended for its strong commitment to clean sport, as well as for the high standards of its anti-doping policies and procedures.

The IO Team observed all elements of the anti-doping program of the Tokyo 2020 Paralympic Games (the Games), with the exception of hearings, as none were held during the Games. This report details the IO Team's observations and recommendations for anti-doping programs at future Games.

The IPC prepared its Test Distribution Plan (TDP) based on a thorough evaluation of each of the 22 sports participating in the Games. By constantly monitoring and revising the TDP based on incoming intelligence and information, for instance from the IPC's appointed Athlete Passport Management Unit (APMU), the IPC's plan was dynamic, and the resources were used where most needed. During the Games, 2,174 samples were collected, 1,122 Out of Competition (OOC) and 1,052 In-Competition (IC). All analyses were conducted at the Tokyo WADA-accredited Laboratory (Laboratory).

The OOC plan covered 13 out of 22 sports. OOC testing started on the opening of the Paralympic Village (PLV) on 18 August 2021 and continued throughout the Games until 4 September 2021. The IC testing plan covered all 22 sports. Both urine and blood samples were collected. In total, 1,695 urine samples, 221 Athlete Biological Passport (ABP) blood samples (in 7 sports) and 258 blood samples (in 13 sports) were collected.

For the first time at Paralympic Games, paperless doping controls were conducted using a system called MODOC that was developed by the Professional Worldwide Controls (PWC) sample collection agency. All Doping Control Officers (DCOs) working at the Paralympic Games had also worked at the Olympic Games and were already familiar with the system, and it worked very well.

The sample collection process was in line with the International Standard for Testing and Investigations (ISTI), and the IO Team observed very few challenges, most of them related to language barriers. In some cases, this resulted in the sample control personnel and chaperones being perceived as less confident by the athletes and their support personnel.

The athlete's rights and responsibilities for doping control based on the Athletes' Anti-Doping Rights Act[1] were available in nine different languages, which was of great assistance to the chaperones and the athletes. The IO Team commends this IPC and Tokyo 2020 initiative. However, some chaperones lacked sufficient training and language skills, which made the notification process difficult on a few occasions.

This report contains a total of 20 recommendations that are addressed to the IPC, the Local Organizing Committee (LOC), National Paralympic Committees (NPCs), Anti-Doping Organizations (ADOs) and WADA that could assist in further improving the anti-doping program for future Games. The IO Team would like to highlight eight of these recommendations in this Executive Summary.

- In preparation for the Games, testing recommendations were sent out to National Anti-Doping

[1] Athletes' Anti-Doping Rights Act | World Anti-Doping Agency (wada-ama.org)

Organizations (NADOs) in July 2021 for athletes in three IPC sports that are deemed at highest risk (Athletics, Swimming and Powerlifting). Whilst this was a great initiative, the IPC and NPCs should monitor the implementation of these recommendations and make sure testing is conducted, not only in these three sports but in all sports throughout the year. Specific testing recommendations should also be made earlier for NADOs to be able to act on all recommendations i.e., six months prior to the Games (Recommendations no 1 and 2).

- It would be beneficial for the IPC to have their own confidential platform for anonymous information on doping moving forward, in particular to be able to monitor and act on tips and information quickly, which is important during major events (Recommendation no. 3).
- The LOC should ensure that all chaperones receive in-person and/or online training, assessment and mock training sessions pre-Games and that they have sufficient English skills (Recommendations no 4 and 5).
- The IO Team encourages the IPC to review the wording of the diluted sample policy for future Games so that the policy and its implementation are in line and therefore compliant with Annex F of the International Standard for Testing and Investigations (ISTI) (Recommendation no. 10).
- The IPC should consider having a process in place regarding Athlete Passport Management Unit (APMU) recommendations for athletes where the IPC does not have the passport custody, for example a share file (shared between all the APMUs and the IPC) where the APMU types in every recommendation for the athletes tested during the Games (Recommendation no. 13).
- The IO Team notes that anti-doping information (or reference to IPC/WADA anti-doping information) on various NPCs' websites is scarce or non-existent. We highly recommend to the concerned NPCs to highlight the rights and responsibilities of athletes and Athlete Support Personnel and facilitate their awareness and compliance with the IPC Anti-Doping Code and other IPC Anti-Doping Regulations (Recommendation no. 17).

In addition, under the new International Standard for Code Compliance by Signatories, the IPC, as a Major Event Organization (MEO) and signatory to the World Anti-Doping Code (Code), was required to complete a Code Compliance Questionnaire (CCQ) based on requirements in the Code and International Standards relevant to the role of a MEO.

Following the assessment of the IPC CCQ by WADA before the Games, the IPC was provided with a corrective action report that included any non-conformity identified from the CCQ responses. The non- conformities identified were required to be addressed in advance of the Games with any further observation of the implementation of the corrective actions to be done during the Games by the IO Team. The IO Team included two WADA auditors who followed up on the corrective actions linked to the IPC CCQ and concluded that the corrective actions were implemented successfully either in advance of or during the Games.

4.0 Introduction

4.1 Independent Observer Program

The Independent Observer (IO) program was established by WADA in 2000 with the aim to contribute to effective doping control programs during major sporting events and to enhance athlete and public confidence in the quality, effectiveness and reliability of the anti-doping program in place.

The IO Team consists of experts appointed by WADA. It is responsible for observing all different aspects of the doping control process, reviewing relevant documents, contributing to the overall implementation, and providing daily feedback to the IPC and the local organizing committee (LOC). This IO report includes a summary of all the IO Team observations and assessment of compliance to relevant rules. It also includes recommendations to the IPC, WADA, the LOC and NPCs for improvements at future Games.

4.2 Methodology

An agreement that authorized and approved the presence of an IO Team appointed by WADA

at the Games was signed by the IPC and WADA. The composition of the IO Team is presented in Annex III.

The Games Period for Doping Control was from 18 August to 5 September 2021 with the IO Team present in Tokyo from the start of the Games Period. Prior to the opening of the Paralympic Games, which took place on 24 August 2021, the IO Team reviewed relevant documents, such as the Risk Assessment and the Test Distribution Plan (TDP) and observed out-of-competition (OOC) notifications and testing in the Paralympic Village. After the Opening Ceremony, the IO Team mainly observed in-competition (IC) testing until the Closing Ceremony on 5 September 2021. Areas of observation included, but were not limited to:

- Pre-Games testing recommendations for National Anti-Doping Organizations (NADOs);
- Risk assessment;
- Provision of whereabouts;
- Test distribution planning;
- Implementation of the OOC Testing Program;
- Therapeutic Use Exemption (TUE) procedure;
- Athlete notification and sample collection procedure;
- Storage, transport and chain of custody of samples;
- Results management process including hearings (if relevant); and
- Any other relevant areas

The IO Team had daily meetings with the IPC during the first part of the Games. During the second week of the Games, the meetings were held every other day, unless there was something urgent to report, in which case an ad hoc meeting was set up. During these meetings, the IO Team reported observations from the previous day and discussed TUEs and results management.

In addition, the IO Team attended two Doping Control Officer (DCO) education and transition workshops[2] prior to the start of the Games.

The IO Team observations followed an audit-style approach. The 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 Tokyo 2020 Doping Control Operational Manual, and the Doping Control Guide for Testing Athletes in Para Sport. The IO Team also reviewed the recommendations from previous WADA IO reports to assess the progress achieved.

It is worth noting that prior to the Games, the IPC compiled and published an excellent complement to the existing Doping Control Guidelines called *The Doping Control Guide for Testing Athletes in Para Sport*, where all the important information regarding testing athletes with a disability can be found

The IO Team wishes to thank the IPC and Tokyo 2020 for a good collaboration and communication throughout the Games.

5.0 Rules and Regulations

The IPC is the global governing body for the Paralympic Movement, as well as the Major Event Organization (MEO) for the Games. The IPC is also the International Federation for several Winter and Summer sports. The IPC AD Code was drafted in accordance with the World Anti-Doping Code and the associated International Standards and was approved by WADA as compliant with the Code. The IPC AD Code thus applies to the Games and to all other events and competitions under the jurisdiction of the IPC.

[2] Two DCO "transition workshops" took place on 12 and 13 August 2021 i.e., in the period between the Tokyo 2020 Olympic and Paralympic Games. The focus of the workshops was to remind Sample Collection Personnel (SCP) of the modifications related to the doping control process when dealing with athletes with a disability.

Athletes and athlete support personnel are responsible for having full knowledge of, and complying with, the IPC AD Code.

6.0 Test distribution

6.1 Pre-Games Testing

During the months prior to the Games, the IPC went through the testing history of athletes that were on the long list[3] for Tokyo 2020 in athletics, powerlifting and swimming with a focus on those with high rankings in their respective countries. Athletes who were not tested within six months prior to the Games (i.e., since February 2021) were put on a list that was sent to the NADO of the athlete, requesting these NADOs to test them prior to the Games. Out of 160 participating countries, 78 NADOs received an email with a list of athletes to test. In total, 520 testing recommendations were given by the IPC to the NADOs.

The response and actions were generally good, and many athletes on the lists were tested, but the IPC did not verify the number of recommendations that were implemented.

Whilst this was a good initiative, the letters were sent too late (in July 2021) for some NADOs to be able to act on all requests. In addition, the requests were only in IPC sports (athletics, powerlifting and swimming), leaving many sports out.

Recommendation no. 1: The IPC should collaborate with the applicable National Anti-Doping Organizations (NADOs) at least 12 months in advance of the Games to ensure that an appropriate level of out-of-competition testing is built into the NADOs' Test Distribution Plans for Paralympic athletes; and the IPC should provide specific test recommendations at least six months prior to the Games.
Recommendation no. 2: National Paralympic Committees need to be more proactive in communicating the long lists to the IPC and their NADO, and the NADOs should ensure that athletes that qualify or are likely to qualify for the Paralympic Games are tested at least once within six months prior to the Games. This especially concerns sports considered "high-risk" according to the Risk Assessment.

6.2 Risk Assessment and Test Distribution Planning

The IPC's risk assessment is a solid and well-thought-out document including (but not limited to) calculations of both country-based and sports-based risk of doping, pre-Games testing activities by the NADOs, physical demand and credible intelligence received. This document has been developed and refined during a number of years and was used to calculate the adequate number of tests per sport for both IC and OOC in Tokyo. The majority of the tests were targeted, thereby focusing the resources where most needed.

For the high-risk sports, the IPC Anti-Doping Team attended the venues and performed real-time selection of athletes to notify based on performance and test history of the athletes as well as other intelligence.

Analyses for erythropoietin (EPO), growth hormone releasing factors (GHRFs), gonadotropin releasing factors (GnRHs) and human Growth Hormone (hGH) were done according to WADA's Technical Document for Sport Specific Analyses (TDSSA) and the IPC's risk assessment. In addition, analyses for blood transfusions were also performed (see Appendix I, Table 6 for final testing numbers).

In total, 4,403 athletes participated in the Games. The TDP included IC testing in all 22 sports, while OOC testing was performed in 13 of the 22 sports. The plan was to collect, 1,499 urine samples (863 IC and 636 OOC) along with 458 blood samples, of which, 208 were ABP samples

[3] The NPCs' list of athletes with the possibility to qualify for the Tokyo 2020 Games.

and 250 were serum samples.

The IPC constantly monitored its TDP in WADA's Anti-Doping Administration and Management System (ADAMS) and revised it several times during the Games. The updates were based on feedback and information, or intelligence received from the Doping Control Officers, the Laboratory and the IPC Athlete Passport Management Unit (APMU).

6.3 Intelligence and Investigations

The IPC collected information from multiple sources (Laboratory, Sample Collection Personnel, Athletes, Athlete Support Personnel, NPCs, IFs, NADOs, law enforcement, etc.). In addition, the IPC promoted the possibility to report information confidentially through WADA's Speak Up! whistleblowing platform.

In addition, during the Games Period, the IPC had an agreement with the Japan Government to receive intelligence and information from law enforcement, including Customs. This collaboration worked well, and the IO Team was informed that the IPC had received such information and what necessary steps were taken to follow up

Recommendation no. 3: It would be beneficial for the IPC to have its own confidential platform moving forward in order in particular to be able to monitor and act on tips and information quickly, which is important during major events.

6.4 Out-of-Competition Testing

OOC testing began on the first day of the opening of the Paralympic Village in Tokyo and continued throughout the competition period as necessary.

The selection of athletes was based on the IPC's risk assessment. In total, 1,122 OOC samples (662 urine, 250 blood and 210 blood passports) were collected in 13 of the 22 sports (see Appendix I, Table 3 and Table 4 for details). In addition, 220 OOC ABP samples were collected per the IPC TDP in seven sports (see appendix I, Table 5 for details).

The IPC requested all NPCs to provide rooming lists setting out where their athletes were residing in the Paralympic Village. At a minimum, the rooming list had to include: the athlete's full name, the athlete's building location and assigned room number, the athlete's sport, as well as the athlete's arrival and departure dates. Each NPC was responsible for updating the rooming list when required. The IPC also had access to the Tokyo 2020 management system, which contained information about the athletes' training schedules.

The submission of rooming lists as an effective way to locate athletes for OOC testing was considered realistic and sufficient, although far from all NPCs provided these lists on time if at all. As a consequence, the IPC will fine the NPCs that submitted the rooming lists late (33 NPCs) or not at all (61 NPCs). There were, however, no significant issues finding athletes.

Most OOC testing was conducted in the Paralympic Village, where the chaperones first went to the athlete's room according to information from the rooming list. If the chaperones did not find an athlete in their room, they would go to the dining hall or the gym, making sure they did not disclose the name of the athlete they were looking for. If they did not find the athlete, they would go back to the athlete's room. To identify the right athlete, pictures from start lists were used. Testing with no advance notice was a priority. The IO Team observed on a few occasions that chaperones revealed the selected athletes indirectly to third parties, e.g., if three out of the four athletes rooming together were present but the selected athlete was not.

If the chaperones did not locate the athlete in the village, they reported back to the Doping Control Station Manager (DCSM). The DCSM used a tracking system on a white board, and later attempts to locate the athlete were made. In case the DCSM was not able to locate the athlete during their

shift, the information was passed to the next shift.

The Doping Control Station (DCS) in the Paralympic Village was open 24 hours.

There was a small number of athletes whose submission in ADAMS indicated that they were residing outside the Paralympic Village for the period of the Games. There were two "mini-villages" in Fuji and Izu (the cycling venues) with Doping Control Stations and dedicated staff. The IPC, in coordination with Tokyo 2020, located and tested athletes at their residence in the mini villages.

6.5 In-Competition Testing

The IPC took a dynamic approach towards IC selections. In low-risk sports, the focus was either random selection (for team sports) or medalists. The IPC Anti-Doping Team, however, was overseeing the program and making recommendations in order to avoid repeat athlete testing. In high-risk sports, the IPC Anti-Doping Team was present at the venues and performed real-time selection of athletes for testing. The focus was based on performance and test history of the athletes, as well as intelligence, rather than purely ranking in the competition.

Real-time selection was more challenging for Sample Collection Personnel, especially for chaperone coordinators and chaperones, who had to react rather quickly in some cases.

The IPC collected 1,052 IC samples, all as per its TDP. In-Competition testing occurred in all 22 sports. The number of tests per sport is highlighted in Appendix I, Table 3 and Table 4. Urine and blood (including ABP) samples were collected. Samples were analyzed for EPO (both urine and blood), homologous blood transfusion (HBT), GH, GHRF and GnRH (see Appendix I, Table 6).

7.0 Sample Collection and Documentation

7.1 Doping Control Stations

The IO Team visited all competition venues and all Doping Control Stations (DCSs) during the Games period. The IO Team made the following positive observations:

- All DCSs were located strategically, close to the athletes' areas and medical zones.
- Entrances to DCSs were controlled by Sample Collection Personnel, and only certified people (in possession of a Doping Control Pass) were permitted to enter
- All DCSs had spacious waiting rooms, equipped with the necessary furniture and technical equipment including a TV with live coverage of the competition at the venue or other events of the Games. A choice of water and soft drinks was provided, both cold and at room temperature. Athletes' consumption of drinks was monitored by Sample Collection Personnel to avoid overhydration and dilute samples.
- All DCSs had an adequate number of processing rooms to ensure timely and efficient sample processing. All the processing rooms were spacious enough to fit athletes in wheelchairs. All processing rooms could be locked from the inside. There was a sufficient amount of sample collection equipment, visual materials and posters outlining the doping control process on the wall. Additionally, laminated cards were provided in processing room, with visual explanation of the doping control steps, as well as translations into multiple languages.
- The processing rooms had spacious toilets for sample provision.
- Each DCS was equipped with necessary personal protection equipment as part of COVID-19 countermeasures.
- Sample Collection Personnel had its own room/lounge to avoid crowding in the athlete waiting area.
- Refrigerators were located, and samples securely stored in the Doping Control Station Manager's office that was lockable.
- All DCSs operated well.

7.2 Sample Collection Personnel

7.2.1 Composition of Sample Collection Personnel

The Tokyo 2020 Doping Control Team consisted of 10 full-time staff in the Doping Control division, three in the laboratory division, support from Japan Anti-Doping Agency staff (20) and Sample Collection Personnel (365).

The IO Team would like to commend the Tokyo 2020 Doping Control Team, as well as the IPC, for the very successful implementation of the sample collection program during the Games.

The recruitment process of International Doping Control Officers (IDCOs) was comprehensive and started from May 2018 by the IPC sending out a request for nominations to NADOs and Regional Anti-Doping Organizations (RADOs) via the Institute of National Anti-Doping Organizations (iNADO). The deadline for nomination was in September 2018. The selection process started soon after and ended in September 2019. The final IDCO list was announced in December 2019. With the postponement of the Games being confirmed in March 2020, the Tokyo 2020 Organizing Committee sent in April 2021 a Commission Request Letter to the IDCOs that were selected in December 2019. As a result of the COVID-19 pandemic, 14 DCOs and 14 chaperone coordinators were not able to, or did not want to, travel to Tokyo for the Games. The Tokyo 2020 Organizing Committee therefore had to recruit more local DCOs and chaperone coordinators for the Games.

All DCOs working at the Paralympic Games had also worked at the Olympic Games and were therefore already familiar with the day-to-day work at the Games.

The combination of international and local DCOs allowed Tokyo 2020 to benefit from a highly experienced and diverse Doping Control Team. The final list of Sample Collection Personnel is presented in Table 1 below.

Table 1: Sample collection personnel

Paralympics	DCSMs	CCs	DCOs	BCOs	Chaperones
International	12	2	25	N/A	N/A
Japan	17	19	87	14	228
Total	29	21	112	14	228

There were 29 (12 international and 17 local) Doping Control Station Managers (DCSMs) working during the Games. The work of all DCSs was well organized and managed. All DCSMs were fluent in English. The IO Team observed several situations out of the ordinary with athletes and their support personnel that were very well handled by the DCSMs.

7.2.2 Training of Sample Collection Personnel

Sample Collection Personnel training was delivered by the Canadian Centre for Ethics in Sport, the Japan Anti-Doping Agency, the Professional Worldwide Controls (PWC) sample collection agency, and the IPC. DCO training sessions and final assessments for both local and international DCOs were held virtually.

The IO Team had the opportunity to attend two of the training sessions:

1. On 22 June 2021, the IO Team attended the "MODOC IDCO virtual session" held by PWC. The contents covered by the training included "MODOC overview, Why Paperless, Main Workflows & Process Changes and Practical Works".
2. DCO training on testing in Para sports was delivered by the IPC virtually on 13 (1st session) and 14 (2nd session) August 2021.

Overall, the training sessions were well organized. There were some technical difficulties when the trainees tried to log into MODOC. In addition, some trainees were not familiar with managing the MODOC system and needed significant assistance from the trainer to complete the practical work mission.

The training on testing in Para sports was well organized, with sufficient time allocated to the Q&A session. It was apparent that some, but not all, of the DCOs were experienced with testing in Para sport. It would therefore have been beneficial for the DCOs, especially the unexperienced ones, to have more visual material, such as illustrations of urine drainage systems, accompanied with practical training on testing in Para sports. However, the IO Team notes that the Doping Control Guide for Testing in Para Sport is a comprehensive document, which is very helpful.

Recommendation no. 4: The IPC could include more visual materials and practical sessions during the Doping Control Officer training on testing in Para sports.

7.2.3 Recruitment and Training of Chaperones

There was a sufficient number of chaperones during the Games to notify and chaperone the athletes selected for testing.

The recruitment and training of chaperones were combined for the Olympic and Paralympic Games. The People Management Functional Area (PEM FA) of the Organizing Committee was responsible for the recruitment of both international and local chaperones. Due to the postponement of the Games and the strict entry requirements to Japan, Tokyo 2020 excluded all international chaperones, and therefore all chaperones for the Games were residents of Japan.

The Paralympic Games had 228 chaperones. They participated in four online training sessions. There were another 12 on-site trainings with mock sessions for 307 chaperones. Since chaperones were volunteers, and due to limitations because of COVID-19, these training sessions were not mandatory. There were some chaperones that participated in both online and on-site training sessions and some that could not participate in either training sessions. Exactly who had undertaken training was not captured since personal data was protected and only attendance numbers were captured for each type of training sessions. All chaperones had to complete one e-learning training session.

At the beginning of each shift, the Chaperone Coordinator and Doping Control Station Manager would undertake a briefing and refreshing training with the chaperones. Some Chaperone Managers went above and beyond and did mock scenario sessions with the chaperones while waiting in the Doping Control Station.

7.3 Notification and Chaperoning of Athletes

The chaperones had Doping Control Station access passes and doping control armbands that were orange and very visible. Sample Collection Personnel always wore their official uniforms and maintained professionalism. Therefore, there were no issues observed regarding access to the Doping Control Stations and restricted areas such as mixed zones, field of play, medal ceremony room etc.

In general, language was the major barrier in notifying the athletes. This led to lack of confidence by some chaperones as they had difficulty to clearly outline the athlete's rights and responsibilities.

When DCOs or experienced chaperones notified the athletes, these challenges were not observed. The IO Team observed that when an experienced Chaperone Coordinator was in charge, the chaperone was selected according to their language skills to notify the athlete.

The IPC and Tokyo 2020 had prepared athletes' notification notes in nine languages to support athletes to understand their rights and responsibilities, and the IO Team observed increasing use of these notes over the duration of the Games, which was very positive.

Chaperones who had volunteered in the Paralympic Village during the Tokyo 2020 Olympic Games were familiar with the process and facilities. Chaperones were aware of their roles and responsibilities, for instance monitoring liquid intake or advising athletes not to drink large quantities of liquids in order to avoid dilute samples.

Recommendation no. 5: The Local Organizing Committee should ensure that all chaperones receive more (or at least one) live or online training, assessment, and mock training sessions Pre-Games.
Recommendation no. 6: The Local Organizing Committee should ensure that all chaperones have sufficient English verbal and writing skills.
Recommendation no. 7: Future Local Organizing Committees should continue to develop notification notes in more foreign languages to assist athletes in understanding the notification process and their rights and responsibilities in their own language.

7.4 Sample Collection Process

7.4.1 Arrival at the Doping Control Station

After notification, chaperones accompanied athletes and Athlete Support Personnel to the Doping Control Station. Athletes and their support personnel were provided with Doping Control Passes in order to access the Doping Control Station. Before entering the Doping Control Station in the Paralympic Village, the accreditations were scanned, and a face recognition feature was used. The Doping Control Stations at the competition venues did not have this feature.

A reception desk was located at the entrance of the Doping Control Station, both in the Paralympic Village and at the competition venues, where the entry and exits were logged. When entering the Doping Control Station, the athlete had to exchange their accreditation pass for a Doping Control Pass. The accreditation pass was attached to the athlete's Doping Control Form (DCF) so that the Doping Control Officer could validate their identity. After the test was completed, the athlete received their accreditation back while checking out at the reception desk.

7.4.2 Coordination in the Doping Control Station

The Doping Control Stations were managed by the Doping Control Station Manager. Upon arrival at the Doping Control Station waiting room, the athletes were provided with a choice of water or soft drinks and asked if they were ready to provide a urine sample. If the athlete was not ready, they were encouraged to complete some of the paperwork with the Doping Control Officer, e.g., transfer notification details into MODOC and filling out athlete's information and medications/supplements. The Doping Control Station Manager could do real-time monitoring of the different ongoing processes through MODOC. This was helpful when coordinating the work of the Doping Control Officers. After completion of each testing session, and before the athlete was checked out from the Doping Control Station, the Doping Control Station Manager double checked the documentation to ensure it was all in order. Samples where then put in secure storage in the Doping Control Station Manager's office.

7.5 Collection of Urine Samples

Overall, the quality of the performance by the Doping Control Officers (DCOs), both international and local, was excellent. The DCOs efficiently conducted the doping control process in line with the 2021 Code, the 2021 International Standard for Testing and Investigations, and the Tokyo 2020 Doping Control Operation Manual requirements. Berlinger doping control equipment was used for urine and blood samples. To facilitate sample collection and possible language barriers, each processing room was equipped with illustrative posters, which helped DCOs to explain different steps of the doping control process.

In addition to their obligations to implement the doping control process in line with the requirements, the DCOs had to follow strict COVID-19 protocols, which sometimes made their work more complicated. For instance, face masks and shields together with a language barrier sometimes made the communication between the athlete, Athlete Support Personnel and Sample Collection Personnel more difficult. Some DCOs tended to lean past the shields in order to hear the athlete better. After the Tokyo 2020 Organizing Committee and the IPC made the shields between the athlete and the Sample Collection Personnel optional, the situation improved, both communication- wise and social distance-wise. The COVID-19 protocols generally worked very well, and the IO Team was not aware of any complaints regarding safety during the sample collection process.

No major or systematic mistakes were observed. The IO Team observed a few random or minor mistakes, which were reported to the IPC and the Local Organizing Committee and were quickly rectified.

Not all local DCOs were comfortable speaking English. This sometime became problematic, especially when the athlete was inexperienced with the doping control process or if further explanation of the process was required, for instance with partial samples.

Recommendation no. 8: While the pandemic situation made it difficult to attract a large number of International Doping Control Officers (IDCOs), the IO Team would like to emphasize for future Games and organizing committees the importance of having a large number of IDCOs to gather as much experience and different languages among the Doping Control Officers as possible.
Recommendation no. 9: Provide the athletes with access to doping control documents, such as their rights and responsibilities and the Supplementary Report Form, translated into multiple languages, as well as illustrated posters in the Doping Control Stations, where they were very helpful for both DCOs and athletes. The IO Team recommends passing this best practice to future Games organizers.

7.5.1 Dilute Sample Policy

The Tokyo 2020 Doping Control Operational Manual outlined detailed instructions in case a urine sample did not meet the requirement for suitable specific gravity (SG) for analysis. These included, in particular, the requirement that DCOs collect additional samples from the athlete until the requirement for SG is met. The IPC, however, added the following precisions:

a. When the DCO identifies that the SG of the first urine sample is lower than the requirement, the DCO shall collect an additional sample from the athlete.
b. When the SG of the second urine sample is still lower that the requirement, the DCO must make a phone call to IPC Anti-Doping Team, or the IPC Anti-Doping Management, who will decide how to proceed.

Whilst the IO Team can appreciate that the IPC wanted to implement a consistent approach when dealing with dilute samples, the IO Team does not believe that a phone call is always necessary if the second urine sample provided does not meet the requirement for specific

gravity, especially if there are no exceptional circumstances identified by the DCO. Instead, the IPC should document what it may consider as exceptional circumstances ahead of time and share those with its DCOs. While DCOs may still be required to contact the IPC to assist in making a final determination regarding whether or not to stop sample collection, the phone call would be triggered by the exceptional circumstances that may exist and not by a specific number of samples collected. The IO Team is of the view that by identifying a specific number, there is a perception that sample collection will stop after the second sample is provided even if the specific gravity is not met and no exceptional circumstances exist.

Having said that, out of 31 dilute samples from 19 individual tests during the Games, three tests ended without a sample with a suitable specific gravity being collected. For two of the three cases, the IO Team is aware of the discussion that took place and why sample collection did not continue. Specifically, in one instance, this was due to a situation involving a close contact with a COVID case. There was an initial phase of figuring out how to handle such situation, which was worked out and a system was put in place. This athlete was tested the next morning and a suitable sample for analysis was collected. The second instance involved a sample collection which continued late in the evening and where the athlete was at risk of not having access to any transportation. The IO Team is of the view that in those two cases, it was justified to stop sample collection and we also commend the IPC for collecting an additional sample from one of those athletes the following day.

Whilst the IO Team acknowledges that the dilute sample process was implemented in accordance with the ISTI, we recommend removing the requirement to call after two dilute samples are provided, especially if there are no exceptional circumstances identified by the DCOs. As mentioned above, the phone call should be triggered when the situation calls for it and not after a specific number of dilute samples are collected.

***Recommendation no. 10**: The IO Team recommends that the IPC reviews the wording of their instructions for future Games, so that it is clear that the dilute sample policy is based on potential situations involving exceptional circumstances which would trigger the DCOs to contact the IPC Anti-Doping Team, or the IPC Anti-Doping Management to confirm whether such exceptional circumstances exist that make it impossible to continue with the sample collection session rather than after two dilute samples.*

7.6 Collection of Blood Samples

The Blood Control Officers (BCOs) were all from Japan. They were very professional and performed their role well.

Both blood serum samples and blood Athlete Biological Passport (ABP) samples were collected. To help athletes understand the ABP Supplementary Report Form, translation cards were provided in nine major languages. After collecting blood samples, the DCOs noted the time and set a timer to indicate the correct time when the samples should be put into cooling boxes with the temperature data loggers. No departures from the ISTI requirements were observed.

7.7 Declaration of Medications and Supplements

Declarations of medications and supplements were entered in MODOC. Athletes had the possibility to provide information on medication and supplements in their native language in MODOC by changing the language setting; however, most DCOs were not aware of this possibility.

The IO Team observed in several cases that DCOs only asked for medications and not supplements. The situation improved after the Local Organizing Committee received this feedback.

Recommendation no. 11: Future organizing committees are recommended to ensure that DCOs are instructed to ask for both medications and supplements when filling out the doping control form.

7.8 Modifications for Athletes with Impairments

Prior to the Games, the IPC published its Doping Control Guide for Testing Athletes in Para Sport. This Guide is very comprehensive and provides information about the types of impairments that are eligible within Para sport and tips on how to engage with athletes with a disability. The IO Team commends the IPC for this initiative.

Overall, the DCOs performed and recorded all required modifications in accordance with the ISTI. The IO Team noted a few areas for improvement:

- When testing visually impaired athletes, some DCOs communicated with the athlete's representative instead of directly with the athlete, especially when the athlete needed translation.
- The requirement that Athlete Support Personnel has to observe the DCO in turn observing the sample provision (and a third person therefore must observe the Athlete Support Person) was over-interpreted in some cases, leading to unnecessarily large crowds in the processing rooms in the Doping Control Station.

Recommendation no. 12: The IPC and future organizing committees should provide more emphasis on athletes with visual impairments, and other specific scenarios should be placed during training to ensure that Doping Control Officers are comfortable in all situations for these athletes during doping control.

7.9 Storage of Samples in the Doping Control Station

All completed urine samples were stored in refrigerators in the Doping Control Station Manager offices. Blood samples were stored in cooling boxes, where their temperature was recorded. Upon completion of each sample collection session, the DCOs delivered the samples and relevant documentation to the Doping Control Station Manager, who thoroughly ensured that every part of the process was correctly documented before the athlete was checked out from the Doping Control Station.

7.9.1 Transport of Samples and Chain of Custody

The Doping Control Station Manager made a daily appointment with the official Games Courier, YAMOTO. Until the arrival of courier, all samples were kept refrigerated in the Doping Control Station Manager's office. The courier brought unsealed cardboard cooling boxes with cooling devices. The Doping Control Station Manager placed each sample into the cooling box and recorded the numbers of samples in MODOC. Each cooling box was sealed, and the sealing code was recorded on the Chain of Custody.

When all samples were packed and sealed, and all the data was recorded and paperwork completed, the Doping Control Station Manager accompanied the samples to the courier vehicle.

The samples were then transported to the WADA-accredited Tokyo Doping Control Laboratory.

7.10 MODOC

For the first time during the Paralympic Games, the doping control process was paperless, and the doping control documentation was performed using tablets with touch screens. The system used is called MODOC and has been developed by Professional Worldwide Controls (PWC), a professional sample collection agency. For the duration of the Games, two of the developers of the MODOC system were on site to help with any problems or questions.

For athlete notification, Tokyo 2020 used paper notification forms, which contained all mandatory

information as per ISTI requirements. After the athlete arrived at the Doping Control Station, the notification details were transferred to MODOC.

The Doping Control Forms, Athlete Biological Passport additional questionnaires and supplementary report forms, the Chain of Custody and the letter to the laboratory were all paperless. All digital doping control documentation was in line with ISTI requirements.

According to the IO Team's experience, there were very few problems with the system during the Paralympic Games. As the majority (if not all) of the DCOs working at the Paralympic Games had also used MODOC during the Olympic Games, they were already well acquainted and experienced with the system at the start of the Paralympic Games.

MODOC allowed the Doping Control Station Manager to monitor the progress of the procedures in each processing room.

The disadvantage with the system is that it is not linked to ADAMS, which means that the mission orders are created in ADAMS and then must be manually transferred to MODOC, after which the completed Doping Control Forms have to be manually entered into ADAMS. This created additional administrative work and increased the risk of manual mistakes.

Recommendation no. 13: WADA should provide an application programming interface (API) to allow ADAMS to communicate with the different paperless doping control systems, such as MODOC. WADA's paperless system, which is free of charge, could also be considered for future Games.

8.0 Analysis of Samples

A total of 2,174 samples were collected during the Games: 1,695 urine samples, 258 blood samples and 221 Athlete Biological Passport (ABP) blood samples. Complete tables of testing figures are shown in Appendix I.

8.1 Athlete Biological Passport

The IPC uses the Doping Laboratory in Ghent, Belgium, as its Athlete Passport Management Unit (APMU). During the Games, the Ghent APMU reviewed all the blood and steroid athlete passports of which the IPC had Passport Custody. The APMU issued reports for every new sample in the respective passports within 24 hours. In addition, starting on 25 August, the APMU compiled all its key testing and analysis recommendations in a document that was sent to the IPC daily. This allowed the IPC to immediately act on all urgent recommendations. For the passports of which the IPC did not have custody and for which the Ghent APMU did not have access, the IPC reviewed read-only files and made recommendations based on these to the laboratory.

The APMU made approximatively 150 testing and analysis recommendations. Based on these, the IPC requested an additional 44 IRMS and 10 EPO and/or blood transfusion analyses from the Tokyo Laboratory.

Recommendation no. 14: The IPC should ask for the permission from the passport custodian organizations that their respective APMUs send their testing and analysis recommendations directly to the IPC during the Games. During the Olympic Games, the International Testing Agency created a secure share file system into which they asked all APMUs to put their testing and analysis recommendations. A similar solution is recommended for the Paralympic Games in order to allow the IPC to receive APMU recommendations from all sports and disciplines.

8.2 Atypical Findings

During the Games Period, the Tokyo Laboratory reported two Atypical Findings (ATFs) (see Appendix II, Table 7). One of the ATFs is currently under investigation, and one was covered by

an approved TUE.

8.3 Adverse Analytical Findings

In total, ten AAFs were reported by the Tokyo Doping Control Laboratory during the Games. Nine of the AAFs were covered by approved TUEs or involved a prohibited substance that was used via a permitted route of administration and one of them has resulted in an ADRV and a sanction for the athlete. For further details, see Appendix II, Table 8.

One potential "non-analytical" ADRV (e.g., evasion, refusal, failure to submit to sample collection, tampering, possession) was reported during the Games. The investigation is still ongoing.

8.4 Sample Retention and Further Analysis Strategy

As recommended by a previous IO Team (Recommendation no. 7 of the PyeongChang 2018 Paralympic Games IO Report), the IPC has implemented a targeted, intelligence-based sample retention and further analysis strategy. The IPC policy was shared with the IO Team. Under this policy, every sample was reviewed, and a number of samples were selected for long-term storage based on steroidal or hematological passport data, atypical findings, risk of sport, risk of athlete, performance and intelligence. Consequently, 802 urine samples and 9 EDTA blood samples were selected for long-term storage.

The policy also states that samples selected for long-term storage will be further analyzed if, among other things, information and analysis methods of new substances are available or if existing methods are significantly improved. A number of stored samples from the Rio 2016 Games were further analyzed prior to the Tokyo Games.

9.0 Therapeutic Use Exemptions

Athletes may have illnesses or conditions that require them to take medication(s) or use (a) prohibited method(s) that are on the Prohibited List. A Therapeutic Use Exemption (TUE) may give an athlete the authorization to use (a) prohibited substance(s) or method(s) while competing in sport if it is in accordance with the International Standard for TUEs (ISTUE). The purpose of the ISTUE is to ensure that the process of granting TUEs is harmonized across sports and countries.

The IPC operates as both as a Major Event Organization (MEO) and an International Federation (IF) for ten Para sports, four of which participated in the Tokyo 2020 Paralympic Games. Since the IPC was the MEO for the Games, it managed the TUE approval process for the athletes competing at the Games.

The IPC TUE Committee (TUEC) consists of members of the IPC Medical Committee who are responsible for the assessment of TUEs. Currently, there are eight standing members in the IPC Medical Committee, seven of whom are physicians and one member who has a special interest in para-athletes. Four of the eight standing TUEC members could not act as a TUEC member on site at the Games due to NPC roles, illness and/or other commitments. The IPC therefore appointed three new physicians to be part of the TUEC during the Games.

The TUEC members that were on site during the Games period consisted of three physicians – two members of the standing Medical Committee plus one of the additional physicians. All TUE requests for the granting of a new TUE or for recognition of an existing TUE were reviewed by the IPC TUEC. The IPC Medical Manager was responsible for all TUE administration and was the main liaison with the NPCs and IFs.

As defined by the Tokyo 2020 Doping Control Guidebook, all athletes registered to compete at the Games were considered to be international-level athletes for the duration of the Games Period of 3 August to 5 September 2021. In the 2021 version of the IPC Anti-Doping Code, the IPC described the TUE recognition process, as well as the TUE application process (sections 4.4.2 and 4.4.3). The

detailed application process for TUEs was also available on the IPC website.

In accordance with the Tokyo 2020 Doping Control Guidebook, if the athlete needed to obtain a new TUE before the Period of the Games, i.e., prior to 3 August 2021, they needed to apply to the responsible Anti-Doping Organization that was in charge of the TUE management i.e., NADOs for national-level athletes and IFs for international-level athletes. From 3 August 2021, all athletes that required a new TUE had to apply directly to the IPC TUEC and submit the completed TUE application form with supporting medical documents electronically, either by email or through ADAMS. Submissions were only accepted in English. If approved, the TUE would only be valid for the duration of the Games, except where the IPC was the IF for the athlete's sport. All new applications were processed by the IPC Medical Manager and uploaded into ADAMS.

Under the provisions of the IPC Anti-Doping Code, where the athlete already had a TUE granted by another ADO, the IPC would recognize it for the Games period, provided it met the Article 4.2 conditions set out in the ISTUE. If the IPC considered that the TUE did not meet the ISTUE 4.2 criteria, it would not be recognized, and the athlete could not use the prohibited substance or prohibited method in question in connection to the Games.

As published on its website, the IPC had a process in place that allowed for automatic recognition of TUE decisions (or categories of such decisions i.e., certain substances or methods) made by certain ADOs without undergoing an IPC TUEC review. The complete list of eligible NADOs and IFs for automatic recognition was made available on the IPC website.

Whilst automatic recognition meant that an IPC TUEC review was not required, the IPC Medical Manager screened all TUEs for completeness regardless of the automatic recognition eligibility. The IPC notified the athletes through their NPC to inform them whether their TUE was recognized or not. All TUE approvals (including recognized TUEs) were only valid for the duration of the Games for the sports for which the IPC was not the IF.

One of the main challenges that the IPC TUEC faced was incomplete TUE applications with insufficient medical documentation. There were also numerous TUE applications where a TUE was not needed since the medication was not prohibited OOC, such as glucocorticoids. In addition, there were several TUE applications for vitamins, antibiotics, painkillers, and salbutamol at therapeutic doses, which are not prohibited. The IPC Medical Manager sent all NPCs and Chief Medical Officers (CMOs) an email reminding them to check the use of medications among their athletes so that new or expired TUEs for athletes were not missed and recognition of TUEs was complete.

In total, there were 101 TUEs granted or recognized for the Games. Four TUEs were retroactively approved, and one TUE was rejected because the route of administration was not clear. Two TUEs were cancelled during the period of the Games as one was no longer clinically needed and the other was illegal to import into Japan. More information is outlined below in Table 2.

Table 2: TUE Figures

	Before Period of the Games	During Period of the Games
Granted by IPC	14 TUEs (11 athletes)	10 TUEs (8 athletes)
Recognized by IPC	53 TUEs (50 athletes)	24 TUEs (22 athletes)

Recommendation no. 15: The IPC, in collaboration with NPCs and IFs, should continue its efforts to educate athletes and Athlete Support Personnel, including team physicians, on the TUE process and the requirements to have a complete and robust TUE application and supporting medical documents. Furthermore, any changes to the WADA Prohibited List, such as the upcoming glucocorticoid changes in 2022, should be communicated accordingly.

10.0 Results Management

10.1 The Anti-Doping Rules

The applicable anti-doping rules during the Paralympic Games are clearly set out in the "IPC Games Rules". These are supplemented by the "IPC IF Rules", which apply when the IPC functions as the relevant International Federation.

The IO Team noted that the IPC Games Rules, which were in line with the 2021 Code, addressed the points highlighted by previous IO Teams, i.e., the accumulation of roles within the IPC Secretariat. In the IPC Games Rules, the responsibilities of the IPC are well separated from those of the Independent Tribunal, which is competent to decide on sanctions within the Paralympic Games, and beyond, where the IPC functions as the International Federation.

10.2 Prior to the Games

In the months prior to the Games, the IPC signed agreements for the "Transfer of Testing and Results Management Authority" with participating IFs. Through these agreements, IFs were bound to make all possible attempts to complete results management of pending procedures prior to the Games and inform the IPC should this not be possible.

The IO Team commends this initiative from the IPC to ensure that all IF cases are settled by the date of commencement of the Games. Such efforts could be replicated, to some extent, with NADOs in order to similarly ensure that all cases within their jurisdictions are also settled.

10.3 During the Games

The IO Team noted that the IPC's office was well staffed, including with the support of an external lawyer should an anti-doping case arise during the Games.

However, there were no disciplinary hearings held during the Games. The IO Team was informed that should a potential ADRV arise during the Games, the relevant hearing would have taken place virtually before the IPC Independent Tribunal.

11.0 Education and Awareness

11.1 Before the Games

The IPC, in collaboration with WADA, launched an anti-doping e-learning course on WADA's Anti- Doping Education and Learning platform (ADEL) specifically made for athletes, coaches and other support personnel participating in the Paralympic Games. A letter from the IPC was sent to all NPCs and recommended that all athletes and support personnel should complete this course prior to the Games. The course was offered in nine languages and, as of 7 September 2021, had been completed 2,153 times (out of 2,752 enrolments). The IO Team commends the IPC for this initiative and encourages the IPC and WADA to provide further translations of the course so that it becomes accessible to an even wider audience. A particular focus could be given to languages spoken outside of Europe (for example, Arabic, Chinese and Japanese).

As recommended in the IO Report from the Rio de Janeiro 2016 Paralympic Games (Recommendation 74), the IPC could also consider linking completion of the online education to the accreditation process for participation at the Games.

Recommendation no. 16: Make the e-learning course mandatory for all athletes and their support personnel once more languages are available. The completion of the course should be linked to the accreditation process.

11.2 During the Games

From its interactions with athletes and their support personnel, the IO Team noted good awareness of anti-doping processes. When being notified, most athletes appeared comfortable with the doping control process as a normal part of competing at high level.

Whilst there were some exceptions, the vast majority of athletes observed had already been through doping control prior to their presence at the Paralympic Games. This reflects the work conducted by the IPC and anti-doping stakeholders to ensure that athletes are familiar with the process as well as their rights and responsibilities during doping control.

For those athletes that were not so familiar with the doping control process, the Tokyo 2020 Organizing Committee had posters in the Doping Control Stations describing the process step by step, both for the athletes' understanding and for the Doping Control Officers to be able to explain the process better, especially when there were language barriers.

Since WADA's athlete outreach program was not present at the Games due to the pandemic, the IO Team made an effort to ask athletes about their level of anti-doping education following completion of the sample collection process. Many athletes mentioned that their NPCs requested them to participate in mandatory anti-doping education programs, some of them as often as monthly, but more commonly every quarter or yearly. The IO Team stresses that this was not a systematic review, only a small selection of athletes, but the impression was that most athletes were well educated and experienced in the doping control processes.

Recommendation no. 17: The IO Team notes that anti-doping information (or reference to IPC/WADA anti-doping information) on various NPCs' websites is scarce or non-existent. It is highly recommended to the concerned NPCs to highlight the rights and responsibilities of athletes and Athlete Support Personnel and facilitate their awareness and compliance with the IPC Anti-Doping Code and other IPC Anti-Doping Regulations.

Recommendation no. 18: The IPC should consider making Recommendation no. 17 mandatory as a part of its NPC membership to the IPC. The NPCs would then also assist by translating this information into their language.

Recommendation no. 19: The language barrier is a recurring issue in the doping control process. Therefore, it is recommended that the materials produced by WADA, the IPC and Anti-Doping Organizations are translated into more languages. 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 no. 20: As the COVID-19 pandemic continues, the IPC should consider developing online athlete outreach and/or mobile application programs for future Games (Beijing 2022 and Paris 2024)

12.0 Summary of Recommendations

- **Recommendation no.1**: The IPC should collaborate with the applicable National Anti- Doping Organizations (NADOs) at least 12 months in advance of the Games to ensure that an appropriate level of out-of-competition testing is built into the NADOs' Test Distribution Plans for Paralympic athletes; and the IPC should provide specific test recommendations at least six months prior to the Games.
- **Recommendationno.2**: National Paralympic Committees need to be more proactive in communicating the long lists to the IPC and their NADO, and the NADOs should ensure that athletes that qualify or are likely to qualify for the Paralympic Games are tested at least once within six months prior to the Games. This especially concerns sports considered "high-risk" according to the Risk Assessment.
- **Recommendation no.3**: It would be beneficial for the IPC to have their own confidential platform moving forward, in order in particular to be able to monitor and act on tips and information quickly, which is important during major events.
- **Recommendation no.4**: The IPC should include more visual materials and practical sessions during the Doping Control Officer training on testing in Para sports.
- **Recommendation no.5**: The Local Organizing Committee should ensure that all chaperones receive more (or at least one) live or online training, assessment, and mock training sessions Pre-Games.
- **Recommendation no.6**: The Local Organizing Committee should ensure that all chaperones have sufficient English verbal and writing skills.
- **Recommendation no.7**: Future Local Organizing Committees should continue to develop notification notes in more foreign languages to assist athletes in understanding the notification process and their rights and responsibilities in their own language.
- **Recommendation no.8**: While the pandemic situation made it difficult to attract a large number of International Doping Control Officers (IDCOs), the IO Team would like to emphasize for future Games and organizing committees the importance of having a large number of IDCOs to gather as much experience and different languages among the Doping Control Officers as possible.
- **Recommendation no.9**: Provide the athletes with access to doping control documents, such as their rights and responsibilities and the Supplementary Report Form, translated into multiple languages, as well as illustrated posters in the Doping Control Stations, where they were very helpful for both DCOs and athletes. The IO Team recommends passing this best practice to future Games organizers.
- **Recommendation no.10**: The IO Team recommends that the IPC reviews the wording of their instructions for future Games, so that it is clear that the dilute sample policy is based on potential situations involving exceptional circumstances which would trigger the DCOs to contact the IPC Anti-Doping Team, or the IPC Anti-Doping Management to confirm whether such exceptional circumstances exist that make it impossible to continue with the sample collection session rather than after two dilute samples.
- **Recommendation no. 11**: Future organizing committees are recommended to ensure that DCOs are instructed to ask for both medications (including hormonal contraceptives for women) and supplements when filling out the doping control form.
- **Recommendation no. 12**: The IPC and future organizing committees should provide more emphasis on athletes with visual impairments, and other specific scenarios should be placed during training to ensure that Doping Control Officers are comfortable in all situations for these athletes during doping control.
- **Recommendation no. 13**: WADA should provide an application programming interface (API) to allow ADAMS to communicate with the different paperless doping control systems, such as MODOC. WADA's paperless system, which is free of charge, could also be considered for future Games.
- **Recommendation no. 14**: The IPC should ask for the permission from the passport custodian organizations that their respective APMUs send their testing and analysis recommendations directly to the IPC during the Games. During the Olympic Games, the International Testing Agency created a secure share file system into which they asked all APMUs to put their testing and analysis recommendations. A similar solution is recommended for the Paralympic Games in order to allow the IPC to receive APMU recommendations from all sports and

disciplines.

- **Recommendation no. 15**: The IPC, in collaboration with NPCs and IFs, should continue its efforts to educate athletes and Athlete Support Personnel, including team physicians, on the TUE process and the requirements to have a complete and robust TUE application and supporting medical documents. Furthermore, any changes to the WADA Prohibited List, such as the upcoming glucocorticoid changes in 2022, should be communicated accordingly.
- **Recommendation no. 16**: Make the e-learning course mandatory for all athletes and their support personnel once more languages are available. The completion of the course should be linked to the accreditation process.
- **Recommendation no. 17**: The IO Team notes that anti-doping information (or reference to IPC/WADA anti-doping information) on various NPCs' websites is scarce or non-existent. It is highly recommended to the concerned NPCs to highlight the rights and responsibilities of athletes and Athlete Support Personnel and facilitate their awareness and compliance with the IPC Anti-Doping Code and other IPC Anti-Doping Regulations.
- **Recommendation no. 18**: The IPC should consider making Recommendation no. 17 mandatory as a part of its NPC membership to the IPC. The NPCs would then also assist by translating this information into their language.
- **Recommendation no. 19**: The language barrier is a recurring issue in the doping control process. Therefore, it is recommended that the materials produced by WADA, the IPC and Anti-Doping Organizations are translated into more languages. 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 no. 20**: As the COVID-19 pandemic continues, the IPC should consider developing online athlete outreach and/or mobile application programs for future Games (Beijing 2022 and Paris 2024).

APPENDIX I

Table 3: Number of Samples by Date and by Type of Test

Date	IC	OOC	Total
18/8/2021	0	15	**15**
19/8/2021	0	79	**79**
20/8/2021	0	135	**135**
21/8/2021	0	202	**202**
22/8/2021	0	180	**180**
23/8/2021	0	133	**133**
24/8/2021	0	68	**68**
25/8/2021	71	122	**193**
26/8/2021	61	42	**103**
27/8/2021	98	62	**160**
28/8/2021	124	31	**155**
29/8/2021	113	14	**127**
30/8/2021	106	9	**115**
31/8/2021	89	1	**90**
1/9/2021	89	10	**99**
2/9/2021	69	5	**74**
3/9/2021	82	1	**83**
4/9/2021	105	13	**118**
5/9/2021	45	0	**45**
Total	**1,052**	**1,122**	**2,174**

Table 4: Number of Samples by Sport and by Type of Test

Sport	Discipline	IC	OOC	Total
Archery	Para-Archery	22	0	**22**
Badminton	Para-Badminton	34	0	**34**
Basketball	Wheelchair Basketball	59	10	**69**
Boccia	Para-Boccia	8	0	**8**
Canoe/Kayak	Para-Canoe Sprint	27	32	**59**
Cycling	Para-Cycling	43	113	**156**
Equestrian	Para-Equestrian	4	0	**4**
Fencing	Wheelchair Fencing	19	0	**19**
Football 5-a-Side	Para-Football 5-a-side	28	9	**37**
Goalball	Goalball	36	0	**36**
Judo	Para-Judo	71	67	**138**
Para-Athletics	All Para-Athletics Disciplines	262	377	**639**
Para-Powerlifting	Para-Powerlifting	79	209	**288**
Para-Swimming	All Para-Swimming Disciplines	151	182	**333**
ParaVolley	ParaVolley Sitting	23	0	**23**
Rowing	Para-Rowing	28	44	**72**
Rugby Union	Wheelchair Rugby	18	17	**35**
Shooting Para Sport	Shooting Para Sport	29	0	**29**
Table Tennis	Para-Table Tennis	63	0	**63**
Taekwondo	Para-Taekwondo-Kyorugi	17	23	**40**
Tennis	Wheelchair Tennis	14	17	**31**
Triathlon	Para-Triathlon	17	22	**39**
	Total	**1,052**	**1,122**	**2,174**

Table 5: Number of samples by sport and matrix

Sport	Discipline		Urine	Blood	Blood ABP	Total
Archery	Para-Archery		22	0	0	**22**
Badminton	Para-Badminton		32	2	0	**34**
Basketball	Wheelchair Basketball		65	4	0	**69**
Boccia	Para-Boccia		8	0	0	**8**
Canoe/Kayak	Para-Canoe Sprint		44	0	15	**59**
Cycling	Para-Cycling		91	14	51	**156**
Equestrian	Para-Equestrian		4	0	0	**4**
Fencing	Wheelchair Fencing		19	0	0	**19**
Football 5-a-Side	Para-Football 5-a-side		36	1	0	**37**
Goalball	Goalball		36	0	0	**36**
Judo	Para-Judo		126	12	0	**138**
Para-Athletics	All Para-Athletics Disciplines		467	89	83	**639**
Para-Powerlifting	Para-Powerlifting		201	87	0	**288**
Para-Swimming	All Para-Swimming Disciplines		270	24	39	**333**
ParaVolley	ParaVolley Sitting		23	0	0	**23**
Rowing	Para-Rowing		48	5	19	**72**
Rugby Union	Wheelchair Rugby		27	8	0	**35**
Shooting Para Sport	Shooting Para Sport		29	0	0	**29**
Table Tennis	Para-Table Tennis		63	0	0	**63**
Taekwondo	Para-Taekwondo-Kyorugi		36	4	0	**40**
Tennis	Wheelchair Tennis		21	4	6	**31**
Triathlon	Para-Triathlon		27	4	8	**39**
	Total		**1,695**	**258**	**221**	**2,174**

Table 6: Number and type of analyses

Analysis	Total
All EPO (urine and blood analysis)	**246**
Blood transfusions	**9**
GH Analysis	**246**
GHRF analysis	**1,519**
GnRH	**861**

APPENDIX II

Table 7: Atypical Findings (ATFs) - Summary by Substance Class

Test Type	Analysis Result	Substance Class	Substances	Outcome
OOC	ATF	S4. Hormone and Metabolic Modulators	trimetazidine	Investigation ongoing
OOC	ATF	S7. Narcotics	morphine	Valid TUE

Table 8: Adverse Analytical Findings (AAFs) - Summary by Substance Class

Test Type	Analysis Results	Substance Class	Substances	Outcome
OOC	AAF	S5. Diuretics and Masking	brinzolamide	Permitted route of
OOC	AAF	S5. Diuretics and Masking	desmopressin	Valid TUE
OOC	AAF	S5. Diuretics and Masking	dorzolamide	Permitted route of
OOC	AAF	S5. Diuretics and Masking	brinzolamide	Permitted route of
IC	AAF	S6. Stimulants	modafinil	Valid TUE
IC	AAF	S6. Stimulants	methylphenidate	Valid TUE
IC	AAF	S5. Diuretics and Masking	dorzolamide	Permitted route of
IC	AAF	S5. Diuretics and Masking	dorzolamide	Permitted route of
IC	AAF	S5. Diuretics and Masking	dorzolamide	Permitted route of
IC	AAF	S6. Stimulants	Sibutramine	ADRV

APPENDIX III

WADA Independent Observer Team for the Tokyo 2020 Paralympic Games:

Role	Member	Position and Organization	Nationality
Chair	Jenny Schulze	Manager, Testing and Science National Anti-Doping Agency of Sweden	Sweden
Vice-Chair	Ieva Lukosiute-Stanikuniene	Senior Manager, NADO/RADO Relations World Anti-Doping Agency	Lithuania
Manager	Yoko Dozono	Medical Consultant, Medicine and Science World Anti-Doping Agency	Japan
Member	Thomas Delaye-Fortin	Head of Legal and Governance Badminton World Federation	Canada
Member	Jeongmin Lee	Member, Asian Paralympic Committee Athletes' Council (former athlete)	Republic of Korea

Left to right - IO Paralympic Team Members: Jeongmin Lee, Ieva Lukosiute-Stanikuniene, Jenny Schulze, Yoko Dozono, Thomas Delaye-Fortin