Report of the

INDEPENDENT OBSERVERS

2024 Summer Olympic Games
Paris, France

world anti-doping agency

PARIS 2024

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1.0 Acknowledgement

The preparation and logistics of bringing the WADA Independent Observer Team (IO Team) members together and providing everything from travel, accommodation, technical documents, accreditation, and support is a large and often thankless task. All IO Team members greatly appreciate the support and hard work of all the WADA team members who helped to physically get us on the ground in Paris. We would also like to acknowledge and thank the WADA staff and WADA IO Team members who performed an enormous task on the ground, often while managing their regular duties.

Special thanks go to Dan-Thanh Tran (IO Vice-Chair) and Françoise Dagouret (IO Team Manager), who were instrumental in the success of the program for Paris. They went above and beyond in their roles, providing the highest level of support to the rest of the team. Their individual contributions deserve to be noted and acknowledged.

The entire teams from the International Testing Agency (ITA) and Agence française de lutte contre le dopage (AFLD) were consistently professional and greatly assisted the IO Team. This included pre-games briefings, in-games meetings, information sharing, and on-the-ground support during sample collection missions. At all times, the staff were welcoming and accommodating towards the IO Team. It is challenging to accommodate an audit-style program and answer questions while delivering the operational anti-doping program for the Games. We thank both the ITA and AFLD for their professionalism and support in providing a collaborative environment and their openness in sharing information with the IO Team.

The IO Team would also like to extend our gratitude to the Paris 2024 staff, IOC team members, staff from the WADA accredited laboratory, and the Court of Arbitration in Sport (CAS) who assisted us in performing our functions for the Paris Games. We were pleased to work with Dr. Richard Budgett, IOC Medical Director, in what is his last Games in his current role.

The volunteer chaperones were a delight to work with. The enthusiasm and pride of many chaperones, particularly the local ones, helped to lift everyone during the long hours working in Doping Control Stations (DCS). We hope that they enjoyed their time working in anti-doping and thank all of them for their efforts.

The anti-doping rules are technical and detailed. No sample collection is rarely the same and the success of the entire program hinges on the work of the DCOs. The DCOs were a group of international experts in their field. They perform under pressure and are the real heroes of the anti-doping program. We understand that it is difficult to have WADA IO Team members watching your every move during sample collection sessions. We were honoured to have worked so closely with all of you. Your professionalism, attention to detail and dedication to delivering the largest part of the anti-doping program needs special mention. These team members work incredibly long hours, often have to wait for transport to get back to their hotels at all hours of the evening/morning, deal with every kind of logistical issue imaginable, and are generally tired, thirsty and hungry. Continually through the Paris Games we witnessed your professionalism and dedication. You all did such a great job in protecting the integrity of the sample collection processes. Thank you all for doing an outstanding job, for your sense of humour and your incredible dedication and hard work.

Lastly, but certainly not least, are the group of people who are the reason that we do what we do: the athletes of the Paris Games. We witnessed elation and heartbreak in equal measure. Despite the annoyance of having to interrupt your training, plans or post-event celebrations to sit in a DCS waiting room, you treated the anti-doping staff and IO Team members with grace and generosity. We thank you for your part in protecting the integrity of sport and ensuring the anti-doping program could be delivered.

2.0 Acronyms and abbreviations

Full Name	Acronym/Abbreviation
Adverse Analytical Finding	AAF
Agence Française de Lutte contre le Dopage	AFLD
Anti-Doping Administration & Management System	ADAMS
Anti-Doping Hub	ADH
Anti-Doping Organization	ADO
Anti-Doping Rule Violation	ADRV
Athlete Biological Passport	ABP
Athlete Passport Management Unit	APMU
Atypical Finding	ATF
Blood Collection Officer	BCO
Chain of Custody	CoC
Chief Medical Officer	CMO
Court of Arbitration for Sport's Ad Hoc Division	CAS Ad Hoc Division
Court of Arbitration for Sport's Anti-Doping Division	CAS ADD
Delegated Third Party	DTP
Doping Control Command Center	DCCC
Doping Control Form	DCF
Doping Control Officer	DCO
Doping Control Station	DCS
Doping Control Station Manager	DCSM
Dried Blood Spot	DBS
Erythropoietin receptor agonists	ERAs
External Quality Assessment Scheme	EQAS
Gonadotrophin Releasing Hormone	GnRH
Growth Hormone Releasing Hormone	GHRH
Growth Hormone Releasing Peptides	GHRP
Growth Hormone Secretagogues	GHS
Haemoglobin-based Oxygen Carriers	HBOCs
Hypoxia-inducible factors	HIFs
Independent Observer Team	IO Team
Insulin-like Growth Factor-I	IGF-I
Intelligence and Investigations	I&I
Intelligence Collection Plan	ICP
Intelligence Task Force	ITF
International Doping Control Officer	IDCO
International Federation	IF

Full Name	Acronym/Abbreviation
International Olympic Committee	IOC
International Standard for Education	ISE
International Standard for Laboratories	ISL
International Standard for Results Management	ISRM
International Standard for Testing and Investigations	ISTI
International Testing Agency	ITA
International Testing Agency's data management system	PASS
International Testing Agency's reporting platform	REVEAL
International Testing Agency's anti-doping communication platform	ADCOM
IOC Anti-Doping Rules applicable to the XXXIII Olympiad Paris 2024	IOC ADR
Isotope Ratio Mass Spectrometry	ISRM
Laboratoire AntiDopage Français	LADF
Laboratory Information Management System	LIMS
Local Organizing Committee	LOC
Major Events Organization	MEO
National Anti-Doping Organization	NADO
National Olympic Committee	NOC
Olympic Broadcasting Services	OBS
Olympic Summer Games Paris 2024	Paris Games
Paris Organising Committee for the 2024 Olympic and Paralympic Games (COJOP2024)	Paris 2024
Personal Protection Equipment	PPE
Registered Testing Pool	RTP
Results Management Authority	RMA
Sport Specific Protocol	SSP
Test Distribution Plan	TDP
Testing Pool	TP
Therapeutic Use Exemption	TUE
Therapeutic Use Exemption Committee	TUEC
Word Anti-Doping Code	Code
World Anti-Doping Agency	WADA

3.0 Executive Summary

The IO Team's primary role was to conduct an audit-style review of the anti-doping program for the Paris Games. An anti-doping program of this scale presents numerous moving parts, making it a significant logistical and technical challenge. Crucially, in recognition of the paramount importance of the athlete experience, the IO Team included an athlete representative from the WADA Athlete Council. This ensured the athlete's unique perspective was integrated directly into our assessment and recommendations.

While the IO Team has provided many recommendations in this report (many of a technical nature), it would be wrong to think that we were not impressed overall with the quality of the anti-doping program and the efforts of all individuals connected with the program.

From the perspective of an athlete who has personally undergone multiple doping control sessions, every recommendation within this summary and report directly or indirectly shapes the athlete experience at major Games.

It is therefore important for both the Local Organizing Committee (LOC) and the Major Event Organization (MEO) to thoroughly review all recommendations, keeping the athlete experience at the forefront of their considerations. Every decision and policy directly impacts the athletes, who are at the heart of any major sporting event. By prioritizing their needs and perspectives, the LOC and MEO can ensure a more seamless, fair, and ultimately successful Games for everyone involved.

To ensure the anti-doping program receives the necessary support and clear direction, these recommendations, along with their associated timelines, need to be embedded within the Olympic Requirements (ORs)/Host City Agreement and/or the anti-doping or other policies for the Games. This means existing policies, such as the accreditation policy for various functional areas, must be updated to explicitly include sample collection personnel like DCCC staff, Doping Control Officers (DCOs), Blood Collection Officers (BCOs) and chaperones and ensure that the various roles have the required access to undertake their work in accordance with the International Standards i.e. access to all athlete areas so that notification and chaperoning of the athletes can occur uninterrupted. Similarly, if the Games Technical Officials policy outlines which functional area roles are included it should include DCOs and BCOs at a minimum, as raised in previous IO reports, including as “LOC Recommendation no.6” in the IO Report for the Olympic Games Tokyo 2020. Even minor but important details, such as the uniform policy for functional areas, need to clearly specify what DCOs and BCOs receive – perhaps aligning with the Technical Officials policy to ensure consistency and proper recognition. Implementing such clear, updated policies will go a long way in ensuring the anti-doping program has what it needs to function effectively.

While it is the primary responsibility of the MEO and OC to ensure thorough planning, the athlete representative also recommends that WADA continue to be available to provide assistance on the planning process for the Games, if and when initial planning efforts encounter significant challenges. This assistance could be particularly valuable to the OC by highlighting the necessary scale and complexity of a robust anti-doping program and the various requirements including those that may be a mandatory requirement under the World Anti-Doping Code or International Standards. Such collaboration with the OC, the MEO and any delegated third party such as the ITA would assist in many potential issues to be resolved before the event even begins, rather than requiring reactive troubleshooting during the Games themselves.

There are several key themes to our recommendations, and these are outlined below for convenience.

I. Planning and Logistics

The planning of an Olympic Games is understandably demanding. With the pressure to build and fit out venues, security, transportation and other major issues it is easy to forget the requirements of an anti-doping program. How many toilets do I need for athletes? What do you mean at least two people need to fit into a cubicle? Why does a DCS need freezers? Does an athlete really need to be followed through a mixed zone by a person who can't be captured on the broadcast? These are but a few of the questions that anti-doping co-ordinators face on a regular basis.

During the Paris Games the IO Team observed frequent issues with the location and efficiency of notification zones within venues. This was sometimes caused by sport specific protocols being observed that hindered athlete flows and effective notification of athletes.

The earlier the planning for the anti-doping program (including the recruitment of key staff with an appropriate level of anti-doping experience and influence within a local organizing committee), the more likely logistical issues can be 'ironed out' in advance. The IO Team note that key staff in Paris 2024 were hired (in our view) later in the process and despite their dedication and determination the anti-doping program experienced too many logistical issues. These logistical issues make the jobs of sample collection personnel significantly more difficult. At worst, they can jeopardize the careers of athletes if the processes can not be completed properly. Having anti-doping expertise embedded in a local organizing committee early can facilitate key planning decisions and protocols that affect the anti-doping program, to be in place and operate smoothly. The athletes deserve this kind of meticulous organization, as they would prefer to be celebrating their achievements than sitting in Doping Control for a minute longer than they have to. Again, these comments should not detract from the efforts of the Paris 2024 staff who did their best under the circumstances.

II. Doping Control Officers

The success or failure of an anti-doping program can come down to the group of individuals who are required, amongst other things, to oversee testing missions, run a DCS and oversee the collection of samples from athletes. At the Paris Games, the IO Team's views are that the treatment of these technical experts in terms of logistics and planning had a negative impact on the morale and performance of these critical staff (many of whom were flown from all over the world in recognition of their unique skillset). Issues with pay, conditions and allowances, a lack of uniform, lack of availability of food and/or drink can seriously jeopardize the implementation of a successful anti-doping program.

DCOs are at the coalface and can impact positively or negatively on the athlete experience during the Games. They have a raft of technical rules to follow and varying challenges in the field to manage which includes the many athletes who have to sit in doping control despondent, sometimes alone and devastated as a result of their performance, while some of their competitors are also in the same room elated at winning a medal. At its most simple, the athlete's confidence in the system depends entirely on these staff being fresh and competent.

The IO Team's strong recommendation is to treat these key staff like any other 'technical official' for the Games. Provide them with basic food and drink (and the actual ability to access these services), transport to and from venues including late at night/early mornings, a uniform and the chances of a successful program are greatly increased.

III. Laboratories and the Analysis of Samples

In general terms, the IO Team were very impressed with logistics surrounding the laboratory and the handling of samples. The implementation of the anti-doping hub (ADH) and the transport of collected samples generally worked very well and was efficient.

There are improvements that can be made in the planning and communication of workload and the forwarding of pertinent information from the DCFs to better allow the laboratory to do its important work. It will never be perfect (for example, a good program should have the ability to adapt to last minute sample collections based on intelligence and there will always be unexpected and unscheduled 'national and world record' sample collections). In the IO Team's view, there are also improvements that can be made in the logistics between the laboratory and sample collection areas of the anti-doping program.

IV. The International Testing Agency

Generally, the IO Team was impressed with the dedication and professionalism shown by the International Testing Agency (ITA) and its staff. There were many sample collection sessions where the presence of ITA dedicated staff was critical to the successful implementation of the anti-doping program.

The IO Team is of the view that the ITA can still further leverage the skills and expertise from other areas, such as ADO expertise that was brought in to assist with the Games. There were occasional 'bottlenecks' in processes that could have been alleviated with more reliance on the unique and impressive expertise that the ITA had brought together for the Paris Games.

Whilst, the anti-doping program itself was very good, a critical analysis of the program in a post operational assessment style review would help to highlight further areas of improvement and key learnings for the delivery of the ITA's component of the program.

V. Volunteer Staffing

It is perhaps inevitable that to deliver an anti-doping program of the size of the Paris Games, local organizing committees must recruit and rely on a large volunteer workforce to act as 'chaperones' during doping control missions.

Despite often valiant attempts, the IO Team is of the view that there were too many issues regarding insufficient numbers of chaperones or those that were appointed who were unsuitable for the role. Specifically, too few numbers of total chaperones were available, there were issues caused by volunteers not turning up for shifts or an incorrect gender mix of chaperones being sent to venues. Issues of limited accreditation hindered a fast response and ability to re-task chaperones between different competition venues.

The anti-doping program in the future could benefit from greater face to face and role playing training and education for these volunteers immediately before the commencement of the Games. In addition, a more thorough training program for 'chaperone co-ordinators' could greatly assist the individuals performing this useful role and better enable the co-ordination of the volunteer workforce at venues.

Lastly, to engage and keep the volunteer workforce throughout the period of the Games, consideration could be given to an incentive style program (for example where volunteers receive a Games specific gift e.g. a pin after completing their assigned shifts at the conclusion of the Games).

4.0 WADA Independent Observer Program Paris Games and IO Team Composition

At the invitation of the IOC, the World Anti-Doping Agency (WADA) appointed an IO Team to attend the XXXIII Olympiad Paris 2024.

Originally launched at the 2000 Olympic Games in Sydney, the IO program was established to enhance athlete and public confidence at major sporting events by monitoring and reporting on all phases of the doping control and results management processes in an objective manner. Over time, the IO program has evolved to meet the needs and demands of organizations responsible for delivering major events.

For this edition of the Games, an audit-style approach was adopted. The IO Team, through its observations, assessed whether procedures were in line with the World Anti-Doping Code (Code) and relevant International Standards and provided onsite advice and recommendations to the relevant organizations involved in the delivery of the doping control program.

For the Paris Games, the IOC and WADA agreed that the IO Team would observe all aspects of doping control including, in particular:

- Test Distribution Planning (TDP);
- Selection of competitors;
- Provision of whereabouts;
- Training of sample collection personnel;
- Implementation of the in-competition (IC) and out-of-competition (OOC) testing program;
- Therapeutic Use Exemption (TUE) procedure;
- Athlete notification and sample collection procedures;
- Transport and chain of custody of samples;
- Sample receipt, preparation, analysis and storage at the laboratory;
- Result management process including all hearings; and
- Any other relevant areas under the 2021 Code, International Standards or Technical Documents.

The period of the Paris Games spanned from the opening of the athlete village on 18 July 2024 to the final day of competition on 11 August 2024. Active observations of the doping control procedures began on 22 July 2024, with laboratory monitoring starting on 21 July 2024. During this time, the IO Team was present at the laboratory almost daily and visited all competition venues within the Île-de-France region, except for Chateau de Versailles and Golf National, as well as the competition venue in Lille. The doping controls for all sports and disciplines listed below were subject to observations and assessments by the IO Team.

- Archery
- Artistic Gymnastics
- Artistic Swimming
- Athletics
- Athletics (marathon)
- Athletics (race walk)
- Badminton
- Basketball
- Basketball (3x3)
- Beach Volleyball
- BMX
- Boxing
- Breaking
- Canoe slalom
- Canoe sprint
- Cycling - Mountain Bike
- Cycling - Road
- Cycling - Track
- Diving
- Fencing
- Football
- Handball
- Hockey
- Judo
- Marathon Swimming
- Rhythmic Gymnastics
- Rowing
- Rugby Sevens
- Shooting
- Skateboarding – Park
- Skateboarding - Street
- Sport climbing
- Swimming
- Table Tennis
- Taekwondo
- Tennis
- Trampoline Gymnastics
- Triathlon
- Volleyball
- Water Polo
- Weightlifting
- Wrestling

The IO Team also observed several sample collection sessions at the DCS in the main Athletes village.

The IO Team also attended daily meetings with the IOC, ITA, AFLD, and Paris 2024 to report their observations and provide ongoing feedback. Alongside verbal feedback, the IO Team submitted written reports of their observations and recommendations via the ITA's secure online platform, ADCOM. The ITA promptly reviewed and responded to the feedback provided, often implementing solutions the following day, including sending dedicated staff members to support the team. Examples of these responses are detailed throughout this report.

In addition to the daily meetings, the ITA organized 'in-focus' meetings with the IOC, AFLD, Paris 2024, and the IO Team to explore various aspects of the anti-doping program implemented at the Games in

greater detail. These sessions were highly productive, covering topics such as risk assessment, test distribution planning, sample collection personnel, science (Athlete Biological Passport (ABP)), education, TUEs, and Intelligence and Investigations (I&I). These focused discussions were instrumental in enhancing the overall effectiveness and success of the anti-doping efforts at the Paris Games.

The IO Team attended the Chief Medical Officer (CMO) introductory meeting (24 July 2024). The IO Team also observed a results management hearing process while onsite during the Paris Games and was provided with the relevant information related to other results management processes.

5.0 Independent Observer Team Composition

The IO Team consisted of (from left to right, top to bottom):

- Dr. Maira Bakasheva (Kazakhstan), Director, Kazakhstan Anti-doping Centre
- Dr. Vinicius Sardela (Brazil), Senior Manager, Laboratory Operations, WADA;
- Mr. Darren Mullaly (Australia), Deputy CEO, Strategy and International Engagement, Sport Integrity Australia (Chair);
- Mr. Iñaki Gomez (Canada), two-time Olympian (race walking) and WADA Athlete Council member;
- Ms. Françoise Dagouret (Switzerland), Manager, Testing, WADA;
- Ms. Dan-Thanh Tran (Canada), Head of Testing Compliance, WADA (Vice-Chair)

Recommendation No. 1 (IOC/ITA, LOC, Laboratories, WADA)

The limited number of observers at the Paris Games necessitated an adjustment in the scope of observations, which is reflected in the level of detail in this report. Moving forward, if the Observer Team size remains consistent, we recommend all parties involved to proactively meet during Games planning to collaborate and resolve potential issues before they arise.

6.0 Overview and Operating Environment

The Paris Games were held from July 26 to August 11, 2024. A total of [1] from 204 nations competed in the Games. The Paris Games featured 329 events in 32 sports, spread out across 30 different venues across Paris and outside of Paris.

The IOC is the governing body of the Olympic Games and, as a signatory to the Code, adopted the relevant rules for the Paris Games. As a signatory to the Code, the IOC is responsible for all aspects of doping control conducted at the Paris Games. The IOC Anti-Doping Rules applicable to the Games of the XXXIII Olympiad Paris 2024 apply in relation to the Paris Games. The Period of the Pre-Olympic Games 2024 is defined under these rules as the period commencing on 18 April 2024 until the day prior to the opening of the Athlete Village for the Paris Games, 17 July 2024 (inclusive).

The period of the Paris Games is defined as the period commencing on the date of the opening of the athlete village, July 18, 2024, up until and including the day of the closing ceremony, August 11, 2024.

As it did for the 2022 Beijing and 2020 Tokyo Games, the IOC delegated the management of its anti-doping program to the ITA. The ITA had overall responsibility for the development, implementation, and management of the anti-doping program. The ITA, in accordance with the IOC Anti-Doping Rules (ADR), sub-delegated certain aspects of doping control to the Paris Organising Committee for the 2024 Olympic and Paralympic Games (Paris 2024) and to the local National Anti-Doping Organization (NADO), to the AFLD.

Paris 2024, through the Olympic Requirements, is the entity responsible to carry out all operational aspects of the planning, organising, financing and staging of the Paris Games. Delivery of all Paris Games services, such as transportation, accommodation, food and beverage, accreditation, etc., are at the cost of Paris 2024.

Specifically related to anti-doping, Paris 2024 was tasked with the implementation and delivery of the doping control programme for the Paris Games, under the authority of the IOC, and the provisions of the Code, its standards and the IOC Anti-Doping Rules. This includes:

- Developing sample collection procedures specific to the Paris Games;
- The provision of DCSs;
- The recruitment and the training of Sample Collection Personnel (DCOs, BCOs, and chaperones);
- Sample transport to the WADA-accredited laboratory;

Laboratory security.

The AFLD is the National Anti-Doping Organization (NADO) for France. Paris 2024 contracted the AFLD to assist them in the delivery of the anti-doping program for the Paris Games.

It is important to highlight France's "Code du Travail," or Labor Code, which outlines the rules covering all stages of employment, from hiring to termination, as well as workplace regulations. These rules apply to all employees and employers working in France, ensuring the protection of employee rights and the promotion of work-life balance. Non-compliance with these laws can result in fines, compensation, and even legal action for employers, while employees may face suspension, demotion, or dismissal.

[1] International Olympic Committee. (n.d.). Paris 2024. Olympics.com. Retrieved 16 September 2025, from https://www.olympics.com/en/olympic-games/paris-2024

Although there were some adaptations and exceptions made for the Paris Games, French labor laws still applied to the event. This presented an added challenge for the anti-doping team, given the nature of their work. Examples of laws impacting the program included the 35-hour work week, minimum break periods, minimum daily rest periods, and mandated paid leave.

7.0 Pre-Games Testing

While the observation period did not commence before July 22, 2024, the ITA did provide the IO Team with a presentation of their Paris 2024 Pre-Games program.

Regarding testing for the Paris Games, following a comprehensive review of available performance and anti-doping data and with the guidance of its Pre-Games Expert group and the supervision of a Pre-Games Supervisory Panel, the ITA issued Pre-Games instructions and guidelines to Anti-Doping Organizations (ADOs), with the objective of ensuring that participants arriving had been subject to a level of testing in the months leading up to the Games period.

A key difference for the Paris Games compared to previous ones is that while the ITA previously provided specific instructions and names of athletes to be tested, for these Games, ITA provided a general recommended number of tests based on an assessment of the different sports disciplines to all ADOs. This approach offered ADOs the flexibility to prioritize which athletes to test and the type of test (IC and/or OOC). The ITA also recommended collaboration between NADOs and International Federations (IFs) to fulfill these recommendations. Where specific gaps were identified, ITA sent specific instructions to the ADOs, which could be focused on particular groups of athletes, sports, disciplines, or countries.

For the Paris Games, the IOC had a period of jurisdiction starting April 18, 2024, to July 18, 2024, three months prior to the start of the Games, allowing them to conduct testing on any athlete entered to participate at the Paris Games during this period. This was an improvement of one additional month compared to the period of jurisdiction ahead of the Tokyo 2020 Games which was two months. During this three month pre-Games period, and possibly in light of the outcomes of the Pre-Games recommendations, the IOC conducted 52 tests.

The intelligence feeds into the ITA to enable target testing pre-Games were a positive sign of co-operation between anti-doping organisations. In the final six weeks of the pre-Games period, the ITA received 10 intelligence reports that enabled specific target testing prior to the Paris Games commencing. In some cases these reports also led to specific In-Competition target testing.

- Based on Anti-Doping Administration & Management System (ADAMS) data[2], in the period of January 1 to July 18, 2024:
- A total of 33,800 **tests**[3] were conducted by 193 ADOs on the final list of 11,408 athletes attending the Paris Games;
- A total of 70.7% of the tests were conducted OOC and 29.3% were IC;
- A total of 87.6% of the final list of athletes attending the Games were tested in the recommended period (compared to 80% for the Tokyo Games).
- In terms of sports, the 10 sports with the most Pre-Games tests conducted on accredited athletes were[2] (Table 1):

[2] The information relies on data that, like many large datasets, may contain some inherent inaccuracies or incomplete entries. An example of an inaccuracy includes athletes competing in multiple sports or athletes with dual citizenships (but competing for one national olympic committee)
[3] As defined by the WADA Technical Document for Sport Specific Analysis (TDSSA), one Test includes any number of Samples that are collected from one Athlete during a single Sample Collection Session. For example, a Sample Collection Session in which one urine Sample, one blood ABP Sample and one dried blood spot Sample are collected will count as one Test.

Table 1: Top 10 sports with the most Tests on Accredited Athletes conducted during the Pre-Games Period

Sport(s)	Number of Tests	% of Pre-Games Tests
Athletics	8862	26.2%
Aquatics	4911	14.5%
Cycling	2856	8.4%
Rowing	1559	4.6%
Tennis	1155	3.4%
Wrestling	1025	3.0%
Canoe	968	2.9%
Weightlifting	932	2.8%
Judo	914	2.7%

- The top 10 ADOs with the most Pre-Games tests conducted on accredited athletes are listed below[4] (Table 2)

Table 2: Top 10 ADOs with the most tests conducted on accredited athletes during the Pre-Games period

Anti-Doping Organization	Number of Tests	% of Pre-Games Tests
World Athletics – Athletics Integrity Unit (AIU)	3585	10.61%
China Anti-Doping Agency (CHINADA)	2285	6.76%
World Aquatics	2163	6.40%
Union Cycliste Internationale (UCI)	1601	4.74%
US Anti-Doping Agency (USADA)	1499	4.43%
NADA Germany (NADA)	1452	4.30%
Agence Française de lutte contre le dopage (AFLD)	1304	3.86%
International Tennis Federation (ITF)	1025	3.03%
NADO ITALIA	1001	2.96%
Japan Anti-Doping Agency (JADA)	770	2.28%

- The Pre-Games anti-doping program achieved a commendable average of 90.4% of athletes tested per sport, demonstrating strong collaboration among anti-doping organizations (ADOs) worldwide. Notably, Surfing and Weightlifting achieved 100% pre-competition testing of all athletes, a benchmark that was made possible in weightlifting by the International Weightlifting Federation's specific eligibility requirements.
- The sports with the lowest percentage of pre-Games testing per capita were (Table 3):

[4] These figures may be influenced by team size and athlete qualification numbers; lower counts do not necessarily indicate less effective programs for smaller teams.

Table 3: Sports with the lowest percentage of tests conducted on accredited athletes during the Pre-Games period

Sport	Total number of Participants	% Tested Pre-Games
Handball	406	75.1%
Field Hockey	454	70.5%
Sailing	328	69.8%
Football	611	63.7%
Equestrian	250	63.2%

- For sailing and equestrian, the final outcomes were consistent with the recommendations provided from the Pre-Games Expert Group (i.e., recommendations versus risk level).
- The average percentage of athletes tested per sport nationality, including athletes in the Olympic Refugee Team and the Individual Neutral Athletes, during the Pre-Games period is 67.20%. Athletes from 29 National Olympic Committees (NOCs), the Olympic Refugee Team and Individual Neutral Athletes had 100% of their delegation tested. 17 NOCs had no athletes from their delegation tested at all (0%) during this period. This represents a total of 47 athletes.

Recommendation No. 2 (ADOs)

With regards to testing in team sports, given the inherently larger number of athletes participating in team sports, it is often observed that the percentage of individual athletes tested within these disciplines may be lower compared to individual sports, even with a substantial total number of tests. As such, a recommendation would be for ADOs to pay specific attention to the *percentage* of athletes tested within team sports, in addition to the specific athletes that are tested rather than solely the raw number of tests. This ensures meaningful testing coverage across all team members, maximizing both deterrence and the likelihood of detecting doping where it might occur in a larger athlete pool.

Recommendation No. 3 (IOC/ITA)

Drawing on the findings from previous post-Games assessments, it is recommended to continue the assessment of the athletes/delegations that were not tested, considering their performance, status (e.g., alternative/reserve), country represented, specific sport, and the timing of their qualification and/or confirmation to the delegation. The insights gained from these assessments will assist in strategically improving the allocation of additional resources for testing athletes, countries, or sports with similar profiles in previous Pre-Games testing programs. If the timing of the qualification or confirmation of the athlete to the delegation is a reason for the inability to test an athlete in high-risk sport (for example), a recommendation would be to discuss with all parties, how this can be addressed for future Games.

8.0 Education

As per the International Standard for Education all Signatories must plan, implement, monitor and evaluate an education program. For Major Events, it is the intention that all relevant Signatories collaborate to meet the objective of educating athletes and ASP before they arrive at the Games. In this context, the IOC delegates its education responsibility to the ITA, and the focus was on supporting NOCs, NADOs and Regional Anti-Doping Organizations through the provision of the following materials and Pre-Games initiatives:

- An Athlete's Guide to Testing;
- A NOC Clean Sport Education survey, to review Pre-Games education programs in all participating countries and to identify support needs;
- A Clean Sport Education Guide and Toolkit, available to National Olympic Committees and other education stakeholders (NADOs and RADOs);

- WADA ADEL e-learning course for Paris 2024 Olympics, available in 23 different languages;
- An ITA Educator present at the WADA's Athlete Engagement booth in the Athlete's Village;
- Pocket guides and posters, including both Reveal and Speak Up, Athletes' Anti-Doping Ombuds, available in the DCSs.

The ITA also delivered and recorded webinars and presentations on the Paris Games anti-doping program, designed to provide information to athletes and their support personnel attending the Games. The IO Team attended a presentation during the Paris Games, tailored to the NOC medical teams.

Recommendation No. 4 (IOC/ITA, NOCs, IFs, NADOs)

Recognizing that responsibility for education in the context of the Olympic Games is shared among the IOC, NOCs, IFs, and NADOs, it is recommended that all stakeholders take deliberate steps to strengthen coordination well in advance of the Games, and the IOC could take a leading role on that front. This should include the clarification of roles and responsibilities, the alignment of educational plans and timelines, and the sharing of resources of best practices.

Furthermore, in addition to its supporting role, the IOC should consider developing a specific education plan complementing those of the stakeholders, that could target wider audience beyond athletes, ASP and medical staff (for example, the International Standard for Education suggests including target groups such as the general public, commercial sponsors or media personnel). Such measures will contribute to the delivery of education that is then monitored and evaluated to determine impact and inform following Games education plans.

Recommendation No. 5 (IOC/ITA)

With the emphasis put on a supporting role, strengthening the monitoring system for education to track whether and which target groups among stakeholders' Education Pools, as relevant for the Games, have completed their required education before participating in events should be considered.

Recommendation No. 6 (IOC/ITA)

Consider sharing its full Evaluation Report as well as the data resulting from its monitoring process with relevant parties including WADA, to help share valuable insights and inform future education program activities to support continuous improvement.

9.0 Therapeutic Use Exemptions

Athletes requiring the use of a prohibited substance or method as part of a legitimate medical treatment, may apply for and be granted a Therapeutic Use Exemption (TUE), only if the conditions set out in the International Standard for Therapeutic Use Exemption (ISTUE) are satisfied. This exemption, if granted, will preclude the athlete to an Anti-Doping Rule Violation (ADRV) and applicable sanction for the use of the medication within the prescribed and agreed limits. The purpose of the ISTUE is to ensure that the process of granting TUEs is harmonized across sports and countries.

The IO Team reviewed the procedures and processes in place for the handling of TUEs at the Paris Games, confirming they aligned with the ISTUE. The IO Team did not however review the content of the medical files or the rationale for the decisions made by the Paris Games' Committee (TUEC) to recognize, grant, or refuse a TUE. This is the role of WADA's Science and Medicine Department, which has a right of review TUE decisions.

The ITA implemented a comprehensive and athlete-centric approach to TUEs for the Paris Games.

Ahead of the event, the ITA launched a dedicated TUE section on their website, offering clear, detailed, and easily accessible information. This proactive initiative enabled athletes to be prepared well in advance of the Games.

Prior to the Paris Games, recognizing that TUEs granted by the ITA, on behalf of the IOC, would only be valid for the Games period, athletes were encouraged to submit their TUE applications to their NADO or IF. Pre-existing TUEs granted by ADOs that complied with the conditions set forth in ISTUE Article 4.2 and were duly recorded in ADAMS where recognized.

During the Paris Games, the ITA provided on-site support with a dedicated TUE office conveniently located in the Polyclinic of the Olympic Village. Athletes could book appointments for personalized assistance with their TUE needs and submit applications directly. To ensure timely processing, a booking system was in place, as the office wasn't staffed 24/7. Additionally, athletes familiar with the ADAMS system had the option to submit their TUE applications directly through the platform.

The ITA appointed a TUEC consisting of four physicians to consider applications for TUEs permitting the use of prohibited substances or methods during the Paris Games. According to a report provided to WADA by ITA and based on data extracted from ADAMS, the TUEC approved 43 TUEs during the course of the Paris Games. In addition, 136 TUEs issued by ADOs were recognized, while one TUE was not recognized, in comparison to 96 recognized TUEs and two refused recognitions for the Tokyo 2020 Olympic Games. In total, 174 athletes (including five athletes with two TUEs each) held a valid TUE(s) during the Paris Games, representing approximately 1.6% of all participating athletes.

WADA noted a number of discrepancies between the figures reported by the ITA and the data available in ADAMS. Specifically, WADA identified 9 TUEs valid for the Paris Games that did not have a corresponding recognition recorded in ADAMS. Potential causes include administrative oversight or a system-related error.

Additionally, a number of athletes were found to have TUE recognitions recorded in ADAMS, despite the fact that the TUEs had expired prior to the start of the Paris Games. These TUE recognitions were unnecessary.

Recommendation No. 7 (IOC/ITA)

To minimize such discrepancies in future events and ensure the integrity of TUE records the IO Team recommends the ITA implement the following:

- Pre-Games Data Validation**:** The ITA should collaborate closely with WADA Medical and implement a Pre-Games review of all TUE recognitions to confirm accuracy and completeness. This may encompass the ITA providing WADA Medical with daily reports on the TUEs that have been recognized.
- System Flags in ADAMS: The ITA should develop automated alerts to flag expired TUEs and prevent unnecessary recognitions from being processed.

10.0 Intelligence

The ITA were responsible for intelligence collection during both the pre-Games and Games periods. The collection of intelligence is more successful if stakeholders share information to provide a more accurate tactical intelligence picture.

There were two critical components relating to intelligence. Firstly, changes to French legislation and secondly, comprehensive information sharing arrangements and agreements with the ITA.

The IO Team were informed that French legislation was amended in 2021 which provided, amongst other things, increased capability to interview athletes and other persons, conduct searches (for example rooms of athletes). Importantly the legislation facilitated the ability to open investigations to other ADOs, such as the ITA and allow for information sharing. Such legislation is commendable and allowed agencies such as AFLD to also share information with other Code signatories.

The IO Team were provided with a copy of the Memorandum of Understanding between the AFLD and the ITA which facilitated information sharing between the two organisations.

During the pre-Games period the ITA circulated an intelligence reporting form for key partners and received 10 reports in the final six weeks prior to the Paris Games. IFs also continued to share intelligence with the ITA to enable more target and intelligent testing. The IO Team requested information in relation to one specific IF and could see that the IF had made approximately 40 athlete suggestions in terms of target testing. These suggestions were then examined closely by the ITA and decisions made about appropriate target testing.

The ITA also had information sharing arrangements in place with appropriate French law enforcement agencies. This allowed for the possibility of sharing suspicious alerts on individuals coming into France for the Paris Games. The ITA commenced in person meetings with law enforcement agencies in 2023 to identify important stakeholders within the French administration to enable smooth operations during the Paris Games. These meetings enabled the ITA to explain their role and function during the Paris Games and produce operational documentation shared with French authorities. These agreements enabled the ability for French Prosecutors to be able to start formal inquiries and exercise significant powers in the event of a doping issue (such as the ability to search phones).

Practically during the Paris Games the ITA were performing several tasks relating to intelligence gathering. For example, the ITA were examining all medical declarations from athletes and any relevant DCO/Chaperone comments from testing missions.

The ITA's efforts attempting to bring intelligence and science staff together during the Paris Games was also commendable. Intelligence was incorporated into science and testing meetings in the operations centre. Meetings occurred in a private room in the polyclinic and also included important stakeholders such as the AFLD on a daily basis.

The ITA maintained a full evidence collection kit on site. An intelligence policy and protocol were put in place between the ITA and Paris 2024. This provided pictures and descriptions of what could constitute doping specific material. It was available to Paris 2024 staff such as cleaning personnel in the Athletes Village.

Lastly, the ITA utilized an advanced social media tool in order to identify and track close or suspicious associates of athletes.

Overall, the ITA's intelligence work prior to and during the Paris Games was very impressive and should be a key component of any future Games.

Recommendation No. 8 (LOC/ITA)

To continue to build on and improve intelligence outcomes in connection with Major Games, the IO Team recommend including a formal Post Operational Assessment into the ITA's procedures. Such a Post Operational Assessment can also include examining if there could be improvements made to Olympic Requirements to aid the ITA in leveraging relationships with local law enforcement agencies.

11.0 Technology

The ITA, with its involvement in the Games since 2018, has consistently refined its major-event specific tools and processes. These include their paperless system (ComPASS), the communication platform for all stakeholders (ADCOM), and their internal administrative system (PASS), which integrates data from various sources like laboratories, intelligence, and investigations.

In addition to these proprietary tools, ADAMS played a central and mandated role, adhering to the Code and the International Standard for Testing and Investigations (ISTI). ADAMS was essential for verifying athlete whereabouts information, reviewing TUEs, inputting all Doping Control Forms (DCFs), and uploading laboratory sample analysis results.

Notably, the ITA piloted an API (Application Programming Interface) this year. This API enabled automatic uploading of DCFs from their ComPASS paperless system directly into ADAMS, significantly enhancing the efficiency and speed of the DCF entry process.

ITA deserves commendation for this continuous refinement and their commitment to innovation is evident in the creation of effective, integrated systems.

12.0 Risk Assessment

ITA provided a comprehensive presentation of their Risk Assessment and Test Distribution Plan (TDP).

ITA's tiered risk assessment's distinct methodology, which incorporated Games-specific data and parameters (e.g., participant numbers and medal events per discipline), was noteworthy. This approach was further enhanced by distributing deliverables across three timelines, allowing for adjustments based on availability of the latest data (e.g., performance and rankings).

The final outcomes of the risk assessment divided sport disciplines into three risk categories, which were used in the development of the TDP to determine the number of OOC and IC tests to be conducted.

While the IO Team lacked visibility into the specific calculations behind the risk assessment, the resulting three-tiered framework still proved sensible for the TDP, particularly in determining the overall number of tests.

Recommendation No. 9 (WADA)

The risk assessment met the ISTI requirements for the Paris Games. However, for future events (and other MEOs), earlier presentation to the IO Team is recommended to facilitate a proactive review and to allow for any potential adjustments.

To support this and other Pre-Games presentations, we recommend appointing the IO team—or at least the specific members who need to be at these meetings—earlier in the process. This is especially important for teams with members in different time zones, as it can be incredibly challenging to find a suitable time for pre-event meetings, on risk assessment but on other topics as well.

Recommendation No. 10 (ITA/IOC)

It would be beneficial to document how the outcomes of the third phase of the risk assessment, specifically those related to individualized performance and testing history, were reflected in the TDP and implemented during the Paris Games. This would provide valuable insights into the methodology and its impact.

13.0 Test Distribution Plan and Delivery

ITA developed a TDP, allocating tests to sports based on the risk levels identified in their risk assessment. As such, sports identified with the most risk of doping were allocated a higher percentage of testing than those with the lowest risk of doping. Tests were allocated both OOC (32.6%) and IC (65.2%) during the Paris Games.

13.1 Analysis

Both steroidal and hematological module of the athlete biological passport samples (ABP) were planned and collected during the Paris Games period and additional analysis for Erythropoietin receptor agonists (ERAs), Growth hormone (GH), Growth hormone releasing factors (GHRFs) including growth hormone-releasing hormone (GHRH) and its analogues, growth hormone secretagogues (GHS) and its mimetics, and growth hormone-releasing peptides (GHRPs) were also allocated in accordance with the requirements of the Technical Document for Sport Specific Analysis (TDSSA).

Dried Blood Spot samples (DBS), and blood samples for the purpose of detecting gene doping, and steroid and endocrine modules of the athlete biological passport were also planned and collected. The proactive decision to include these additional analyses enhanced the thoroughness of the Paris Games' test distribution plan.

Recommendation No. 11 (ITA)

The Pre-Games collaboration between the ITA and multiple ADOs to establish endocrine profiles and conduct targeted testing on participating athletes represents a proactive effort. This Pre-Games work, which was not part of the on-site observation period, sets a good example for intelligence-led anti-doping programs.

Building on this success, it is recommended that the ITA continue to prioritize and expand the collection of samples for the athlete biological passport program during Major Events, including the Games period. This strategic focus ensures the consolidation of comprehensive endocrine and blood steroid profiles. The samples collected during the Games, a crucial time period, serve two vital purposes:

- They provide an essential in-Games baseline for global anti-doping efforts.
- They serve as invaluable intelligence for ongoing, year-round anti-doping programs of all ADOs with jurisdiction.

13.2 Athlete Biological Passport Program

The Athlete Passport Management Unit (APMU) is an indispensable partner for ADOs in running effective Athlete Biological Passport (ABP) programs. The APMU's core function involves the expert assessment of an athlete's biological passport data, where they diligently scrutinize longitudinal markers for any atypical findings that could suggest doping. This critical analysis leads to the provision of specific feedback and actionable recommendations, which the APMU is required to input directly into the ADAMS. This direct communication is vital, as ADOs must closely monitor and promptly act upon these recommendations, especially those concerning further sample collection from athletes and/or additional analyses, to ensure the integrity and efficacy of their anti-doping efforts.

Between July 16th and August 18th, a collaborative initiative involving the IOC, ITA, and WADA was implemented. This extraordinary measure ensured that all APMUs worldwide directly provided the ITA with recommendations for reactive testing strategies. These recommendations included suggestions for additional analyses, such as Erythropoietin Receptor Agonists (ERA), Homologous Blood Transfusions (HBT, or Isotope Ratio Mass Spectrometry (IRMS) on samples collected on behalf of the IOC, or the collection of additional samples during the Paris Games period.

Additionally, WADA undertook a review of all passports under the custodianship of ADOs that did not have an existing agreement with an approved APMU, further centralizing oversight during this timeframe.

To facilitate this rapid communication, the ITA provided APMUs and WADA with access to their secured ITA Anti-Doping Communication platform (ADCOM). During the Paris Games period, the ITA ABP program managed a total of 296[5] APMU recommendations. These included:

- 221 further Laboratory Requests, which included 166 IRMS analyses, 26 EPO tests, 9 Homologous Blood Transfusions (HBT) requests, and 96 urgent test requests upon APMU review[6];
- 7 hematological passports (7 blood ABP samples) of 3 different passport custodians without the need of further actions;
- 36 steroidal passports (43 urine samples) of 15 different passport custodians with only one sample for which a steroid profile confirmation and IRMS analysis were requested.

The International Testing Agency's ABP program demonstrated exceptional efficiency, thanks to its effective use of the ADCOM system. This allowed the ITA ABP group to rapidly coordinate and act on recommendations from Athlete Passport Management Units (APMUs).

The collaboration with APMUs was essential, with their recommendations being implemented promptly. While the Independent Observer (IO) Team did not directly witness the application of these specific recommendations, the overall strength of the system and the robust testing statistics from the period strongly suggest that the system was applied effectively.

13.3 Out-of-Competition Testing

For the OOC TDP, the ITA developed an individualized/country risk assessment in each sport discipline and used the following information:

- outcomes from the Pre-Games test recommendations (i.e., when and how many times each athlete was tested prior to the Paris Games);
- Athlete Biological Passport data;
- any applicable intelligence; and
- performance data, to determine which athletes and/or countries to focus their resources on.

During the Paris Games period, a total of 1611 OOC tests were conducted, surpassing the original plan by 60 additional tests. Specifically, across all sport disciplines, the most substantial increase in testing was strategically directed towards higher-risk disciplines, ensuring enhanced scrutiny where it is most vital for maintaining the integrity of the competition.

During the Paris Games, the majority of OOC tests took place within the Olympic Villages. Testing was typically clustered around specific times: early mornings (before athletes departed for training), lunchtime, and evenings (after athletes returned from training).

Tests were also planned on athletes at hotels who were not staying in the Olympic Village(s). Although the IO Team was not able to witness the test missions at hotels, the ITA and DCOs confirmed that these were indeed executed. They reported that these missions, while vital, presented challenges due to pre-mission instruction clarity, limitations in the Paris Games transportation system, and restricted access at some hotel locations.

[5] Figures provided by the ITA
[6] Figures provided by the ITA

OOC tests were also conducted both outside of the main Paris Games venue clusters and beyond the borders of France, 47 tests or 2.9% of the total OOC. These missions targeted athletes not residing in the Village or those arriving just before their competition, demonstrating a commitment to reaching a broader athlete pool.

Recommendation No. 12 (ITA)

During the Paris Games, the IO Team observed that athletes from the same team and sport, particularly in team sports, underwent testing on the same days, and often that team was not tested again. Chaperones would leave in groups to locate these athletes at their accommodations, further highlighting this clustered approach. Recognizing that there are many aspects to consider when allocating OOC tests during the Paris Games period, as much as possible, it is recommended to implement a more varied testing strategy, diversified across different days and times throughout the Paris Games, and repeat testing of athletes/countries should be considered. This approach will enhance the unpredictability and robustness of the testing process.

Recommendation No. 13 (LOC/ITA)

To enhance the effectiveness of the OOC program and fully realize the "anywhere, anytime" testing principle, the IO Team recommends that the ITA and the LOC consider establishing a dedicated "mobile doping control team." This specialized team would complement existing Village-based activities and be capable of conducting testing missions outside of the Olympic Villages, at any time and any location, including training venues, as needed. This mobile team should be:

- Sufficiently staffed with enough Doping Control Officers (DCOs), Blood Collection Officers (BCOs), and chaperones to conduct testing at diverse locations.
- Specially trained for complex, off-site missions, covering logistics, access protocols, and communication.
- Equipped with all necessary equipment to carry out missions without constantly having to return to the Village to replenish their supplies.
- Provided with full accreditation access to training, competition venues and hotels.
- Have access to their own vehicles, dedicated Games transportation, or even a mobile DCS to allow for rapid deployment and to avoid these added logistical challenges.

13.4 Whereabouts System

During the Paris Games, NOCs were required to provide the ITA with rooming information for all their athletes. This information had to be submitted by the Chef de Mission or designated staff within 24 hours of an athlete's arrival at any official accommodation. NOCs were also responsible for updating this information and providing any other reasonable assistance to help the ITA locate athletes. Failure to comply with these whereabouts requirements can result in disciplinary actions for both athletes and NOCs.

Therefore, to locate athletes for OOC testing, the ITA had access to rooming information submitted by the NOCs through the ITA Rooming List App, in addition to information submitted in ADAMS by the athletes already included in a Registered Testing Pool (RTP) or a Testing Pool (TP)[7].

The combination of both systems proved effective in assisting the anti-doping team to locate athletes during the Paris Games. However, the IO Team did not verify whether unsuccessful attempts to locate

[7] According to ADAMS, 6082 athletes (53% of all accredited athletes) were included in their International Federation's or National Anti-Doping Organization's RTP or TP during the Games.

athletes, specifically those attributed to inaccurate whereabouts information, as provided by the athletes or the NOCs, were subsequently pursued for follow-up or investigation.

In addition, the IO Team did not cross-reference the information from the ITA Rooming App with the instructions given to chaperones for locating assigned athletes. In practice, however, the IO Team noticed chaperones typically went straight to the delegation's residential buildings to find an athlete's room.

Finally, the IO Team received feedback[8] from one delegation regarding the administrative burden associated with athlete whereabouts requirements. This delegation expressed frustration with the demands placed on their mission staff, especially given the size of their delegation. They also highlighted perceived inconsistencies in the consequences for delegations that did not fully meet these requirements.

Recommendation No. 14 (IOC/ITA, IFs, NADOs, WADA)

The primary goal of collecting athlete whereabouts information is to enable a robust OOC testing program. Therefore, any system must be designed to maximize accuracy and effectiveness while actively minimizing administrative burden and data duplication across all stakeholders: athletes, NOCs, athletes, ADOs, the IOC, and ITA. We acknowledge the progress the ITA has already made in this domain, particularly by developing and deploying the ITA Rooming List App. This self-developed system successfully provided an essential, complementary layer of athlete location data alongside ADAMS for OOC testing at the Paris Games.

To build upon this success and further enhance the efficiency and integrity of the whereabouts process for future Games, the following recommendations are offered, subject to data privacy rules:

- Implement Real-Time Compliance Checks: The ITA should integrate an automated "compliance check" feature into the Rooming List App. This feature would automatically flag missing or incomplete information in real-time (e.g., missing building or room numbers), allowing delegation staff to correct issues immediately upon submission and significantly reducing the need for manual follow-up by the anti-doping team
- Leverage Existing IOC Data Streams: The ITA should actively explore gaining direct and secure access to information already provided by NOCs to the IOC for Games accreditation and logistical purposes. This includes data such as athlete arrivals/departures, training schedules, and accreditation entry/exit times at venues, which can reduce NOC data submission requirements.
- Integrate and Consolidate Whereabouts Systems: The ITA should explore technical solutions to cross-reference and consolidate the whereabouts information submitted in ADAMS by RTP/TP athletes with the data collected through the ITA Rooming List App. Furthermore, integrating access to the central training schedules managed by the IOC would provide an essential third data point, creating a single, comprehensive, and up-to-date source for athlete location.
- Address Whereabouts Data Inaccuracy and Education: The ITA, in collaboration with WADA and the ADOs who serve as whereabouts custodians for the respective RTP/TP athletes, should conduct an assessment of the rate of inaccuracy or incompleteness in Games-time whereabouts data for RTP/TP athletes in previous Games. The findings must be used to explicitly reinforce the requirement of maintaining highly accurate and detailed Games-time whereabouts (including precise rooming and training details) in future Pre-Games education provided to athletes.
- Investigate and Enforce NOC/Athlete Compliance: The ITA must establish a clear, standardized protocol to pursue and investigate (multiple) unsuccessful attempts to locate athletes that are directly

[8] The IO Team did not independently verify the specific claims regarding the administrative burden or the inconsistencies in consequences but is reporting the feedback as received.

attributed to inaccurate or incomplete whereabouts information. This protocol must include mechanisms to ensure that NOCs that are not submitting information or submitting inaccurate rooming information have been formally followed up with and that consequences are pursued where appropriate, thereby ensuring accountability for both athletes (ADAMS data) and NOCs (Rooming List App data).

- Consult a Wide Range of NOCs: To gain a more holistic understanding of the administrative impact and identify potential improvements, a wider group of NOCs from different Tiers should be interviewed. This consultation should specifically focus on their experience with the Rooming List App, soliciting suggestions for better data collection methods, and gathering feedback on the perceived accuracy of whereabouts provided by their RTP athletes.

13.5 In-Competition

The IC TDP was developed based on the number of medal events in each discipline and the risk level allocated to the discipline in the risk assessment. As such, the IOC planned an impressive 3099 IC tests for the period of the Paris Games, with additional tests for contingency. 3227 tests were conducted IC, exceeding the IOC's initial plan.

As per the outcome of the Risk Assessment developed by the ITA, performance was one of the main factors considered when selecting athletes for IC testing. As a result, all medallists were tested after their final competition. Additional tests were conducted, both throughout the competition period and final competition, proportionally to the risk level of the sport. all medallists were tested after their final competition. Additional tests were conducted, both throughout the competition period and final competition, proportionally to the risk level of the sport.

Table 4: IC tests conducted during the Games period

Number of IC Tests per Athlete	Number of Athletes Tested IC	Total IC Tests
1 test	2723	2723
2 tests	181	362
3 tests	21	63
4 tests	7	28
Total	**2932**	**3176**

Recommendation No. 15 (IOC/ITA)

The ITA's successful achievement of its IC targets is highly commendable. Building upon this strong performance, for future Major Games (and other MEOs), a consideration for the IC TDP is to also incorporate the number of athletes competing in the sport discipline as well as the structure of competitions (e.g., number of competition days, elimination tournaments vs. round robin, single-day competitions, sports that compete in multiple competitions) in its final plan.

Recommendation No. 16 (IOC/ITA)

While the ability to test athletes multiple times certainly provides thoroughness (i.e., multiple medallists were tested after each win), a consideration would be to leverage resources more meaningfully by expanding the focus to a wider range of athletes during the Games.

13.6 Test Numbers

- A total of 4838 tests were conducted during the period of the Paris Games (July 18 to August 11, 2024).
- 33% of tests were conducted OOC and 67% were conducted IC.

- 4129 athletes of the 11,408 athletes (36%) were tested during this period.
- The top sports[9] that were tested during this period were (Table 5):

Table 5: Sports that received the most tests during the Games period

Sports	% of All Tests
Athletics	19%
Aquatics	15%
Cycling	7%
Rowing	5%
Wrestling	5%
Boxing	5%
Canoe	5%

- It is to be commended that 100% of all weightlifters were tested during this period.
- For OOC testing, the sports[10] (Table 6) and countries (Table 7) that were most tested:

Table 6: Top 7 sports tested OOC

Sports	% OOC Tests
Athletics	21.4%
Aquatics	13.9%
Cycling	6.3%
Rowing	6.0%
Wrestling	4.6%
Football	4.2%
Canoe	3.9%

Table 7: Top 10 countries tested OOC

Countries	% Total OOC Tests
FRA	4.5%
ESP	3.7%
BRA	3.5%
AUS	3.3%
USA	3.1%
GBR	2.9%
ITA	2.7%
EGY	2.4%
CHN	2.2%
RSA	2.1%

[9] These figures may be influenced by team size and athlete qualification numbers; lower counts do not necessarily indicate less effective programs for smaller teams.
[10] These figures may be influenced by team size and athlete qualification numbers; lower counts do not necessarily indicate less effective programs for smaller team

- For In-Competition, these were the sports[11] that received the most tests:

Table 8: Top 10 sports tested IC

Sports	% Total IC Tests
Athletics	17.7%
Aquatics	14.9%
Cycling	7.7%
Boxing	5.5%
Wrestling	5.5%
Rowing	5.1%
Canoe	4.9%
Weightlifting	3.8%
Gymnastics	3.6%
Judo	3.3%

Recommendation No. 17 (ADOs/ITA)

In addition to Recommendation 3 (which relates to only the Pre-Games period), a total of 916 athletes (8%) were not tested at all during either the Pre-Games and/or the Paris Games period. It is therefore recommended that a comprehensive assessment of these athletes be conducted, evaluating factors such as their performance trajectory, status (e.g., alternative/reserve), country represented, and specific sport. This assessment would help determine if additional resources should be strategically dedicated to testing athletes, countries, or sports of similar profiles in future pre-Games and Games time testing programs.

14.0 Sample Collection Personnel

14.1 Roles and responsibilities

International Testing Agency

With regards to sample collection personnel, the International Testing Agency (ITA) was specifically responsible for the recruitment of IDCO, and the training of all sample collection personnel, ensuring a skilled and well-prepared workforce. Furthermore, the ITA was also responsible for the development and implementation of the test distribution plan and subsequently assigning missions to Doping Control Coordination Centre (DCCC), who would then assign sample collection personnel to these missions.

As the organization with overall responsibility for program delivery, the ITA frequently deploys staff with specialized expertise on-site at Major Games. This strategic presence allows them to provide assistance with athlete selection and to efficiently troubleshoot any issues that may arise during the doping control process. The ITA also proactively scheduled its own observers to be on-site, with the strategic objective of enhancing Games anti-doping program in the long run through direct observation and feedback.

Doping Control Coordination Center

The Doping Control Coordination Center (DCCC) operated with two distinct but complementary teams:

Doping Control Coordination Center Testing

[11] These figures may be influenced by team size and athlete qualification numbers; lower counts do not necessarily indicate less effective programs for smaller teams.

This team was composed of 11 anti-doping experts from the AFLD (AFLD) and 12 experts from various NADOs, representing countries such as the USA, UK, Italy, Australia, New Zealand, Sweden, Norway, Brazil, Germany, Canada, Poland, and Spain. Their core responsibilities included assigning Doping Control Officer (DCO) roles within the ADAMS, ensuring DCO readiness for their assigned missions, and actively troubleshooting any testing-related issues with the Doping Control Station Managers (DCSMs).

The AFLD also played an active role in the training of DCOs before the start of the Paris Games and providing continued support on the ground during the Paris Games.

Doping Control Coordination Center Logistics

Comprising of 19 staff members from Paris 2024, this team was crucial in providing logistical support. Their duties encompassed scheduling of chaperones, arranging hotels, managing accreditations, and coordinating transportation for personnel. Importantly, they served as the primary contact for the DCSMs regarding all logistical inquiries (e.g., transport) and challenges.

It should be noted that the Head of the Paris 2024 Anti-Doping Program, who was the sole individual within the team possessing prior anti-doping experience, led the team with effort and grit, demonstrating determination. However, this individual's appointment only occurred in the fall of 2022, less than two years before the commencement of the Paris Games. Consequently, having missed a significant portion of the crucial planning phase, when issues were raised, they were able to implement some changes during the Paris Games, but these modifications were not substantial in their scope or impact.

While the framework of the team structure was logical in theory, its implementation was met with numerous practical challenges, which the IO Team observed.

- The ITA held the ultimate decision-making authority over all testing matters. This centralized control, while ensuring consistency, frequently led to bottlenecks. When issues arose – such as athlete selections or adjustments to testing numbers due to chaperone shortages - neither DCCC Testing nor DCCC Logistics had the autonomy to resolve them independently. These challenges were exacerbated during the evenings when ITA staff, responsibly deployed across multiple venues, were less immediately available to provide input. . While this centralized decision-making structure remains necessary, greater operational effectiveness depends on improved anticipation and proactive planning by the DCCC and LOC.
- In particular, the LOC did not sufficiently adapt its planning to the evolving requirements of the TDP. Despite ITA providing timely updates and setting regular afternoon daily meetings with the DCCC to ensure adequate workforce coverage and the IOC’s efforts in elevating these staffing shortages with the LOC (by, for example, securing volunteers from other functional areas), the planning process did not reflect these changes adequately, leading to operational inefficiencies. Addressing these planning gaps and ensuring adequate budgeting during the preparation phase will better support smooth, responsive testing operations and reduce reliance on last-minute decisions.
- While the DCCC Logistics team was comprised of competent individuals, their limited experience in anti-doping often presented significant challenges. As this team was responsible for organizing logistics, their lack of familiarity with the details of anti-doping meant that important nuances were missed, including during the planning stages, leading to operational inefficiencies. The ITA sought to proactively address this by providing a comprehensive half-day onsite briefings, together with IOC representatives, clearly outlining expectations and proposing solutions. Despite these efforts, some operational challenges nevertheless remained.
- The DCCC Testing team, though comprised of numerous anti-doping experts, found their decision-making authority limited. While the plan was adapted to reflect their needs and operational constraints in several instances, they had no power to make broader testing decisions. This meant that their expertise could not be fully leveraged for operational adjustments beyond DCO scheduling. This was

the intended governance structure from the start, but it represented a missed opportunity to utilize their knowledge more fully in a scenario of constant staffing shortages.

Splitting the coordination of a mission between two teams, without enabling them to plan each other's work, led to disorder and internal tensions between the two DCCC teams. As an example, a frequent challenge arose from the insufficient allocation of chaperones, often forcing both DCCC Teams to scramble to find available personnel or even cover missions themselves. The IO Team observed many instances where chaperones either weren't assigned in adequate numbers or failed to show up for their designated missions. This directly impacted DCCC Testing, which then had to urgently reassign DCOs or deploy their own staff directly on-site to fill the gaps and ensure the success of the mission. This setup inherently prevented a cohesive approach, resulting in a disjointed and inefficient execution of some missions.

Recommendation No. 18 (LOC)

To ensure effective leadership and the successful implementation of the anti-doping program, the OGOG must appoint its Head of the Anti-Doping Program at the very start of the planning phase for future major events. This early involvement is critical to enable them to shape the program, integrate their expertise into all planning stages, with other functional areas, and make substantial, meaningful changes to optimize operations well in advance of the event.

Recommendation No. 19 (LOC)

It is crucial for the organizing committee to include personnel with prior anti-doping experience at Major Games. Additionally, the committee should leverage the expertise of the local NADO or engage external specialists with Major Games anti-doping experience. This guidance and oversight is vital not only during the Games themselves, but also throughout the critical planning phases.

Recommendation No. 20 (LOC/ITA)

While the ITA had a system in place for the escalation of urgent matters, including 24/7 emergency phones and dedicated MS Teams channels, the on-site experience suggested a need to reinforce staff awareness and confidence in using these channels.

Therefore, it is recommended that for future events, the ITA ensures the full utilization of its existing escalation system by conducting mandatory, scenario-based training for all staff (including new and temporary personnel) on the problems' escalation process and perhaps formalizing the delegation of authority for specific types of urgent matters to Doping Control Command Center (DCCC) leadership, allowing DCCC leaders to provide immediate, on-site input and make certain decisions without having to consult remote ITA staff, thereby ensuring a swifter resolution of issues.

14.2 Hotline

Doping Control Station Managers (DCSMs) and Doping Control Officers (DCOs) greatly benefited from a 24/7 "hotline" monitored by DCCC members. This system allowed for issues to be triaged to either DCCC Testing or DCCC Logistics, ensuring problems were directed to the right team.

In principle, this hotline was excellent for making DCOs feel supported throughout their time at the Paris Games. It generally functioned well for issues that were quick to resolve although the IO Team often observed an all-hands-on-deck approach to troubleshooting. It wasn't uncommon for IO Team members to arrive at a venue and find personnel from ITA and both DCCC teams on-site.

Recommendation No. 21 (LOC/ITA)

To address the challenges observed with the two Doping Control Command Centers (DCCCs operating somewhat independently, future Games could benefit from a more streamlined approach to their operations. One effective solution might be to assign the scheduling of all sample collection personnel to a single, dedicated team, while a separate team handles all logistical aspects. This specialization could reduce overlaps and improve overall efficiency.

Alternatively, to ensure flexibility and resilience, it could be highly beneficial to cross-train both DCCC teams, enabling them to take over each other's responsibilities when required. This would provide crucial backup and adaptability, preventing operational bottlenecks if one team faces unforeseen issues.

14.3 Doping Control Officer Recruitment

The LOC sent the official call for nominations of International Doping Control Officers (IDCOs) for the Paris 2024 Olympic and Paralympic Summer Games to ADOs and service providers on April 28, 2023. Candidates were required to meet the minimum criteria outlined in the Paris 2024 IDCO Selection Criteria document and maintain good standing with their respective ADO programs until the end of the Paris Games. Additionally, fluency in English was a mandatory criterion for all nominees.

There were 173 Doping Control Officers recruited from NADOs and Private Service Providers. The ITA had set stringent criteria for recruitment, which ensured that these individuals came to the Paris Games with adequate sample collection experience, previous experience in testing in major event settings, and experience with paperless sample collection technology.

In addition, AFLD, as the NADO of the host country, also provided 75 DCOs and 81 Blood Collection Officers[12] (67 of which were also certified DCOs) to participate at the Paris Games. As the Paris Games were a good opportunity for the local DCOs and BCOs to gain experience, the qualification of these DCOs and BCOs varied widely, ranging from highly experienced DCOs and BCOs with previous Games experience to newer recruits that had collected very few samples prior to the Paris Games.

All of the DCOs had to be certified through ITA's IDCO program, which ensured a minimum level of consistency in the theoretical training received.

Recommendation No. 22 (LOC)

The initial recruitment plan called for 200 International Doping Control Officers (IDCOs), but only 173 attended. This shortfall placed pressure on the present IDCOs to cover the same number of planned tests, as demonstrated through this report.

The timing of the Head of Doping Control for Paris 2024's hire in the fall of 2022 was a key contributing factor. Their late start negatively impacted the timeline for critical planning and recruitment processes, most notably the IDCO recruitment.

To avoid this in the future, we recommend that this key leadership position be filled at the start of the planning phase, or at a minimum four years in advance of the assigned Games. This proactive approach would allow the newly assigned Head to attend the preceding Games, which are held four years before their own event. By observing and potentially shadowing the Head of Doping Control for those Games, they would gain invaluable on-the-ground experience and insight. This crucial preparation would then

[12] Only BCOs from the host country were allowed to collect blood under national laws

allow them to effectively and immediately launch key planning steps, like the recruitment of qualified sample collection personnel, with a strong foundation and without delay.

14.4 Doping Control Officer Agreement and Remuneration

Once the DCOs received confirmation of their participation at the Paris Games from the LOC, for some, it was as short as two months prior to the Games, Paris 2024 engaged an outsourced HR company to handle HR responsibilities such as the on-boarding and salary and wage structures.

Prior to their arrival at the Paris Games, all DCOs received an offer. While the DCOs were already on-site and had started working, they were provided with a new employment agreement, in French only, with a short deadline for signing. Non-French-speaking DCOs' requests for an English translation were initially declined. While a "loosely translated" version was later provided, DCOs were still instructed to sign the binding French version, raising concerns about transparency and understanding of the terms.

Unfortunately, the DCO employment agreement was a standard employment contract that failed to account for the extraordinary context of the Paris Games and specific demands of their role, such as:

- The necessity of working long hours;
- The shared accommodations;
- The extraordinary context of the Paris Games; and
- Meals and/or pier diems for meals, etc;

Despite the strict experience requirements for DCOs, the IO Team noted that they were not paid for their two days of training, which was incongruously categorized as a "trial period."

This lack of tailored provisions left DCOs feeling inadequately recognized for their unique operational requirements and many were left unprepared for the conditions during the Paris Games.

Finally, as it is a common practice in France to be paid once a month, DCOs did not receive any payment until two days before the Paris Games concluded. This forced DCOs to cover all their meal expenses out of their own pockets for nearly the entire duration of their deployment, which was not communicated to them prior to their participation.

Recommendation No. 23 (IOC/ITA, LOC)

When an organization brings in specialized personnel to work on-site for a period of time, it is standard and widely expected practice to cover their time (payment for work performed, including training days) and all reasonable meal expenses for every day they are required to be away from their usual residence due to the assignment. This includes non-working days (like weekends) if they are still on-site and unable to return home. It should also be clearly stated when individuals will be paid for their time, so that in the event that it is only at the completion of the Paris Games period, DCOs can plan financially for this. This should be considered in future DCO agreements.

Recommendation No. 24 (LOC)

Recognizing the diverse backgrounds of the DCOs, it is important that legally binding contracts are available well-ahead of their participation at the Games to allow sufficient time to have the agreement translated and reviewed in their native language.

14.5 Doping Control Officer Training

Upon their arrival at the Paris Games, all DCOs were scheduled to enter the Olympic Village to receive their uniforms, retrieve their tablets for COMPASS, and attend the "Refresher Training." The IO Team noted the palpable enthusiasm and excitement among the individuals at the start of this day.

The ITA and AFLD provided an informative full-day training session, following previous online training sessions including an e-learning and online practice for COMPASS. They reviewed Paris Games-specific sample collection procedures, gave DCOs opportunities to practice scenarios using COMPASS, and covered important housekeeping details related to Games-time (e.g., accommodations, scheduling, etc.). This training was a good opportunity for DCOs to immerse themselves in the Paris Games' environment and build their skills. The training set a positive tone for the Paris Games.

Recommendation No. 25 (IOC/ITA, LOC)

The IO Team observed the following, and based on that, recommends:

- There was a large amount of theory provided during this “refresher training”. The IO Team recommends incorporating more case scenarios and practical components to the session.
- DCOs assigned as DCSMs for the Paris Games received specific training on their roles and responsibilities. As some assigned DCSMs had never taken on this role before, this would have been a good opportunity to provide case scenarios, provide practice mission and guide them through how to plan a successful mission, etc.
- The new sample transport process specific to these Paris Games was introduced at the end of the DCSM training. Given the IO Team's observation of numerous challenges with this process, it is recommended that more time and practice be dedicated to this key step, ensuring DCSMs are fully prepared and confident.
- In light of the issues observed in the field regarding notification and chaperoning, we strongly recommend specific training for the role of Chaperone Coordinator. Such training could include a standardized checklist of all the items to address during chaperone briefing. his would help streamline the process and prevent many of the notification and chaperoning issues seen in the field.
- Individual skill assessments or evaluations were not conducted during the DCO training. Given the varying levels of experience in sample collection observed, it is recommended to implement these assessments in future training sessions with remedial training provided to individuals who did not perform well during the practical session. These evaluations could be performed by the DCSMs where they would assess the DCOs assigned to their respective venues. This would also allow the DCSMs to understand the different skill sets within their teams and provide more mentorship to the DCOs who need it most.
- Incorporating team-building activities (e.g., breakout groups by venue teams) and opportunities for recaps could further boost the energy among the DCOs and improve retention.

Overall, the training was comprehensive and thorough, but it became clear that the content was too extensive for the time allotted, especially considering the audience had just traveled and arrived the previous day. For future Games, we recommend extending the training to at least a day and a half to accommodate all content and the above recommendations.

14.6 Doping Control Station Managers and Chaperone Coordinators

The IO Team observed that the success of a doping control session was always directly related to the “leadership” team assigned to the mission: the DCSM and the Chaperone Coordinator.

Success in DCO leadership positions was clearly linked to the presence of key skills such as leadership, management, communication, attention to detail, and problem-solving. DCOs exhibiting these strengths performed effectively and guided their teams to successful doping control sessions. For those with less experience in these specific areas, the role presented additional complexities, suggesting a need for targeted development or support.

Chaperone Coordinator assigning athletes to Volunteer Chaperones at Canoe Venue

The IO Team observed that many processing DCOs with previous experience in leadership or specialized roles (e.g., experience with a specific discipline) were eager to assist in those capacities. However, their pre-assigned roles, based on their DCO agreements, prevented their redeployment. iven the diverse backgrounds of our team members, the IO Team occasionally encountered doping control sessions where there were clear communication challenges. These issues arose when instructions from the DCSM and/chaperone coordinator were unclear or when these individuals faced difficulties effectively conveying information, often due to language differences.

The intention behind scheduling French-speaking DCOs to liaise with other functional areas and integrating international DCOs into teams with chaperone coordinators and DCSMs, was well-meaning. However, despite these thoughtful efforts, there were instances where language barriers significantly impacted team collaboration and operational flow.

Recommendation No. 26 (IOC/ITA, LOC)

Recognizing that there needs to be an opportunity for individual's to gain experience in a leadership role, for future Games, consideration could be given to assigning these individuals smaller venues or missions (e.g., 4 tests), or to incorporate a "shadowing" system where they can follow more experienced DCSMs or Chaperone at the larger venues before having their first shift as DCSMs or Chaperone Coordinator, building in continuous feedback and further training.

Recommendation No. 27 (IOC/ITA, LOC)

It is recommended to build greater flexibility into the assignment or accreditation process to allow for the reallocation of positions based on assessed strengths and real-time needs in the field, optimizing the use of experienced personnel and enhancing overall efficiency.

Recommendation No. 28 (IOC/ITA, LOC)

For future Games, to enhance the team's overall effectiveness, and if the ratio of IDCOs remains consistent, it would be beneficial for individuals selected for these leadership roles to possess strong communication skills in English. Additionally, proficiency in the local language is a significant asset that can further ensure clear communication and foster even stronger teamwork, ultimately contributing to smoother operations and better collaboration across all functional areas.

14.7 DCO Assignment

Led by the AFLD, this team developed and implemented an innovative scheduling software that meticulously factored in all the diverse challenges and intricacies of the Paris Games. This tool embedded France's strict labor laws, including specific regulations on the maximum number of working hours and consecutive working days. Furthermore, it integrated logistical details such as the role assigned to the DCO (as per their agreement), the venue assignment where DCOs were accredited, as well as the geographical location of their accommodations to minimize travelling time. This comprehensive approach ensured scheduling, which was a praiseworthy achievement given the complexity of the event.

Recommendation No. 29 (IOC/ITA, LOC)

The scheduling software developed by the AFLD or a similar tool would be very useful to use at future Games.

14.8 DCO and Chaperone Communication

The logistical coordination of doping control operations during this period faced some challenges due to a fragmented communication system. DCO logistics and assignments were disseminated across various platforms, while chaperone assignments utilized entirely separate channels. This disjointed approach led to some operational inefficiencies, compelling DCSMs to create informal groups to coordinate with their assigned team members for their next shifts, and for team handovers.

Further complicating matters, DCOs, experiencing a perceived lack of complete information from Paris 2024, formed their own independent communication group. However, they were directed to cease using this channel, effectively removing a self-organized solution without implementing a clear, centralized alternative.

Ultimately, while all personnel reached their assigned locations, the journey was marked by inefficiencies and frustration and therefore highlighting an area for improvement for future Games.

Recommendation No. 30 (IOC/ITA, LOC)

The recommendation is to implement a unified and centralized communication platform and protocol for all doping control operations. This integrated system would replace the use of different platforms for DCO and chaperone assignments, eliminate the need for ad-hoc groups for shift handovers, and ensure consistent, real-time information flow. It must facilitate not only top-down directives but also structured, two-way communication to address DCOs' immediate needs and feedback.

14.9 Doping Control Officer Uniforms

A notable shortfall observed by the IO Team was the inconsistent provision of Paris Games-time uniforms for Doping Control Officers (DCOs) by Paris 2024. While some DCOs received two cotton t-shirts, often with limited size availability upon arrival, others received what was available in their size. One DCSM reported receiving merely a baseball hat. When this issue was raised by the IO Team after the initial day of observation, Paris 2024 attributed it to DCOs' status as "officials" during the Paris Games.

However, the IO Team stressed the significant role uniforms play in fostering team spirit and professionalism, which are vital for boosting DCO motivation and sense of belonging. Paris 2024 subsequently attempted to provide DCOs with the same polo shirts issued to all volunteers, but challenges persisted due to insufficient size availability. Furthermore, some DCOs declined to wear the volunteer polos once they received them, indicating a potential perception gap regarding their professional role.

This lack of prior communication meant DCOs were compelled to wear their own clothing to work, creating a contrast to the full Paris Games-time volunteer uniform provided to all volunteer chaperones. The result was a sample collection team that appeared noticeably disjointed.

Recommendation No. 31 (LOC)

To foster team spirit, enhance professionalism, and ensure a cohesive appearance for the sample collection personnel, all Doping Control Officers should be provided with a complete and standardized Games-time uniform well in advance of future events. As much as possible, this uniform should be distinct from volunteer attire (more details provided in observations regarding chaperones) and reflect the professional status of DCOs. Pre-event communication regarding uniform provision and expectations is also important to avoid misunderstandings and ensure DCOs feel valued and appropriately equipped for the critical and technical roles they perform.

14.10 Doping Control Officer Scheduling

Given the inherent demands of their role and that fewer DCOs were ultimately recruited than planned, significant pressure was placed on them. All DCOs ultimately worked multiple consecutive days, often involving extended shifts.

For DCSMs, Chaperone Coordinators, and DCOs, working long hours is typical during major international events. While their official paid workday was eight hours, their roles often required them to work shifts that extended to more hours. The additional hours of were mandatory, with personnel required to arrive two hours before their official start and stay two hours after their shift ended to accommodate sample transportation schedules. This already lengthy workday was further compounded by many DCOs facing daily commutes of 90 to 120 minutes each way.

In contrast, the chaperones' schedules were structured with strict adherence to their designated hours. They were consistently provided with adequate time for meals and breaks, ensuring their shifts did not extend beyond the agreed schedule.

As a result of this disparity in scheduling and rest, DCOs experienced significant fatigue from working long, consecutive shifts without the same level of rest afforded to chaperones. This substantial workload and the lack of consistent breaks had a clear impact on their morale and motivation.

Recommendation No. 32 (IOC/ITA, LOC)

Recognizing the inherent demands and unpredictable nature of doping control, it is recommended that efforts be made during the planning phase to ensure flexibility in assigning work schedules for sample collection personnel.

Recommendation No. 33 (IOC/ITA, LOC)

To avoid challenges in future recruitment and retention of Games-times DCOs, it is strongly recommended to conduct thorough workforce planning well in advance of future events to ensure that a sufficient number of DCOs are recruited to handle the anticipated workload without imposing excessive pressure or unreasonably long shifts on individual personnel. In addition, the expected workload, hours, and working conditions should be clearly communicated to prospective DCOs during the recruitment phase. Managing expectations upfront can help attract individuals who are prepared for the demands of the role.

14.11 Doping Control Officer Accommodations

Accommodation arrangements for DCOs presented several challenges during the Paris Games. While DCOs were initially assigned to hotels based on their proximity to assigned venues, many experienced multiple transfers to different hotels throughout the event, creating instability and disruption.

Furthermore, each processing DCO was assigned a roommate, another processing DCO. Although this was communicated in advance, in a few instances, it was reported that some roommates often had opposite work schedules, which hindered their ability to rest properly. The constant disturbance from a roommate arriving or departing at odd hours compromised their much-needed recovery.

Finally, while DCSMs and chaperone coordinators were housed together, processing DCOs were located in separate hotels. This missed an opportunity, as housing teams of DCOs in the same hotel could have fostered stronger bonds and a greater sense of camaraderie among them, which is vital for team cohesion in demanding environments.

Recommendation No. 34 (IOC/ITA, LOC)

Ideally, provide single occupancy rooms for DCOs, recognizing their demanding work schedules and the importance of uninterrupted rest. If shared accommodation is unavoidable due to budget or availability, prioritize assigning roommates with similar work schedules to minimize disturbance and ensure adequate rest.

Recommendation No. 35 (IOC/ITA, LOC)

Whenever feasible, house DCOs together in the same hotels. This strategic co-location can significantly foster stronger bonds, facilitate informal knowledge sharing, and enhance overall team spirit.

14.12 Transportation

Despite efforts by DCCC Testing to minimize commute times when scheduling DCOs, as DCOs had to commute using public transportation, many DCOs frequently faced travel exceeding an hour and a half to reach their assigned venues.

For off-hours travel, DCOs had to contact DCCC Logistics to arrange taxis through Paris 2024 transport services. However, it was a common and concerning issue for DCOs to wait for over an hour for their assigned taxi, and many reported not feeling safe during these prolonged waits. The IO Team observed many instances where the DCSM implemented a “buddy system” for DCOs to depart and wait for their transport together.

Recommendation No. 36 (IOC/ITA, LOC)

Future planning must optimize and carefully plan the location of DCO accommodations in relation to their assigned venues. Consideration of potential commute times during the planning phase should be made to prevent the logistical challenges and fatigue experienced by DCOs.

The most ideal scenario would be to provide DCOs, or at least DCSMs, with their own vehicles or the autonomy to access to the Games-time transportation system themselves.

14.13 Meals and Beverages

A significant concern for DCOs at the Paris Games was the lack of direct meal provision. Initially, a per diem was intended to cover these expenses. After the IO Team's intervention, Paris 2024 was able to secure an additional 12 (twelve) euros per working day to supplement this.

Even with this adjustment, some DCOs were seen bringing their own snacks and sandwiches, often lacking adequate storage at the DCSs. This was largely because the cost of on-site food options remained unaffordable given the per diem. For individuals working 12-hour shifts with up to a four-hour daily commute, finding the time to prepare or acquire more affordable food outside of their demanding schedules presented another logistical challenge.

This situation was again contrast to chaperones, who had access to provided meals and clearly scheduled break times. In fact, many chaperones were observed bringing food back to the DCSs specifically for the DCOs.

The IO Team noted that this disparity in welfare provisions negatively impacted DCO morale and their overall experience. This disparity in welfare provisions likely explains why some DCOs who committed to working both the Olympic and Paralympic Games did not return for the Paralympic Games.

Recommendation No. 37 (IOC/ITA, LOC)

The planning and budgeting phases for future anti-doping programs at the Games must explicitly allocate sufficient funds for DCO welfare, encompassing full meal coverage, a reasonable daily per diem allowance for meals that adequately reflects the cost of living at the Games or a meal plan (e.g., workforce dining, vouchers to the on-site catering) for all days these individuals are away from their residence, not just their scheduled working hours. This information and the applicable policies should be communicated to all DCOs in advance of their participation.

14.14 Chaperone Recruitment

All chaperones were recruited through Paris 2024. During the recruitment phase, a one-to-one ratio of chaperone to athlete was planned to ensure proper notification and chaperoning.

Paris 2024 demonstrated a strong commitment to inclusion and diversity, aiming for gender parity and accommodating various languages and physical abilities. This is a commendable initiative.

The IO Team did observe one instance where a volunteer chaperone was unable to perform the requirements of a chaperone and could not be reassigned to assist in the DCS, or in a position in another functional area. Considering the shortage of chaperones and volunteers overall, described later in this report, this was a lost opportunity for all parties.

Recommendation No. 38 (IOC/ITA, LOC)

While diversity should remain a priority when recruiting volunteers for the role of chaperone, it is important to consider the physical requirements of the role in the recruitment criteria and/or to ensure that volunteers can meet the requirements of the position.

14.15 Chaperone Training

All volunteers designated for doping control successfully completed the ITA e-learning course on chaperone duties, which prepared them for their roles. This training was completed several months before the Paris Games. However, in practice, it was not evident whether this information was fully retained by the volunteers. It also remains unclear whether chaperones performed their duties based on this prior e-learning, or primarily on the on-site training they received on the day of their shift.

During the Paris Games, chaperones arriving on-site at the start of a shift were briefed by the DCO chaperone coordinator for each sample collection session. The most effective chaperone coordinators provided thorough briefings, covering:

- The roles and responsibilities of a chaperone
- The notification form
- The selection criteria and how chaperones could identify their athletes (especially important when chaperones were given a finishing position rather than a name)
- A complete walk-through from the field of play where athletes are notified, through mixed zones, and back to the DCSs
- The “Dos and Don’ts” of chaperoning (e.g., cell phone use, picture taking)
- Schedule, meal breaks, etc.

It was clear through observations that when these briefings were conducted in detail, notification of athletes and chaperone duties were generally performed well.

The chaperones that were scheduled at the same venues and/or for the same sport throughout the Paris Games excelled in their roles. The IO Team frequently observed returning chaperones enthusiastically

taking the lead in training new chaperones at their venue. They provided valuable guidance by allowing new chaperones to 'shadow' them during the first athlete notification, before confidently letting the new chaperones perform their own notifications. As a result of these leadership opportunities and increased ownership, they became reliable and performed their duties with greater effectiveness.

Some chaperone coordinators spoke only French, which was intended to facilitate communication with other functional areas. However, since some chaperones spoke only English, this led to ineffective chaperone training and subsequent issues during athlete identification and notification. .

Recommendation No. 39 (IOC/ITA, LOC)

The IO Team would recommend emphasizing the prohibition on the use of cell phones during doping control as there were many instances where chaperones were filming and taking pictures of the athletes at the field of play.

Recommendation No. 40 (IOC/ITA, LOC)

It is beneficial to assign volunteers to the same venues or sports whenever possible, as this allows them to gain valuable experience and proficiency in their roles, during this limited amount of time.

Recommendation No. 41 (IOC/ITA, LOC)

Further to recommendation No. 28, for the specific role of Chaperone Coordinator, it is strongly recommended that individuals are assigned who can communicate effectively in both the local language and English. This is essential for ensuring clear communication with both local chaperones and other functional areas within the venue in particular on the field of play.

14.16 Chaperone Assignment

The biggest challenge the IO Team witnessed throughout its observation period was the shortage of chaperones available for doping control sessions. This wasn't just about insufficient numbers being assigned; it was also essentially about chaperones not showing up for their shifts, and/or those who did show up being unsuitable for their duties (for example, chaperones of the wrong gender assigned to an event, or those unable to perform their responsibilities). This ultimately affected athlete notification and chaperoning, but also the overall success of a session.

Paris 2024, including DCCC Logistics, the ITA and the IOC worked tirelessly to fill these gaps as much as possible by re-deploying ITA staff and volunteers from other functional areas. However, these new chaperones received only brief training, were often late for their assignments because they were unable to find the DCS and missed the on-boarding process. Additionally, as volunteers are granted access to specific venues on their accreditation, they often did not have the proper access to the field of play for athlete notification or even to the venue they were re-assigned to. The Doping Control Station Managers, who were otherwise busy assigning chaperones on-site, were not always aware of who, where, or how many chaperones were on-site.

This left the DCSMs and the chaperone coordinators scrambling to ensure proper notification and chaperoning of athletes. Chaperones who were present would notify their athlete, bring them back to the DCS and then return to the field of play to notify another athlete. Some chaperones had to chaperone multiple athletes at the same time, which is not always effectively done, especially when athletes are performing a warm-down. Very few athletes could leave the DCS once they had reported because there were no chaperones to accompany them. DCSMs and chaperone coordinators at times did not have time to provide feedback to chaperones who didn’t perform their duties properly. Although this was rare, this led to repeat shortfalls.

When chaperone shortages were reported early, DCCC Testing tried to assign unscheduled DCOs to fill in. This presented two key challenges: first, DCOs often couldn't get to venues on time due to long commutes, and second, some were reluctant to perform duties outside their contract's scope.

Despite these hurdles, when DCCC Testing successfully navigated these constraints, DCOs proved to be excellent chaperones, thanks to their experience. The IO Team often observed strong teamwork in the field, with DCOs stepping up to help their peer chaperone coordinators and assist volunteer chaperones in identifying athletes.

ITA staff and staff from DCCC Testing also took on the role of chaperones.

Recommendation No. 42 (IOC/ITA, LOC)

DCOs have consistently proven their effectiveness in performing chaperone duties, particularly in the critical first step of athlete notification, and demonstrate strong teamwork in supporting both peer chaperone coordinators and volunteers. This capability is not just a testament to their dedication, but a significant opportunity for future Games to leverage their expertise more broadly. While volunteer chaperones are, and will remain, absolutely essential for the successful execution of anti-doping programs at Major Games, there's a clear benefit to strategically utilizing DCOs. To fully realize this potential, future anti-doping programs should ensure DCO employment agreements explicitly permit their deployment to take on any anti-doping responsibility as operational needs dictate, including both notification and chaperone, and that they receive full accreditation access to all relevant areas and venues, enabling seamless and immediate redeployment at any time.

Recommendation No. 43 (IOC/ITA, LOC)

As the issue of volunteer chaperone shortage is recurrent at major events, some general recommendations to prevent these problems include:

- Consider creating an incentive program to entice volunteer chaperones to attend all their shifts. Other Major Games have found success by giving out fun novelty gifts and unique Games collectibles (such as Games pins) after volunteers put in a certain amount of shifts
- Consider partnering with the local NADO to recruit volunteer chaperones who are already involved in their programs. These individuals would bring existing chaperoning experience and a sense of belonging to the anti-doping team, especially if they're working with familiar faces. This approach would make them much more likely to meet their scheduled shifts.
- Make the chaperone position more exciting for volunteers so they keep coming back! For chaperones whose shifts align with event timings, consider scheduling their duties so they have a small window either before or after their chaperoning tasks to briefly experience the Games. This could involve being allowed into a specific spectator area for a limited time or simply having a prime spot to watch a key moment of the competition as they transition to or from their role. We acknowledge that this won't always be possible, but even a small gesture could significantly boost morale and commitment.
- The IO Team observed a particularly effective strategy when one chaperone coordinator incorporated what they called the “guided tour” into their briefing. During the walk-through of the venue, they allowed chaperones to take pictures on the field of play once (and mostly with each other), and importantly, before the competition began. This thoughtful gesture gave chaperones a unique and memorable experience, enhancing their engagement with the Paris Games (this venue had high numbers of returning volunteer chaperones).

14.17 Chaperone Uniforms and Accreditation

Accreditation

The sample collection personnel team, including all chaperones, require access to all areas within a venue, including the field of play, to fulfill their role. As this access can be abused, accreditations assigned to the sample collection team are often limited to specific venues they're assigned to. For these Paris Games, this created a problem when chaperone shortages force reassignments to different venues, frequently leading to access issues.

During the Paris Games, instead of standard accreditation, cluster managers sometimes gave chaperones a limited number of temporary, hand-written accreditation cards for venue access. This alternative wasn't ideal because these temporary accreditations weren't secure and could easily be misused, lost, or reproduced. More importantly, when chaperone shifts changed, the DCSM, already busy with ongoing troubleshooting and operations within the station, had the added responsibility of retrieving these temporary passes from departing chaperones in the field and then distributing them to the incoming staff.

Uniforms

As part of the workforce, chaperones were provided with a full Paris 2024 volunteer uniform. All the chaperones observed were consistently dressed in their appropriate volunteer uniforms. However, once outside the DCS, it was challenging to distinguish them from volunteers in other functional areas.

As a result, the IO Team noted:

- Some chaperones were prevented from accessing certain areas, affecting their ability to properly chaperone their athletes.
- Although chaperones maintained visual contact with their athletes, some athletes had difficulty locating their chaperones amongst the many volunteers. When there were multiple chaperones notifying at the end of events, especially road events (e.g., triathlon, road cycling, etc.), it was challenging for chaperone coordinators to keep track of all their chaperones.
- Unscheduled chaperones were present at the field of play.

Chaperones waiting at the Finish Line to notify their Athlete, amongst other Volunteers

Volunteer Chaperone waiting for their Athlete to complete their competition

The IO Team suggested introducing a doping-control specific armband or accreditation card to easily identify chaperones in the field that are on duty and prevent these common Games-time issues. While the concern of maintaining athlete privacy was discussed (i.e., ensuring athletes are notified privately and that an identifying armband does not compromise this), the issue of access remained unresolved by

the end of the Paris Games. Athlete privacy also needs to be balanced against the Athlete's duty to stay with their chaperones. A task that proved difficult for some athletes as their chaperones were not easy located in a crowded environment. Whilst sample collection personnel are not 'special' when compared to other technical officials or volunteers, the risk of an athlete suffering a potential failure to comply anti-doping rule violation in the event of losing a chaperone because there is no distinguishing armband or vest is a real one. On balance, the IO Team feels that reducing issues and stress for athletes is a worthwhile justification for providing some sort of distinguishing uniform for DCOs. Whilst, privacy of athletes can be an important justification, it does not tend to hold water at major events where for example, it is publicly known that all medalists are subject to doping control.

Recommendation No. 44 (IOC/ITA, LOC)

Addressing the logistical challenge of accreditation provided to doping control personnel is key to ensuring smooth operations and avoiding disruptions. As much as possible, access to all venues and athlete areas including field of play should be given to doping control personnel to enable them to fulfill their roles and the requirements of the International Standard for Testing and Investigations.

Recommendation No. 45 (IOC/ITA, LOC)

In addition to the uniform (as referenced in Recommendation No.31) , the IO Team recommends that sample collection personnel be provided with a specific identifier, such as a branded armband or a dedicated accreditation. This is to control their privileged access to restricted areas, including the field of play. To ensure this access is managed efficiently and securely, identifiers can be issued for scheduled shifts only.

15.0 Sample Collection Sessions

15.1 Doping Control Stations

Each of the venues visited by the IO Team had a dedicated space for doping control used as a Doping Control Station (DCS). All of the stations visited by the IO Team included a registration desk, a waiting room with refrigerator stocked with water and soft drinks for the athletes, processing rooms, washrooms, an office for the DCSM, which housed the refrigerators used to temporarily store urine and blood samples before sample transportation. Some DCSs had a separate equipment room to store inventory whereas some stations had the equipment stored in the station manager's office. Generally, these spaces were comfortable for the athletes, their support personnel, and the sample collection personnel.

Several DCSs were shared between sports held in the same or nearby venues. While this arrangement is logical, the IO Team observed a testing day at Grand Palais where Triathlon and Fencing events ran concurrently. Two teams of sample collection personnel had to share one DCS, creating a challenging situation. A similar scenario occurred at Vaires-sur-Marnes, where both rowing and canoe events took place simultaneously. In both cases, there wasn't enough space (processing rooms) for both teams of sample collection personnel. Two station managers running one station led to a chaotic environment, despite it being well managed under the circumstances. Recognizing that DCSs are planned well before Games schedules are finalized, we recommend having contingency plans for such situations.

Some DCSs were integrated into existing venue spaces, while others were temporary installations, often situated separately or outside the main venue facility. Although both types were functional, the temporary installations had better layouts, as they were specifically designed for doping control purposes. Most of the DCSs had temporary walls, but the IO Team noted that the materials used for these walls created a very loud environment within some of the stations. Additionally, the internet connection was often unstable due to these materials, which proved challenging at times when using the Compass paperless system. The DCOs sometimes would exit their processing rooms in order to gain better internet access.

The location of the DCSs varied depending on the venue. All of the stations were strategically placed in discreet locations within the venue, ensuring they were inaccessible to the public. Though some stations required a bit of navigation or a walk from the field of play, signage was available at the venues, but more could have provided. Notable examples include Stade de France, La Concorde, and Grand Palais (for road events).

Recommendation No. 46 (LOC)

It is recommended to implement (increase) signage to DCS throughout venues. This helps ensure athletes and sample collection personnel can easily locate DCSs, minimizing confusion and streamlining the process.

Recommendation No. 47 (IOC/ITA, LOC)

Developing robust contingency plans is advisable for venues hosting multiple concurrent sports events. These plans should address potential challenges like space constraints and resource allocation, ensuring sufficient support for sample collection personnel.

Recommendation No. 48 (IOC/ITA, LOC)

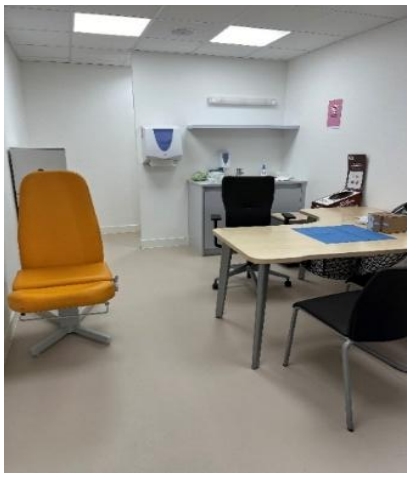
During the planning phase, it's important to meticulously assess the infrastructure of all venues, particularly temporary installations. This verifies that these facilities are fully adequate for doping control operations, with particular attention to critical elements such as soundproofing and reliable internet signals.

15.2 Processing Rooms

The processing rooms were well-equipped with tables, chairs, and all necessary equipment for sample collection sessions. The DCOs were diligent in restocking the rooms throughout their shifts, and station managers often performed a full restock at the start or end of their shifts.

Some processing rooms had their own dedicated washrooms, which was ideal. In certain scenarios, a single washroom was shared between two processing rooms, equipped with locking mechanisms on both sides to ensure privacy for athletes. The DCOs maintained an efficient system within these stations.

Each washroom was equipped with a sink, a toilet, collection vessels, scissors, and a garbage bin. Some washrooms had chemical toilets and portable sinks. While these meet the requirements of a DCS, given the sheer volume of athletes using these toilets, some athletes exhibiting symptoms of dehydration (i.e., diarrhea), the use of these toilets did not provide a good experience for the individuals within these stations. The DCOs in charge avoided use of these where possible (e.g., Stade de France).



Processing Room at Tennis Venue

Chemical Toilet at Athletics Venue

For road events (e.g., triathlon), the distance between the finish line and the DCS, coupled with the potential for athletes to attend medal ceremonies shortly after notification, led to the proactive setup of “emergency” DCSs in nearer locations. Although the IO Team did not observe the emergency station in use, this was an example of good planning.

In the event that the emergency DCS needed to be used, DCOs had access to a bag with all necessary doping control equipment. During visits to the emergency station, the IO Team noted that the equipment bag was available and ready on the processing table. However, the equipment was left unsupervised both times the IO member went to the emergency DCS.

Recommendation No. 49 (LOC)

It is important to plan and implement robust cleaning protocols, and increase their frequency, when necessary, to ensure all washrooms are maintained at a high standard throughout events. This proactive approach helps uphold hygiene and attendee comfort.

Recommendation No. 50 (IOC/ITA, LOC)

Given that the emergency DCS might not be continuously staffed, it is essential to ensure doping control equipment remains supervised or stored securely in the DCS. This can be achieved either by assigning a dedicated security guard, ensuring the DCS is lockable and/or having cabinets inside the DCS that are lockable or having a DCO maintain possession of the equipment at all times. This measure safeguards equipment while not in use.

16.0 Notification and Chaperoning

Notification of athletes was a key aspect of the chaperone duties, and several measures were in place to ensure its effectiveness. Each chaperone folder included a leaflet outlining their rights and responsibilities, and the notification form was designed to be simple and easy to understand.

Experienced chaperone coordinators with excellent leadership and communication skills played an essential role in the success of the notification process. Those who were well-prepared for their mission, understood the selection criteria and sport-specific protocols, and provided thorough training to the chaperones which ensured that everyone was well-prepared for their duties.

The IO Team observed chaperone coordinators delegate, when possible, notification of “higher profile” athletes to more experienced chaperones and assign chaperones based on their gender and/or language

abilities. DCSMs and chaperone coordinators also made careful adjustments for notification of athletes who were minors.

The Chaperone Coordinators were always in the field of play to support the volunteer chaperones, ensuring that all the athletes were correctly notified.

Their effective leadership and clear communication set the tone for a successful notification process and helped maintain a high standard of performance.

16.1 Out-of-Competition

In the Olympic Village, DCSMs were provided with a list of athlete selections for their scheduled shift. It appeared that DCSMs assigned athletes to chaperones mostly based on the time of day, deploying chaperones early in the morning (prior to breakfast), right after training and right before lunch, and before and after dinner time. While the use of whereabouts information wasn't explicitly observed, it is possible that they were utilized.

The IO Team observed that OOC test selections during the Paris Games were frequently assigned by sport and and/or country, particularly for team sport athletes. This approach sometimes resulted in all athletes from a single sport and country being tested OOC during the Paris Games, with no subsequent testing. This pattern is directly reflected in the date and time of notification recorded on the DCFs within ADAMS.

Given athlete schedules and the frequent assignment of tests around meal times, many notifications, if not at an athlete's residence, needed to occur at the athlete's dining hall.

However, sample collection personnel lacked official access to these dining halls. This often forced resourceful chaperone coordinators to negotiate "temporary access" with on-site security volunteers to identify and notify athletes in the athletes' dining hall. Once an athlete was located, the chaperone coordinator would notify the athletes and volunteer chaperones waiting at the entrance would be called in to then continue the role of chaperoning.

In one instance, the IO Team observed a chaperone coordinator notify two athletes simultaneously inside the dining hall. Without available chaperones to take over, both athletes had to remain together until two chaperones could be found. The IO observer was asked to step in to temporarily step in to chaperone the two athletes, while the chaperone coordinator went to find their chaperones at the door.

Another challenge that arose with notification is that each room within the Olympic Village was more like an apartment, containing several smaller, paired rooms. Therefore, although the rooming information and/or the whereabouts information would lead the chaperones to a room, when the main door was opened, multiple athletes could be present, making it difficult to immediately pinpoint the specific room of the athlete being sought and to notify the athlete without other individuals being informed of their selection.

Overall, the notification process for OOC testing was well-executed, likely due to its less stressful nature compared to IC scenarios. While language barriers posed a common challenge, the IO Team did not observe any instances where athletes failed to report to the DCS due to a flawed notification. However, it was noted that some notification forms weren't properly signed until verified by the processing DCO after arriving at the DCS.

16.2 In-Competition

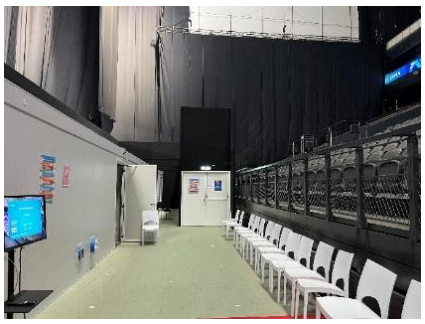
Volunteer chaperones generally did a commendable job in identifying and verbally notifying the correct athletes, and although the instructions were that the notification form be signed as soon as possible in

the notification process, the volunteer chaperones ensured that the forms were signed by the time they reported back at the DCS.

Two-way radios were available to use between the DCSMs and the Chaperone Coordinators to provide updates to the DCSM on the notification count. However, the channels used were not secure and exclusive for doping control. As such, they were used for more general communication between members of the sample collection personnel team.

Some of the recurring challenges that were noted during the period of observations were:

- Lack of privacy for notification: in an attempt to notify athletes as soon as they finish their competition or leave the field of play, chaperones would hastily notify athletes in areas either where the public had access (or visual access) and/or right before the Mixed Zones where media were eagerly awaiting all the athletes. In a few instances, DCSMs and Chaperone Coordinators had spotted these issues ahead of their missions and mitigated this by requesting privacy panels to be installed to reduce the visibility to public from these zones (e.g., Swimming, Volleyball).
- Proper access: chaperones either did not have access to the different areas accessible to the athletes or if they had been re-assigned from another venue, did not have access at all. As a result chaperones had to adapt their route back with the athletes they had notified based on their access. To resolve this issue, venue managers provided temporary hand-written “access” cards to allow chaperones the proper access.
- Change in sport-specific protocols: it seemed that sport-specific protocols were adjusted at venues by the venue manager on-site, sometimes without informing the doping control team. This caused confusion and resulted in the chaperone coordinators having to adapt their plans at the very last minute. To minimize these challenges, it is recommended that the doping control team and the respective venue manager review protocols the day before, if needed, with the appropriate venue manager.
- Finishing positions: when chaperones were responsible for notifying finishing positions (that were not medal finishers), the chaperone coordinators had to really hurry to ensure that the right athletes were identified, between waiting for the final results and confirming with the chaperones the athletes assigned to them. In these scenarios, additional support (from another DCO perhaps), ITA, or even a volunteer chaperone that understands the sport, should be provided.



Spectator seats facing the Doping Control Station at Swimming Venue

The IO team observed that the notification process was performed better at venues with consistent DCSMs, chaperone coordinators, and chaperones highlights the critical impact of team stability and experience. Where staffing remained consistent, sample collection personnel were better prepared and executed their roles more effectively than at venues with frequent staffing changes.

While recognizing that consistent staffing is not always feasible due to the varying structures of sports events (e.g., single-day road competitions), it is crucial to prioritize assigning more experienced individuals, both in doping control and also in the sport, when possible, to these key roles.

The presence of ITA representatives on-site at venues proved to be not only helpful but essential for troubleshooting and ensuring the correct identification of athletes and proper notification.

A notable example of this was an instance where athletes selected in preliminary rounds were also slated to compete again. The ITA's immediate presence was invaluable in confirming that these athletes could

not be notified right away, allowing for adjustments and preventing potential disruption to their competition preparation and schedule while maintaining the integrity of the testing process.

Finally, and as aforementioned in this report, the IO Team observed a significant under-utilization of DCOs within the overall process. These individuals were recruited based on their extensive prior experience in doping control, including expertise in athlete notification, one of the most challenging aspects of the process. Despite this valuable skill set, most processing DCOs were instructed to remain in their rooms, waiting for athletes to arrive. Meanwhile, athlete notification was largely assigned to volunteers, many of whom lacked prior experience and some even training. This seemed like a missed opportunity to leverage the seasoned expertise of the DCOs where it was most needed.

When this issue was raised with Paris 2024, it appeared that the DCO agreement's outlined responsibilities prevented DCOs from being assigned to athlete notification duties.

16.3 Chaperoning

Chaperoning from the point of athlete notification was generally satisfactory.

In addition to the issues of chaperone shortages (and having volunteer chaperones having to chaperone multiple athletes, for example), the most common issues chaperones faced centered around maintaining visual contact with athletes in specific areas:

- Mixed Zone: It was difficult for chaperones to keep athletes in sight as they moved through the Mixed Zone. This was an expected challenge, as chaperones are intentionally not permitted to enter this area to avoid being on camera.
- Press Conferences: Similarly, chaperones were not allowed to enter press conferences, making it difficult to maintain continuous visual contact with their assigned athletes during these events.
- Warm-down Areas: It was sometimes difficult for chaperones to maintain visual contact during athlete warm-downs, especially in large or open spaces. Examples included athletes running on a warm-up track (like at Stade de France) or conducting warm-downs for canoe/kayak at Vaires-sur-Marnes.

Recommendation No. 51 (IOC/ITA, LOC)

The chaperone coordinator role is fundamental to the success of athlete notification. Their ability to train volunteer chaperones, provide ongoing support, and supervise in the field was absolutely critical to ensuring notifications were handled correctly. Given their contribution, greater emphasis must be placed on selecting individuals for this role. Furthermore, their training as chaperone coordinators needs to be consistent, mirroring the robust training provided to DCSMs.

Recommendation No. 52 (LOC)

Accreditation and zone access is essential for the efficiency and integrity of the notification and chaperoning process, especially in high-traffic athlete zones and areas where athletes have access post competition.

Recommendation No. 53 (IOC/ITA)

For future Games where athlete accommodations feature a similar multi-room apartment format, it would be recommended to request more granular rooming information. This could include specifying sub-room numbers or bed assignments within multi-room units, where applicable and feasible. Alternatively, and while acknowledging the previous recommendations made in section 13.4 on Whereabouts System, a simpler solution would be to require athletes to clearly display their names on their individual bedroom doors.

Recommendation No. 54 (IOC/ITA, LOC)

To uphold the privacy of athlete notification and ensure effective chaperoning without compromising other critical event operations, the Games Anti-Doping Team must engage in early and careful planning with other Functional Areas, including Press, Broadcasting, and Medal Ceremonies. This collaboration will ensure all parties clearly understand how notification and chaperoning can effectively occur within shared spaces, while also recognizing the objectives and limitations of each functional area (e.g., avoiding chaperones on camera in the Mixed Zone). Furthermore, maintaining this line of communication throughout the event is crucial for prompt adjustments if operational changes impact planned privacy protocols or chaperoning strategies.

Recommendation No. 55 (IOC/ITA, LOC)

While acknowledging the logistical challenges of consistent staffing across all venues and event types, prioritize assigning stronger, more experienced individuals to key Doping Control roles (DCSMs, chaperone coordinators, and chaperones), particularly where frequent staff rotation is unavoidable.

Recommendation No. 56 (IOC, LOC)

It is key to leverage experienced personnel, such as the ITA, the NADO representatives, the DCOs, and volunteer chaperones with demonstrated multi-shift experience during the Games, in the most challenging and critical doping control roles. This means identifying the functions where expertise has the greatest impact such as athlete notification and ensuring that individuals with proven skills are assigned to these positions.

Recommendation No. 57 (LOC)

As emphasized throughout this report, ensuring accreditation access to athlete areas and chaperone training are key to ensuring proper athlete chaperoning.

17.0 Reporting to the Doping Control Station

Once notified, athletes were escorted to the DCS by their assigned chaperones. The system implemented to manage entry and exit of the DCS generally worked well. At the registration desk, a doping control officer or volunteer chaperone would register athletes and their representatives using the application EntryLog. Similarly, athletes and their representatives had to sign out upon completing the sample collection session and before leaving the station.

The IO Team noted that EntryLog could be slow at times and sometimes the scanning feature wasn't working properly, which resulted in having to switch to manual registration, which caused some delays in the process and athlete queues at some DCSs. Despite these challenges, it's important to recognize this was the first-ever Games where an application was used for recording entry and exit logs, an innovation compared to the paper forms used at all previous Games.

Recommendation No. 58 (IOC/ITA, LOC)

To address this, it is recommended to have additional devices for the sign-in/sign-out process to speed up this procedure, especially during peak times and at those DCS that have a higher testing load. It would also be recommended to train additional staff to handle the sign-in/sign-out tasks.

18.0 Sample Collection Procedures

Once the athletes signed into the DCS, they were instructed to sit in the waiting room until they were ready to provide a sample.

As athletes were ready to provide a sample, the Doping Control Station Manager assigned them to processing DCOs, carefully taking into consideration the language capabilities and when blood samples were required, the availability of a BCO to perform venipuncture.

The system ran seamlessly when each DCO had the same assigned processing room for the mission (e.g., 4 DCOs with 4 processing rooms). When there were more DCOs than processing rooms, this resulted in a lot of DCOs waiting around in the DCS, when they could have been redeployed, to assist with notification and/or chaperoning at that venue (or another venue).

All the DCOs observed were professional and experienced. The sample collection procedures were generally consistent throughout the observation period, with very minor differences from one DCO to the other which ultimately did not affect the integrity of the process. In a single instance, the IO Team noted concerning issues with a DCO's processing skills and the ITA responded effectively, taking proper measures to remediate the situation once reported.

With regards to sample collection, the main issues observed were:

- ComPASS: Inexperience with the use of ComPASS app among some of the DCOs led to delays and errors. Issues arose with the transferring of samples within the system (e.g. partial samples), suggesting potential workflow complications or user unfamiliarity. The order in which samples were collected sometimes did not align with the flow of the app, but this may have been also linked to the user. Furthermore, there were some connectivity issues with the app which slowed down the flow of the process which led to frustration amongst the users.
- Blood collection faced two main issues. Firstly, the scheduling of BCOs was not consistently aligned with the number of blood samples needed during a session. This often led to DCOs and athletes waiting for the next available BCO, prolonging the collection process. Secondly, many BCOs demonstrated limited or no prior experience with blood collection in a doping control context, leading to a noticeable lack of confidence in specific procedures. This not only extended the process and contributed to inefficiencies, but could also have been perceived by athletes, potentially diminishing their trust in the thoroughness and reliability of the anti-doping process.

Throughout the observation period, the IO Team raised any DCO performance issues observed in the field immediately with the ITA (through ADCOM) and the ITA was always very responsive in resolving the situation by offering remedial training, changing a DCO's role for a specific mission, and/or sending an ITA staff member to support the mission (or on the following day).

Recommendation No. 59 (ITA)

The existing training program for the ComPASS app for the DCOs, while comprehensive in its resources, did not adequately prepare all DCOs for some of the in-field operational challenges. While we acknowledge that these challenges will decrease as DCOs continue to use ComPASS at Games (and increasing number of DCOs use paperless systems around the world).

In the meantime, some considerations to alleviate these issues would be:

- some "real-world" challenge simulations such as processing a partial sample with multiple DCOs, handling samples collected out of the app's default workflow, working through a test with simulated loss of internet connectivity.
- Require all DCOs to pass a practical hand-on "test" on-site prior to their first mission to verify that they have not only completed the training modules but can also demonstrate a required level of proficiency in managing the full ComPASS workflow under pressure.

- Formalizing into the role of DCSMs as on-site technical and procedural experts. Their additional training should be specifically geared toward real-time troubleshooting of ComPASS app issues and providing immediate guidance to less experienced DCOs, thereby reducing delays and user frustration.

Recommendation No. 60 (IOC/ITA, LOC)

While the challenges with BCO scheduling and experience were a key factor in the inefficiency of blood collection sessions, it is to be noted that these issues were compounded by national regulations which limited the recruitment pool to only French BCOs, many of which with limited experience in doping control.

Therefore, for future Games where a similar constraint on the recruitment pool may exist, it is recommended to:

- To reduce the wait times for athletes, conduct a more rigorous analysis of testing needs to better align the number of BCOs with the anticipated demand for blood samples per session.
- Given the limited candidate pool, the focus must shift from recruiting experienced BCOs to proactively creating them. This program should go beyond basic phlebotomy skills and include comprehensive instruction on doping control-specific procedures (e.g., documentation, and the handling of different sample types) and hands-on practice sessions and simulations designed to build confidence and competence in a doping control context.

19.0 Post Sample Collection, Security, Transport and Chain of Custody

Once a sample collection session concluded, the processing DCO transferred the sample(s) on ComPASS and physically to the DCSM's office for storage and refrigeration. The refrigerators in the DCSM offices were equipped with combination locks for security, though the IO Team noted they were sometimes left unlocked during peak sample volumes. While the DCSM offices were consistently supervised, minimizing unauthorized access risk, and samples were already secured within their individual boxes, we recommend that the locking mechanism for refrigerators be as practical as possible to ensure they remain locked when not in direct use.

Initially, sample shipments occurred once daily, at the end of the day. The scheduled DCSM was responsible for preparing all samples collected that day. This involved reviewing samples (ensuring that all samples had been transferred under their custody), careful packaging into transport boxes, and creating a detailed shipment record in ComPASS. Upon finalizing details in ComPASS, the boxes were handed to the outsourced transport company, 360º Services.

However, this procedure faced notable inefficiencies:

- It was clear in the first few days of observations that DCSMs were not sufficiently trained on the specific shipment protocol.
- The absence of freezers in the DCS at all venues posed a challenge for the DCSM in preparing the cold packs for the blood transportation bag. For instance, at the Olympic Village DCS, these freezer packs had to be transported from the ITA office, which was approximately 500 meters away. This added an extra step for the DCSM, adding to administration of the process.
- Drivers for the transport companies frequently struggled to locate the Doping Control Station (DCS) and lacked direct contact information for the Doping Control Station Manager (DCSM). This often resulted in delays of over an hour in reaching the DCS, and because the drivers weren't always the same individuals, the problem persisted.

But even with adjustments and experience, the combination of digital transfers via ComPASS and the transport company's numerous manual steps—some, like sealing transport doors with stickers, taking

pictures of the paperwork with the drivers, appeared redundant as they did not enhance security and prolonged the shipment process, often taking two to three hours per shipment.

In response to these challenges, the ITA adjusted this process and reduced sample shipments to one per shift. This adjustment not only alleviated some of the time previously spent on the shipment process but was greatly appreciated by the DCSM working the later shift.

Most importantly, no issues were observed with samples arriving at the laboratory, nor was the integrity of any sample breached during transport. This confirms that, despite operational complexities, the essential security and reliability of the sample chain were maintained.

Recommendation No. 61 (IOC/ITA, LOC)

While training was provided, its lack of depth and practical application contributed to delays. Sufficient hands-on training will minimize errors and delays caused by unfamiliarity, ensuring DCOs can efficiently manage their part of the shipment process in in a live environment.

Recommendation No. 62 (IOC/ITA, LOC)

Doping control stations where blood collection occurs should include a fridge with a separate freezer compartment at the top.

Recommendation No. 63 (IOC/ITA, LOC)

To implement robust logistical and communication protocols for doping control transport, which includes mandatory pre-event briefings and route familiarization for all potential drivers, establishing dedicated, 24/7 direct communication channels for drivers to reach a DCSM or logistics coordinator, and providing clear navigation aids like detailed maps or pre-programmed GPS coordinates. Additionally, we suggest, where feasible, requesting consistent driver assignments and providing standardized "Doping Control Transport Protocol" training for all involved drivers, regardless of rotation, while also ensuring exceptionally clear DCS signage and considering on-site liaison support during peak hours to assist arriving drivers. By putting these measures in place, future events can significantly reduce transport-related delays, boost operational efficiency, and uphold the integrity of the crucial doping control process.

Recommendation No. 64 (IOC/ITA, LOC)

The rigorous chain of custody documentation and the seal on the sample collection kit represent the primary and most robust security measures for samples. Therefore, any additional processes introduced for "security" during shipment or handling should be meticulously reviewed to ensure these supplementary steps genuinely enhance security without compromising the overall efficiency of the post-sample collection process.

20.0 Laboratory operations

20.1 Anti-Doping Hub

The Paris Anti-Doping Hub (ADH), in the most general sense, served as a key focal point where the Samples were received, stored, and finally distributed to their final destination: the anti-doping laboratory. The ADH facility was equipped to handle and store Samples arriving from different venues before being delivered to the Laboratory in a single batch process each day and to facilitate the Laboratory's operation.

The ADH was the responsibility of Paris 2024, which followed an operation plan suggested by the Laboratory, and it was placed just outside of the Laboratory's secure perimeter. The ADH operated 24 hours, 7 days a week for the duration of the Games with one (1) ADH officer per shift (Paris 2024 staff

with a total of five (5) ADH officers over three different shifts) and followed all the requirements for security (restricted and controlled access) and sample temperature control/records, which ensured sample integrity.

Urine, blood and DBS Samples were initially stored refrigerated at the DCS in which they were collected until they were picked up by the contracted courier service. Authorized trucks, with two (2) accredited persons, were, at any given time, able to deliver in secured boxes the samples from each DCS directly to the ADH. Several deliveries were observed from a respective venue or the Olympic Village (OLV), and the average transportation time from a venue within the Paris region to the ADH was around 1 hour. Moreover, the courier trucks did not travel from DCS to DCS to collect samples, which resulted in an efficient single route of transportation, and also meant that the truck's locked/restricted loading space (where the sample boxes were stored during transportation) remained sealed until the sample boxes were transferred from the drivers to the ADH officer.

Security Process in the ADH - Sample Transportation Verification: (A) The samples under transportation and the cargo vans were verified before accessing the ADH premises. (B) Van doors were sealed to prevent access to the boxes containing the samples during transportation after departing from a specific DCS. (C) Documents and seals around the sample boxes were verified upon arrival. (D) Documents were also electronically verified against the information entered in the DCS at the time of sealing, using an online platform.

For every box in which the delivery of urine only samples was observed by the IO Team, it was not possible to ensure the temperature at which the samples arrived at the ADH. It was only possible to verify that the cold packs included at the DCS were still in good condition. Samples from Tahiti were the only ones delivered to the ADH by World Courier, and no outstanding observations were made compared with the samples delivered by courier. Nevertheless, dataloggers were included for the boxes containing blood samples.

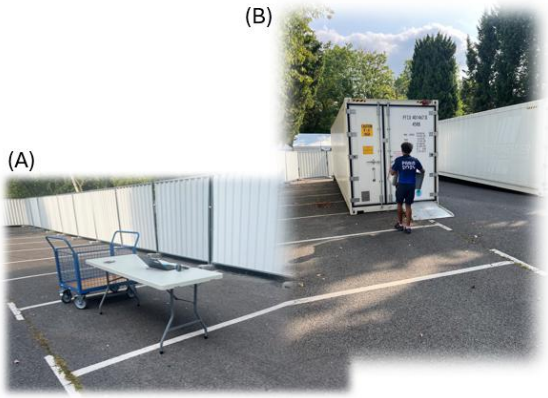
All cool boxes for shipping samples at the Paris Games were equipped with two (2) separate seals to maintain the integrity of the samples during transportation. These seals were carefully checked by the ADH team, scanned via ComPASS and recorded in the SharePoint tool developed by ITA. This system was designed to ensure that the same seals originally added in the DCS were accurately transferred and logged into the ADH system, allowing the ADH to confirm that the samples arrived securely.

However, on several occasions, the seals on the boxes were not appropriately recorded onComPASS by the DCS Manager – for example, due to the DCSM not scanning the seals. As a result, the ADH officer was required to perform an additional process to verify the correct seal codes in the software. This required constant communication between the ADH officer with the ITA team to resolve discrepancies before handling and storage of each box. While it is commendable that this additional layer of security

was implemented to safeguard the integrity of the samples, there were some challenges in ensuring accurate and efficient management of the information.

For future Games, if a similar approach is adopted, it is recommended that the process be further developed to streamline the recording and verification of seal codes. This includes ensuring the DCS Manager is adequately trained to use the system and implement the verification procedure.

In addition, the location of the ADH would have greatly benefited from a more developed infrastructure. The reception of boxes was conducted in an open-air area, leaving the entire process exposed to the elements; on rainy days, ADH officers were required to perform their duties under challenging weather conditions, which posed significant operational difficulties. The exposure to rain and harsh weather could potentially have compromised the efficiency and quality of the sample handling process, introducing unnecessary risks to the integrity of the samples and the overall operation.



Operation area of the ADH – Sample reception and information verification area office (A), and transference process after verification to the container where boxes were stored until the time to be moved to the Laboratory (B)

To improve the system for future events, it is recommended that the infrastructure be upgraded to provide a sheltered area for the reception and verification of the boxes. This would ensure that ADH officers can carry out their tasks in a controlled and safe environment, regardless of external weather conditions. Such improvements would not only enhance the working conditions for staff but also ensure the continued quality and reliability of the sample management process.

Recommendation No. 65 (IOC/ITA, LOC)

Establishing a centralized hub to manage the movement of samples from the various Olympic venues to the Laboratory in a single daily delivery was an outstanding achievement and significantly facilitated the Laboratory's operations, resulting in a cost-efficient approach. One of the notable strengths of the ADH was its continuous 24-hours 7-days-a-week operation, which ensured that samples were received, verified, and stored in proper conditions without undue delay. The presence of a dedicated team of ADH officers working in shifts was efficient and well-established. The structured approach to transportation, security, and operational procedures applied in Paris 2024 is a model that should be further refined and used for future Games.

Recommendation No. 66 (IOC/ITA)

To enhance the efficiency and integrity of the sample management process for future events, it is recommended that the focus be on improving the seal code recording and verification procedure for the transport of the sample boxes from the Venues to the ADH or Laboratory. It is also recommended that DCOs receive more detailed training on ComPASS used to record seal codes. A real-time communication system between DCS and ADH teams could also be established to facilitate quick resolution of any seal code discrepancies. Furthermore, a mandatory cross-checking procedure at the DCS should be introduced to ensure that all seal codes are accurately recorded before sample transfer. Regular audits conducted at the beginning of the transportation procedure would help identify inconsistencies early and prevent delays in the sample handling process.

Recommendation No. 67 (IOC/ITA)

The infrastructure of future ADH should be upgraded to include a dedicated indoor or covered reception area to protect samples and staff from adverse weather conditions. Moreover, providing ergonomic workstations for ADH officers would enhance efficiency and improve working conditions.

20.2 Paris Laboratory Activities

20.2.1 General

WADA's International Standard for Laboratories (ISL) recommends that Major Event Organizers (MEOs) utilize existing WADA-accredited laboratory facilities for sample analysis, rather than investing significant resources into establishing new satellite laboratories. This recommendation aims to optimize efficiency and minimize operational complexity. For the Paris Games, the analytical testing services were provided by the Laboratoire AntiDopage Français (LADF), a WADA-accredited laboratory located in the Université Paris-Saclay in Orsay. The Laboratory moved to this location in April 2023, and extensive investments were made to improve its facilities, security, instruments, and working conditions. LADF's proximity was approximately one (1) hour from many of the Paris Games venues which was a strategic advantage, facilitating swift sample transportation and analysis.

In addition, for at least four years prior to the Paris Games, the Laboratory and the ITA established a close and productive partnership. This collaboration was characterized by regular meetings, comprehensive testing plans, and the joint establishment of the HUB, with both organizations making significant contributions to the development and implementation of essential tools. As a result, this collaboration was noted to be effective and well-coordinated for the operation of the Laboratory.

LADF operated continuously, 24 hours a day, 7 days a week; however, unlike other Laboratories in previous Games, the night shift in Paris (from 9:00 pm to 4:30 am) was limited to one person responsible for verifying instrument performance. It is worth mentioning that the ADH played a crucial role in making this operation possible, as the samples were delivered to LADF as a single batch ealier in the morning. The laboratory's operational schedule was carefully structured to balance workload and maintain quality and efficiency. Major laboratory operations, such as sample reception, preparation, and data interpretation, were allocated to daytime hours, while evening shifts were dedicated to more equipment maintenance tasks, including verification of instrument calibration and analysis. This division of activities allowed most of the Laboratory staff to be present at the same time in the laboratory and to focus on major tasks during predetermined hours, optimizing resources and boosting productivity. Additionally, the approach was supported by the well-established ADH procedure, which ensured consistency, and seamless management and documentation of sample reception activities.

In the year leading up to the Paris Games, WADA conducted three (3) on-site assessments of the Laboratory to ensure the laboratory's readiness. Assessment teams composed of WADA Science staff and external laboratory experts including members of the WADA Laboratory Expert Advisory Group (Lab EAG) and other relevant WADA technical working groups assessed the laboratory's operations and preparations. The assessments were carried out to verify that the laboratory complied with the 2021 ISL as well as all related Technical Documents, Technical Letters, and Laboratory Guidelines.

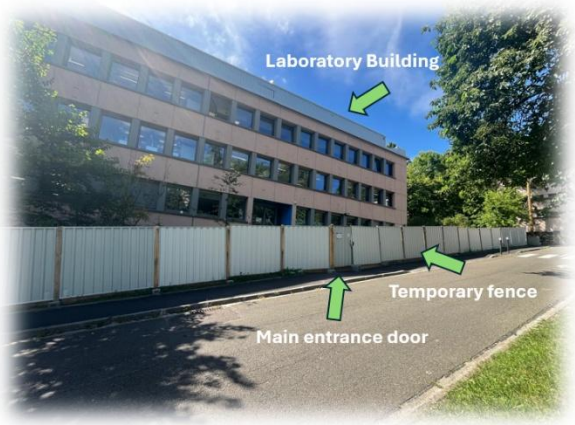
The laboratory's operations were further observed during the Paris Games by an assigned IO member dedicated to the Laboratory operations. This individual observed the LADF operations everyday from the opening of the OLV through to a few days before the conclusion of the OG, observing all of the different analytical procedures.

The decision to utilize the WADA-accredited Laboratory, LADF, for the Paris Games ensured that existing, well-established infrastructure and expertise were used to maintain high standards for the Sample analyses while minimizing operational complexity.

20.2.2 Enhanced Security Measures

As is customary for OG Laboratory operations, the LADF's security was structured using a multi-tiered approach, with significant collaboration from the Université Paris-Saclay.

The first level of security was provided by the University, which implemented a single, controlled entrance gate to their campus, while all other access points were closed. Security personnel were stationed at the entrance, where vehicles entering the campus were subject to checks. Access to the campus was tightly controlled based on prior information provided by the Laboratory; only vehicles with registration details and with driver names and authorization cards of individuals were allowed to enter.



Exterior of the Laboratoire AntiDopage Français (LADF) during the Paris Games

The second level of security included a constructed security fence and gate along its outer perimeter, with multiple guards posted to secure the boundary. The Laboratory had two (2) designated entry points; one was through the main gate which allowed access to only accredited individuals (mainly laboratory staff and IO personnel). Access was strictly controlled with identification checks conducted prior to entry. The second access point was used for authorized vehicle entry including attendees of "B" sample analyses and deliveries of materials critical to Laboratory operations, during the Paris Games.

Inside the Laboratory, a third level of security was implemented, focusing on internal control zones. These zones started with the main restricted entrance, which was secured by keycard access (no biometric or any other advanced authentication methods were put in place). Within the Laboratory, further restricted areas included the analytical zones (such as sample handling and instrumentation areas), as well as the sample reception and storage areas all of which were also controlled by keycard access. LADF also had a specific procedure to be followed in the event of an emergency (e.g. evacuation plans), which would temporarily impact the access to the rooms and specific exit doors. Every individual who had to join the laboratory's daily operations received specific training on this emergency protocol.

Additionally, a comprehensive CCTV system was installed to monitor the perimeter of the Laboratory, including all entrances and exits. Internally, CCTV coverage was not implemented, as the Laboratory followed the General Data Protection Regulation (GDPR) rules that focused on ensuring the protection of personal data and the privacy of EU citizens. Therefore, no recording of internal activities and storage of personal data, which were not relevant to the LADF operation were obtained.

Regarding overall security, while the IO Team did not observe any issues, nor were any communicated to them during the Laboratory's operation, the comprehensive, multi-tiered security measures implemented at LADF for the 2024 Games, including external campus security, laboratory perimeter control, and restricted internal zones, appeared well-structured. The decision by Université Paris-Saclay to strengthen overall security in this manner was welcomed.

20.2.3 Sample Reception

After the sample boxes were delivered from the ADH to LADF on the first floor of the laboratory building, samples were verified against the electronic DCF information (no CoC paperwork was utilized). The relevant details of the electronic DCF were automatically transferred and recorded into the Laboratory Information Management System (LIMS), from Thermo-Fisher Scientific (Thermo Sample Manager), after which the samples were aliquoted.

Sample bottle integrity was visually inspected, and electronic DCF information was cross-checked against the LIMS records. Nonconformities, when noted, were recorded in the LIMS and, whenever relevant, communicated to ITA using a dedicated SharePoint site developed by ITA in cooperation with the laboratory. The nonconformities were readily addressed by ITA.

The process of transferring the electronic DCF information to the Laboratory was identified as a critical step that may benefit from further improvement for future Games. The Laboratory only received the electronic DCFs a few hours before the samples were transferred from the ADH to LADF. The implementation of an electronic DCF submission system that allows DCFs to be transmitted immediately upon completion of sample collection (at the DCS) would enhance efficiency, ensuring that sample data is registered well in advance and reducing the possibility of last-minute complications.

The ITA was always available to resolve issues, yet some issues took longer than expected to be concluded due to their complexity or a limitation of the relevant software program. In some cases, the DCFs were delivered to the Laboratory a few hours after the samples were received by the Laboratory. The delay in receiving DCFs significantly impacted Laboratory's workflow efficiency, and it forced LADF to implement unexpected workarounds to maintain reporting timelines.

Another notable challenge arose from an issue in the Laboratory's macro for reading ITA's electronic DCF.csv (comma-separated value) files, which led to an unexpected increase in Large Peptide analyses requests. This issue made it necessary for the Laboratory to manually verify the ITA testing requests for all samples for a certain period of time. The issue originated from a script errordue to a last-minute script change made by the Laboratory. This incident highlights the risks associated with sudden format modifications, as such errors in data import processes could have resulted in unintended or missed analyses.

Moreover, some EDTA (blood ABP) samples were delivered with requests for ABP, Erythropoietin Receptor Agonists (ERAs), and Gene Doping test, which is an impractical testing menu. ITA later clarified which procedure should then be applied to the samples.

Due to issues described above, the Laboratory's workflow efficiency in Sample Reception and Aliquoting varied throughout the IO observation period. In the absence of nonconformities, such as the ones noted above, the Laboratory sample reception and aliquoting process was completed, on average, in around two (2) hours faster than when nonconformities were detected. The Laboratory estimated its capacity for sample reception and aliquoting at approximately 400 samples a day.

The sample reception room was restricted to authorized Laboratory personnel and a specially trained group of temporary staff (approximately twenty (20) people), whose role was dedicated to sample handling tasks including the opening and aliquoting of samples for the Initial Testing Procedures. These temporary staff did not participate in the sample analysis process. Their work was limited to the time frame between when the samples were transferred from the ADH to the LADF Reception room (around 4:00 am) and the completion of sample aliquoting (around 9:00 am). Despite the challenges posed by the delayed transmission of electronic DCFs in several cases, the LADF team showed remarkable adaptability by implementing workarounds to maintain the expected reporting timelines.

Recommendation No. 68 (IOC/ITA)

To improve the efficiency of sample reception and aliquoting, it is recommended to enhance the timeliness of electronic DCF transmissions to the Laboratory. The current practice of receiving electronic DCFs only a few hours before sample transfers places unnecessary constraints on the Laboratory's ability to pre-register samples and address potential discrepancies before analysis.

Recommendation No. 69 (Laboratories)

In order to avoid software-related issues such as the one encountered with the Laboratory's modified .csv file reader script, as soon as a modification is made, both parties – the Laboratory and the ITA – must be made aware of the changes. Therefore new joint validation tests should be conducted to mitigate unexpected script errors.

20.2.4 Sample storage

A strict procedure to safeguard sample integrity was maintained by the Laboratory. The process was highly structured, involving different Laboratory staff members in a well-coordinated effort. Storage procedures were rigorously followed: 'B' samples were immediately placed in restricted storage freezers, and 'A' samples were aliquoted, stored in refrigerators, and later transferred to dedicated freezers for long-term storage. The Laboratory implemented a secure access system which ensured that an individual never accessed the stored samples.

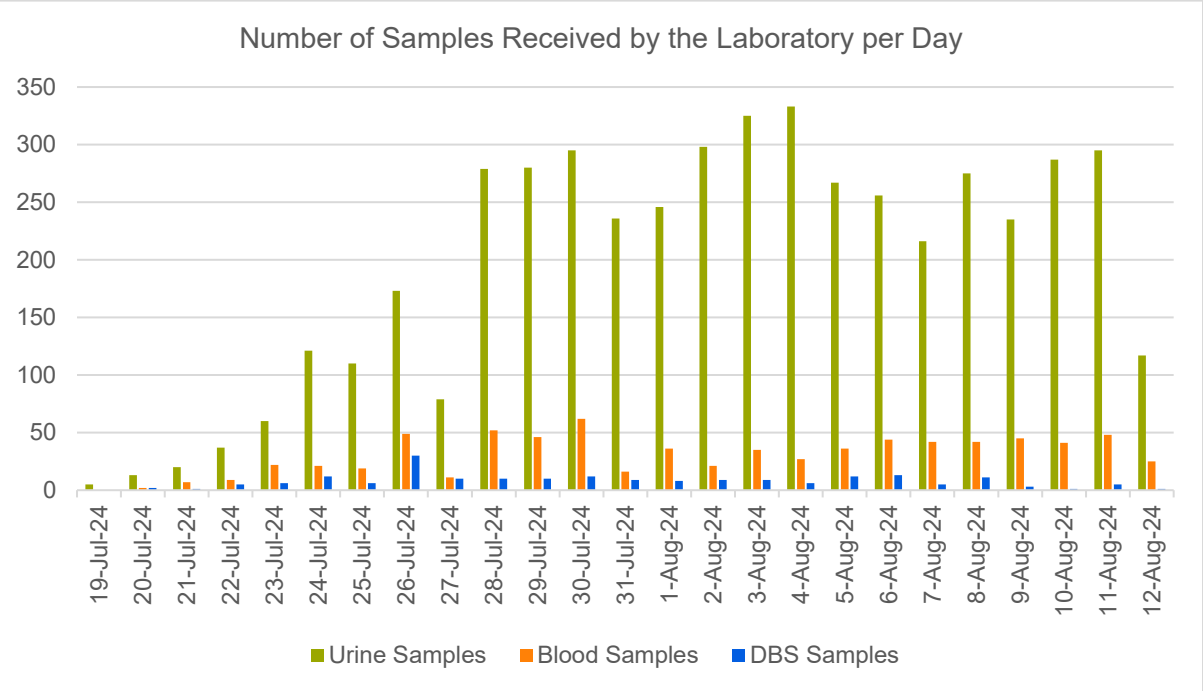
In the final days of the Games, the IO member confirmed that the storage capacity was sufficient for all samples. The Laboratory also restricted access to the dedicated cold room to a limited number of staff until all Olympic samples were transferred to ITA's long-term storage facility in Switzerland. The ITA facility will retain the samples for the statute of limitation period of ten (10) years, as per IOC protocols.

LADF demonstrated a strong commitment to maintain sample integrity through a well-coordinated storage process. The system to access Sample bottles effectively minimized any risk of unauthorized access. Additionally, the Laboratory maintained sufficient storage capacity throughout the Games and strictly controlled access to the cold room until all samples were securely transferred to ITA's long-term storage facilities.

20.2.5 Sample analysis

Each of the Laboratory's analytical procedures included a contingency plan for unexpected increases in workload or equipment failure. Pre-game stress tests included a comprehensive assessment of the Laboratory's operation and ensured the LADF's readiness to carry out the sample analysis beyond the Testing Program Plans (TDP), if necessary. A total of 5,812 samples were analyzed: 758 blood (including ABP, Homologous blood transfusion (HBT), Gene Doping, ERAs, and HBOCs), 196 Dried Blood Spot (DBS) (steroid esters: testosterone, boldenone, and nandrolone esters), and 4,858 urine samples. No significant delay in the expected reporting time of the results was observed (see section Reporting results of analyses).

All substances on the standard analysis menu and small peptides (e.g., Growth Hormone Releasing Peptides (GHRP), Growth Hormone Secretagogues (GHS), and Gonadotrophin Releasing Hormone (GnRH) and its synthetic analogues, TB-500, desmopressin) were analyzed in all urine samples.



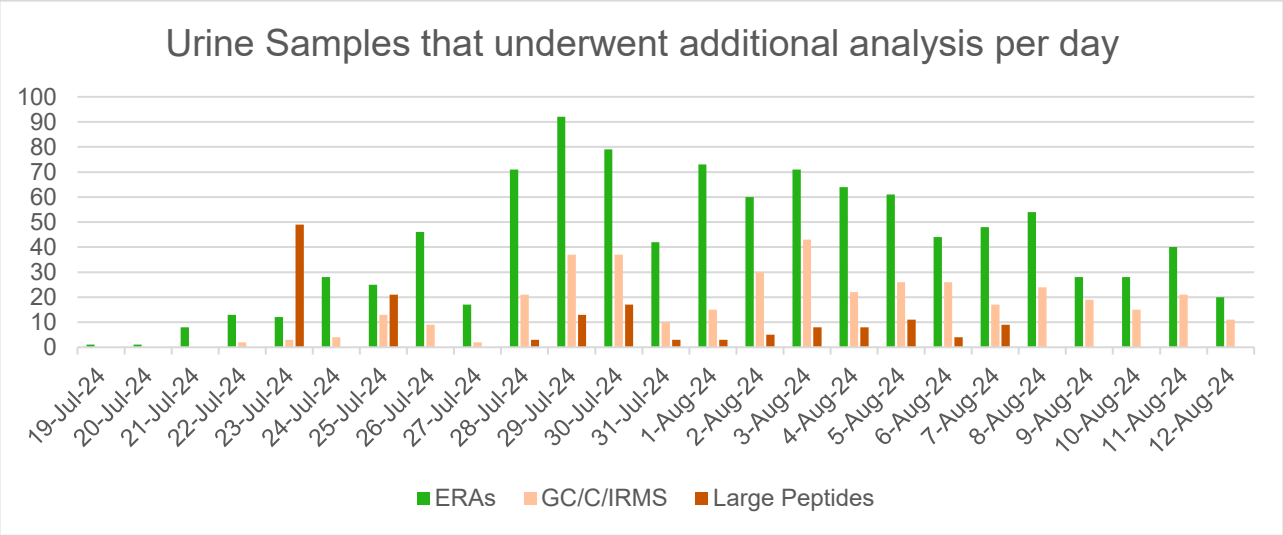
This figure shows the number of samples received by the Laboratory per day, categorized by sample matrix. The data is divided into three groups: Urine Samples, Blood Samples, and DBS Samples.

As observed in **Figure 9**, urine samples constituted a majority of the samples received, with an increase in volume 10 days into the OG testing period.

Blood samples and DBS samples represent a smaller but steady portion of the total samples received by the Laboratory over the OG period: 579 serum samples analyzed for Growth Hormone (GH), 73 blood samples analyzed for the steroid blood profile; 22 blood samples analyzed for ERAs, 91 blood sample analyzed for HBT and 196 DBS samples for analyses of steroid esters.

Three additional analyses were the most regularly performed on urine samples during the Games, namely:

- "Large peptides" (*i.e.,* Growth Hormone-Releasing Hormone (GHRH) and its analogues, Insulin-like Growth factor-I (IGF-I) analogues, and Insulins),
- Gas Chromatography / Combustion / Isotope Ratio Mass Spectrometry (GC/C/IRMS) analysis.
- ERAs.



Number of urine "A" samples analyzed by the Laboratory per day that required additional analysis beyond the standard testing menu. The data is categorized into three types of additional analyses: ERA, GC/C/IRMS, and Large Peptides. The bars represent the distribution of these additional analyses over time.

At the beginning of the Games, there was an unexpected surge in requests for the Large Peptide analysis, with nearly fifty (50) samples requiring this additional test in a single day (**Figure 10**). If maintained, this volume could have exceeded initial projections of Large Peptides analysis requests. The Laboratory had the necessary infrastructure to manage the demand but upon investigation it was later identified that an issue with the Laboratory's macro (as described in the section Sample Reception of this report). The discrepancy arose due to a recent update to the macro, which required adjustments. After addressing the issue, the number of requests returned to expected levels.

The GC/C/IRMS analysis operated at full capacity during the Games (**Figure 10**), with nearly four hundred (400) GC/C/IRMS analysis requests, exceeding the initial projection of approximately two hundred (200) – which was primarily based on anticipated APMU requests. The original plan for two hundred (200) analyses was well aligned with the available staffing and instrumentation. However, during the Games, the number of direct requests for GC/C/IRMS analyses was significantly high (direct requests are considered any analyses specified in the DCF to be performed by the Laboratory that were included at the time of the sample collection and were not part of the Confirmation Procedure Request from the APMU) The approach of including direct requests for GC/C/IRMS analysis was not well communicated to the Laboratory in advance. Despite this unexpected surge, LADF performed exceptionally well, successfully managing all additional requests during the Games.

There were days when the number of samples with GC/C/IRMS analysis was particularly high, which represented a higher risk in the case of instrument failure. The Laboratory operated with daily monitoring and contingency planning for potential overload situations of GC/C/IRMS analysis requests. If a similarly high number of GC/C/IRMS analyses is planned for future OGs, laboratories must be properly informed in advance to allow for adequate preparation for instances of high demand – this planning should include the possibility of a high demand of GC/C/IRMS analysis coming from the APMU recommendations.

The ERA analysis workload was also relatively high during the Games (**Figure 10**), with 1,042 samples analyzed, mainly urine samples (98%). The ERA sector, like the GC/C/IRMS sector, operated at a significantly higher workload capacity than anticipated, at times processing more than one hundred (100) samples per day.

According to WADA rules, currently, the carrying of the EPO c.577del gene variant (leading to the production of the VAR-EPO protein) must be evaluated before confirming an AAF for recombinant EPO (rEPO). This is primarily conducted via analysis of a blood sample (serum/plasma) or, if necessary, by sequencing the EPO gene region containing the mutation. However, this process can be time-consuming, particularly if no blood sample was collected simultaneously with urine.

With previous support from the Beijing Anti-Doping Laboratory (Beijing Sport University), LADF implemented a procedure to directly detect the presence of VAR-EPO whenever a urine profile suggested a mix of endogenous EPO and rEPO.

Although no AAF for ERAs were reported nor VAR-EPO cases were identified in the analyzed samples, the procedure in place enabled the ITA to reduce the need for excessive blood sample collections for ERA analysis.

LADF effectively managed a high volume of sample analysis during the Games, demonstrating remarkable operational efficiency and adaptability. The Laboratory maintained the expected reporting timelines despite significant and unexpected changes in the workload.

Recommendation No. 70 (IOC/ITA, Laboratories)

To further optimize operations for future Games, it is recommended that Laboratories consider increasing the number of GC/C/IRMS analyses than the numbers projected for these Games. The unexpected surge in GC/C/IRMS analyses shows the importance of pre-event coordination between the IOC, ITA, and the designated testing laboratory to ensure realistic workload estimates. The projections for GC/C/IRMS analysis requests should take into consideration the experience of the number of requests by the APMUs during past Major Events and the direct request included in the DCFs. Although a degree of unpredictability will always remain, for GC/C/IRMS sector (and also the EPO analysis sector), Laboratories are encouraged to be overprepared to handle a higher demand for sample analysis than the number of samples planned to be collected.

20.2.6 Reporting results of analyses

The agreed turnaround time for reporting negative results was thirty-six (36) hours (standard analytical menu and Large Peptides analysis results) and seventy-two (72) hours for ERAs and GC/C/IRMS. In addition, also forty-eight (48) hours (except for GC/C/IRMS and ERAs) for any cases that have undergone a Confirmation Procedure and resulted in AAF or ATF. The Laboratory was able to achieve on-time reporting for all Samples, which included the reporting of AAFs.

In total, 9 AAFs and 1 ATF were reported by LADF. For further details, please see section ‘Adverse Analytical Findings and Atypical Findings’, Section 20.2.7 – Table 9. All results were reported into ADAMS as expected.

Whenever a TUE enquiry was necessary the Laboratory asked ITA whether the athlete in question, had an approved TUE on file for the substance identified. As in previous Games, the ITA responses were received promptly. The ITA-Lab SharePoint platform was utilized to communicate securely on any sample enquires or provide recommendations for follow-up actions (*e.g.,* follow up samples if needed for targeting purposes, additional analyses on samples, etc.).

The Laboratory demonstrated exceptional efficiency in meeting the 36-hour reporting deadline. Significant investments in the Laboratory staff, operational planning and state-of-the-art instruments, together with the use of the ITA electronic platforms and the outstanding scheduling sample delivery process from ADH to the Laboratory, contributed to meeting these short results reporting deadlines.

20.2.7 Adverse Analytical Findings and Atypical Findings

The AAFs and ATF reported by the Laboratory in sample collected during the Games period are listed in **Table 9** below.

Table 9: Adverse Analytical Findings and Atypical Findings

Substance Reported (WADA Prohibited List Class)	Number of Cases	Reported Test Result
19-Norandrosterone (S1)	1	ATF
Boldenone (S1.1) and Metandienone (S1.1) [both detected on the same Sample]	1	AAF
Stanozolol (S1)	2	AAF
Brinzolamide (S5)	1	AAF
Canrenone (S5)	1	AAF
Dorzolamide (S5)	3	AAF
Furosemide (S5)	2	AAF
Methylphenidate (S6)	1	AAF

The laboratory put in place an internal review procedure of the analytical data by international experts to ensure the accuracy of the reported AAFs and ATFs.

20.2.8 "B" sample confirmation procedures

The Laboratory conducted two (2) 'B' confirmation procedures. The IO Team member was present at the first 'B' confirmation procedure performed during the Games. The athlete and their representatives were transported to the Laboratory by a vehicle that entered the Laboratory's dedicated secure zone which provided sufficient anonymity for the athlete before entering the Laboratory building. The athlete and their representatives were then escorted into the dedicated 'B' confirmation room to witness the opening of the 'B' sample.

and conducted by the Laboratory during the OGs period for one of the furosemide and stanozolol cases.

The 'B' sample was brought into the 'B' confirmation opening room from the sample storage area by a Laboratory analyst. The Laboratory Director, an international laboratory expert and the Laboratory staff responsible for the 'B' sample opening process were present. The Laboratory prepared a dedicated room for the opening of the 'B' bottle, with a bench which included all the materials and equipment relevant to the process, while the athlete and their representatives waited for the sample to thaw. This process was duly recorded in the 'B' sample's Laboratory internal chain of custody. The participants signed the Laboratory's 'B' confirmation form confirming the integrity of the 'B' sample after being inspected by the athlete and finding the bottle to be intact. The Laboratory then processed the sample in front of the athlete and their representatives, including the opening of the 'B' bottle and pouring a portion of the sample into a test tube. From the test tube, aliquots were taken for the analytical procedure. All test tubes were taken from new, unopened (sealed) packaging. The athlete was provided a choice of numbered "blue caps" to select for the re-sealing of the 'B' bottle. The sample was then re-sealed by the Laboratory Director using the selected green cap and then provided the bottle to the athlete to verify the resealed sample's integrity. The green cap number was recorded, and signatures were recorded on the "B" confirmation form.

Since the “B” sample was frozen and needed to thaw in the presence of the athlete, about 30 minutes were spent in the waiting room. During this time, the Laboratory presented the results observed in the “A” sample to the athlete and their representative. The athlete and their representative were provided the opportunity to witness the entire procedure, however, they decided to leave after the “B” sample aliquoting procedure and not to stay until the end of the analysis.

The observed ‘B’ confirmation procedures were conducted in compliance with the ISL, and no issues were identified by the participants to the knowledge of the IO Team.

In summary, the ‘B’ confirmation procedure was conducted by the Laboratory in in full compliance with ISL requirements. The secure entry process ensured athlete anonymity, and the dedicated confirmation room was well-organized. Clear communication and strict chain-of-custody protocols reinforced confidence in the process.

20.2.9 Double-blind External Quality Assessment Scheme Samples

As part of the monitoring of the Laboratory performance, and as an essential part of the quality control of Laboratory processes during the Games, WADA, in agreement with the ITA and IOC, sent six (6) double-blind EQAS samples to Paris.

With the valuable support from the relevant DCOs, the double-blind EQAS samples were introduced by ITA into the doping control procedure and delivered to the Laboratory such that they were indistinguishable from the other routine anti-doping samples. Therefore, the Laboratory did not know the content of the EQAS samples or that such samples were part of the double-blind EQAS, and these samples were handled the same as any other doping control sample.

The double-blind EQAS samples were introduced either OOC (three (3) samples) or IC (three (3) samples). The IO Team observed the introduction of all six (6) samples, two (2) at the DCS in the Athletes Village, two (2) samples at the DCS at the Stade the France, one (1) sample at the DCS at the North Paris Arena and the sixth sample at the DCS of the Paris La Defense venue, all of which were carried out without any issue.

The double-blind EQAS samples contained representative substances from different classes of prohibited substances, including steroids, hypoxia-inducible factors (HIFs), diuretics, stimulants, and anti-estrogens requiring the application of different analytical methods. The Laboratory reported all the results of the EQAS samples. While a Laboratory non-conformity was identified as part of the EQAS process, it was promptly addressed by the Laboratory, resulting in an improved analytical process.

The performance of the Laboratory was satisfactory, and provided strong assurance that the sample analyses conducted during the Games were in line with the mandatory requirements of the ISL.

21.0 Results Management

During the Games, the ITA Legal team managed the results management process for provisional suspension hearings, including the issuing of relevant results management correspondence, preparation of legal argument and advocacy. The CAS Anti-Doping Division was convened to adjudicate anti-doping related matters referred to it by the ITA in accordance with the IOC Anti-Doping Rules. The CAS Anti-Doping Division office was located within the Paris judicial court in the 17th arrondissement of Paris.

All results management matters during the Games related to Adverse Analytical Findings (AAFs) only.

The ITA were very efficient in notifying all concerned parties after AAFs were posted in the ADAMS system and imposed relevant provisional suspensions on behalf of the IOC in accordance with the anti-

doping rules. The IO Team were included in all notifications and were provided with detailed documentation and the opportunity to attend all hearings. Similar to some other Major Events, a list of pro bono lawyers was made available during the Games which was utilized by athletes subject to results management processes.

The IO Team attended a hearing virtually (for the sport of Judo) in order to observe the full hearing process conducted by the CAS Anti-Doping Division before a single arbitrator.

The documentation provided by the ITA for a provisional suspension hearing was very thorough. The AAF notification letter provided to the Athlete was comprehensive and informed of the potential consequences of the AAF and the athlete's procedural rights, including the right to request the B-sample analysis, a provisional hearing, or an expedited final hearing.

During the hearing the pro bono Counsel for the athlete did identify a small gap in the documentation with reference to the Anti-Doping Rules. This gap was not of a critical nature and could best be described as an issue with the template notification letter. The IO Team observed that the ITA immediately amended the template for remaining results management matters.

Provisional hearings at the Games occur with limited notice and preparation time. It is critical that the correct information including legal analysis is provided to the CAS arbitrator. The advocacy presented during the hearing, both by the ITA staff and the pro bono lawyers were a credit to all involved. Athlete's rights were maintained, and full arguments were presented as to whether a provisional suspension should be maintained. The ITA supported the CAS arbitrator well with well researched examples from prior CAS anti-doping cases on all relevant issues.

The CAS arbitrator was well informed and provided both parties with fair opportunities to present their case and certainly afforded the athlete with natural justice. The CAS decision (to uphold the imposition of a provisional suspension) was well reasoned and made in a timely manner. The CAS also published the outcome of the hearing on its website in a timely manner.

Overall, the IO Team was very impressed with the operation of the CAS Anti-Doping Division and the work of the ITA and pro bono legal counsel.

Recommendation No. 71

Prior to the Games review all template notification letters including, references to all Games specific anti-doping provisions to ensure they are aligned.

22.0 Appendices

22.1 List of Recommendations

Recommendation No. 1 (IOC/ITA, LOC, Laboratories, WADA)

The limited number of observers at the Paris Games necessitated an adjustment in the scope of observations, which is reflected in the level of detail in this report. Moving forward, if the Observer Team size remains consistent, we recommend all parties involved to proactively meet during Games planning to collaborate and resolve potential issues before they arise.

Recommendation No. 2 (ADOs)

With regards to testing in team sports, given the inherently larger number of athletes participating in team sports, it is often observed that the percentage of individual athletes tested within these disciplines may be lower compared to individual sports, even with a substantial total number of tests. As such, a recommendation would be for ADOs to pay specific attention to the *percentage* of athletes tested within team sports, in addition to the specific athletes that are tested rather than solely the raw number of tests. This ensures meaningful testing coverage across all team members, maximizing both deterrence and the likelihood of detecting doping where it might occur in a larger athlete pool.

Recommendation No. 3 (IOC/ITA)

Drawing on the findings from previous post-Games assessments, it is recommended to continue the assessment of the athletes/delegations that were not tested, considering their performance, status (e.g., alternative/reserve), country represented, specific sport, and the timing of their qualification and/or confirmation to the delegation. The insights gained from these assessments will assist in strategically improving the allocation of additional resources for testing athletes, countries, or sports with similar profiles in previous Pre-Games testing programs. If the timing of the qualification or confirmation of the athlete to the delegation is a reason for the inability to test an athlete in high-risk sport (for example), a recommendation would be to discuss with all parties, how this can be addressed for future Games.

Recommendation No. 4 (IOC/ITA, NOCs, IFs, NADOs)

Recognizing that responsibility for education in the context of the Olympic Games is shared among the IOC, NOCs, IFs, and NADOs, it is recommended that all stakeholders take deliberate steps to strengthen coordination well in advance of the Games, and the IOC could take a leading role on that front. This should include the clarification of roles and responsibilities, the alignment of educational plans and timelines, and the sharing of resources of best practices.

Furthermore, in addition to its supporting role, the IOC should consider developing a specific education plan complementing those of the stakeholders, that could target wider audience beyond athletes, ASP and medical staff (for example, the International Standard for Education suggests including target groups such as the general public, commercial sponsors or media personnel). Such measures will contribute to the delivery of education that is then monitored and evaluated to determine impact and inform following Games education plans.

Recommendation No. 5 (IOC/ITA)

With the emphasis put on a supporting role, strengthening the monitoring system for education to track whether and which target groups among stakeholders' Education Pools, as relevant for the Games, have completed their required education before participating in events should be considered.

Recommendation No. 6 (IOC/ITA)

Consider sharing its full Evaluation Report as well as the data resulting from its monitoring process with relevant parties including WADA, to help share valuable insights and inform future education program activities to support continuous improvement.

Recommendation No. 7 (IOC/ITA)

To minimize such discrepancies in future events and ensure the integrity of TUE records the IO Team recommends the ITA implement the following:

- Pre-Games Data Validation**:** The ITA should collaborate closely with WADA Medical and implement a Pre-Games review of all TUE recognitions to confirm accuracy and completeness. This may encompass the ITA providing WADA Medical with daily reports on the TUEs that have been recognized.
- System Flags in ADAMS: The ITA should develop automated alerts to flag expired TUEs and prevent unnecessary recognitions from being processed.

Recommendation No. 8 (LOC/ITA)

To continue to build on and improve intelligence outcomes in connection with Major Games, the IO Team recommend including a formal Post Operational Assessment into the ITA's procedures. Such a Post Operational Assessment can also include examining if there could be improvements made to Olympic Requirements to aid the ITA in leveraging relationships with local law enforcement agencies.

Recommendation No. 9 (WADA)

The risk assessment met the ISTI requirements for the Paris Games. However, for future events (and other MEOs), earlier presentation to the IO Team is recommended to facilitate a proactive review and to allow for any potential adjustments.

To support this and other Pre-Games presentations, we recommend appointing the IO team—or at least the specific members who need to be at these meetings—earlier in the process. This is especially important for teams with members in different time zones, as it can be incredibly challenging to find a suitable time for pre-event meetings, on risk assessment but on other topics as well.

Recommendation No. 10 (ITA/IOC)

It would be beneficial to document how the outcomes of the third phase of the risk assessment, specifically those related to individualized performance and testing history, were reflected in the TDP and implemented during the Paris Games. This would provide valuable insights into the methodology and its impact.

Recommendation No. 11 (ITA)

The Pre-Games collaboration between the ITA and multiple ADOs to establish endocrine profiles and conduct targeted testing on participating athletes represents a proactive effort. This Pre-Games work, which was not part of the on-site observation period, sets a good example for intelligence-led anti-doping programs.

Building on this success, it is recommended that the ITA continue to prioritize and expand the collection of samples for the athlete biological passport program during Major Events, including the Games period. This strategic focus ensures the consolidation of comprehensive endocrine and blood steroid profiles. The samples collected during the Games, a crucial time period, serve two vital purposes:

- They provide an essential in-Games baseline for global anti-doping efforts.

- They serve as invaluable intelligence for ongoing, year-round anti-doping programs of all ADOs with jurisdiction.

Recommendation No. 12 (ITA)

During the Paris Games, the IO Team observed that athletes from the same team and sport, particularly in team sports, underwent testing on the same days, and often that team was not tested again. Chaperones would leave in groups to locate these athletes at their accommodations, further highlighting this clustered approach. Recognizing that there are many aspects to consider when allocating OOC tests during the Paris Games period, as much as possible, it is recommended to implement a more varied testing strategy, diversified across different days and times throughout the Paris Games, and repeat testing of athletes/countries should be considered. This approach will enhance the unpredictability and robustness of the testing process.

Recommendation No. 13 (LOC/ITA)

To enhance the effectiveness of the OOC program and fully realize the "anywhere, anytime" testing principle, the IO Team recommends that the ITA and the LOC consider establishing a dedicated "mobile doping control team." This specialized team would complement existing Village-based activities and be capable of conducting testing missions outside of the Olympic Villages, at any time and any location, including training venues, as needed. This mobile team should be:

- Sufficiently staffed with enough Doping Control Officers (DCOs), Blood Collection Officers (BCOs), and chaperones to conduct testing at diverse locations.
- Specially trained for complex, off-site missions, covering logistics, access protocols, and communication.
- Equipped with all necessary equipment to carry out missions without constantly having to return to the Village to replenish their supplies.
- Provided with full accreditation access to training, competition venues and hotels.
- Have access to their own vehicles, dedicated Games transportation, or even a mobile DCS to allow for rapid deployment and to avoid these added logistical challenges.

Recommendation No. 14 (IOC/ITA, IFs, NADOs, WADA)

The primary goal of collecting athlete whereabouts information is to enable a robust OOC testing program. Therefore, any system must be designed to maximize accuracy and effectiveness while actively minimizing administrative burden and data duplication across all stakeholders: athletes, NOCs, athletes, ADOs, the IOC, and ITA. We acknowledge the progress the ITA has already made in this domain, particularly by developing and deploying the ITA Rooming List App. This self-developed system successfully provided an essential, complementary layer of athlete location data alongside ADAMS for OOC testing at the Paris Games.

To build upon this success and further enhance the efficiency and integrity of the whereabouts process for future Games, the following recommendations are offered, subject to data privacy rules:

- Implement Real-Time Compliance Checks: The ITA should integrate an automated "compliance check" feature into the Rooming List App. This feature would automatically flag missing or incomplete information in real-time (e.g., missing building or room numbers), allowing delegation staff to correct issues immediately upon submission and significantly reducing the need for manual follow-up by the anti-doping team
- Leverage Existing IOC Data Streams: The ITA should actively explore gaining direct and secure access to information already provided by NOCs to the IOC for Games accreditation and logistical purposes. This includes data such as athlete arrivals/departures, training schedules, and accreditation entry/exit times at venues, which can reduce NOC data submission requirements.

- Integrate and Consolidate Whereabouts Systems: The ITA should explore technical solutions to cross-reference and consolidate the whereabouts information submitted in ADAMS by RTP/TP athletes with the data collected through the ITA Rooming List App. Furthermore, integrating access to the central training schedules managed by the IOC would provide an essential third data point, creating a single, comprehensive, and up-to-date source for athlete location.
- Address Whereabouts Data Inaccuracy and Education: The ITA, in collaboration with WADA and the ADOs who serve as whereabouts custodians for the respective RTP/TP athletes, should conduct an assessment of the rate of inaccuracy or incompleteness in Games-time whereabouts data for RTP/TP athletes in previous Games. The findings must be used to explicitly reinforce the requirement of maintaining highly accurate and detailed Games-time whereabouts (including precise rooming and training details) in future Pre-Games education provided to athletes.
- Investigate and Enforce NOC/Athlete Compliance: The ITA must establish a clear, standardized protocol to pursue and investigate (multiple) unsuccessful attempts to locate athletes that are directly attributed to inaccurate or incomplete whereabouts information. This protocol must include mechanisms to ensure that NOCs that are not submitting information or submitting inaccurate rooming information have been formally followed up with and that consequences are pursued where appropriate, thereby ensuring accountability for both athletes (ADAMS data) and NOCs (Rooming List App data).
- Consult a Wide Range of NOCs: To gain a more holistic understanding of the administrative impact and identify potential improvements, a wider group of NOCs from different Tiers should be interviewed. This consultation should specifically focus on their experience with the Rooming List App, soliciting suggestions for better data collection methods, and gathering feedback on the perceived accuracy of whereabouts provided by their RTP athletes.

Recommendation No. 15 (IOC/ITA)

The ITA's successful achievement of its IC targets is highly commendable. Building upon this strong performance, for future Major Games (and other MEOs), a consideration for the IC TDP is to also incorporate the number of athletes competing in the sport discipline as well as the structure of competitions (e.g., number of competition days, elimination tournaments vs. round robin, single-day competitions, sports that compete in multiple competitions) in its final plan.

Recommendation No. 16 (IOC/ITA)

While the ability to test athletes multiple times certainly provides thoroughness (i.e., multiple medallists were tested after each win), a consideration would be to leverage resources more meaningfully by expanding the focus to a wider range of athletes during the Games.

Recommendation No. 17 (ADOs/ITA)

In addition to Recommendation 3 (which relates to only the Pre-Games period), a total of 916 athletes (8%) were not tested at all during either the Pre-Games and/or the Paris Games period. It is therefore recommended that a comprehensive assessment of these athletes be conducted, evaluating factors such as their performance trajectory, status (e.g., alternative/reserve), country represented, and specific sport. This assessment would help determine if additional resources should be strategically dedicated to testing athletes, countries, or sports of similar profiles in future pre-Games and Games time testing programs.

Recommendation No. 18 (LOC)

To ensure effective leadership and the successful implementation of the anti-doping program, the OGOG must appoint its Head of the Anti-Doping Program at the very start of the planning phase for future major events. This early involvement is critical to enable them to shape the program, integrate their expertise into all planning stages, with other functional areas, and make substantial, meaningful changes to optimize operations well in advance of the event.

Recommendation No. 19 (LOC)

It is crucial for the organizing committee to include personnel with prior anti-doping experience at Major Games. Additionally, the committee should leverage the expertise of the local NADO or engage external specialists with Major Games anti-doping experience. This guidance and oversight is vital not only during the Games themselves, but also throughout the critical planning phases.

Recommendation No. 20 (LOC/ITA)

While the ITA had a system in place for the escalation of urgent matters, including 24/7 emergency phones and dedicated MS Teams channels, the on-site experience suggested a need to reinforce staff awareness and confidence in using these channels.

Therefore, it is recommended that for future events, the ITA ensures the full utilization of its existing escalation system by conducting mandatory, scenario-based training for all staff (including new and temporary personnel) on the problems' escalation process and perhaps formalizing the delegation of authority for specific types of urgent matters to Doping Control Command Center (DCCC) leadership, allowing DCCC leaders to provide immediate, on-site input and make certain decisions without having to consult remote ITA staff, thereby ensuring a swifter resolution of issues.

Recommendation No. 21 (LOC/ITA)

To address the challenges observed with the two Doping Control Command Centers (DCCCs operating somewhat independently, future Games could benefit from a more streamlined approach to their operations. One effective solution might be to assign the scheduling of all sample collection personnel to a single, dedicated team, while a separate team handles all logistical aspects. This specialization could reduce overlaps and improve overall efficiency.

Alternatively, to ensure flexibility and resilience, it could be highly beneficial to cross-train both DCCC teams, enabling them to take over each other's responsibilities when required. This would provide crucial backup and adaptability, preventing operational bottlenecks if one team faces unforeseen issues.

Recommendation No. 22 (LOC)

The initial recruitment plan called for 200 International Doping Control Officers (IDCOs), but only 173 attended. This shortfall placed pressure on the present IDCOs to cover the same number of planned tests, as demonstrated through this report.

The timing of the Head of Doping Control for Paris 2024's hire in the fall of 2022 was a key contributing factor. Their late start negatively impacted the timeline for critical planning and recruitment processes, most notably the IDCO recruitment.

To avoid this in the future, we recommend that this key leadership position be filled at the start of the planning phase, or at a minimum four years in advance of the assigned Games. This proactive approach would allow the newly assigned Head to attend the preceding Games, which are held four years before their own event. By observing and potentially shadowing the Head of Doping Control for those Games, they would gain invaluable on-the-ground experience and insight. This crucial preparation would then allow them to effectively and immediately launch key planning steps, like the recruitment of qualified sample collection personnel, with a strong foundation and without delay.

Recommendation No. 23 (IOC/ITA, LOC)

When an organization brings in specialized personnel to work on-site for a period of time, it is standard and widely expected practice to cover their time (payment for work performed, including training days) and all reasonable meal expenses for every day they are required to be away from their usual residence due to the assignment. This includes non-working days (like weekends) if they are still on-site and unable

to return home. It should also be clearly stated when individuals will be paid for their time, so that in the event that it is only at the completion of the Paris Games period, DCOs can plan financially for this. This should be considered in future DCO agreements.

Recommendation No. 24 (LOC)

Recognizing the diverse backgrounds of the DCOs, it is important that legally binding contracts are available well-ahead of their participation at the Games to allow sufficient time to have the agreement translated and reviewed in their native language.

Recommendation No. 25 (IOC/ITA, LOC)

The IO Team observed the following, and based on that, recommends:

- There was a large amount of theory provided during this “refresher training”. The IO Team recommends incorporating more case scenarios and practical components to the session.
- DCOs assigned as DCSMs for the Paris Games received specific training on their roles and responsibilities. As some assigned DCSMs had never taken on this role before, this would have been a good opportunity to provide case scenarios, provide practice mission and guide them through how to plan a successful mission, etc.
- The new sample transport process specific to these Paris Games was introduced at the end of the DCSM training. Given the IO Team's observation of numerous challenges with this process, it is recommended that more time and practice be dedicated to this key step, ensuring DCSMs are fully prepared and confident.
- In light of the issues observed in the field regarding notification and chaperoning, we strongly recommend specific training for the role of Chaperone Coordinator. Such training could include a standardized checklist of all the items to address during chaperone briefing. his would help streamline the process and prevent many of the notification and chaperoning issues seen in the field.
- Individual skill assessments or evaluations were not conducted during the DCO training. Given the varying levels of experience in sample collection observed, it is recommended to implement these assessments in future training sessions with remedial training provided to individuals who did not perform well during the practical session. These evaluations could be performed by the DCSMs where they would assess the DCOs assigned to their respective venues. This would also allow the DCSMs to understand the different skill sets within their teams and provide more mentorship to the DCOs who need it most.
- Incorporating team-building activities (e.g., breakout groups by venue teams) and opportunities for recaps could further boost the energy among the DCOs and improve retention.

Overall, the training was comprehensive and thorough, but it became clear that the content was too extensive for the time allotted, especially considering the audience had just traveled and arrived the previous day. For future Games, we recommend extending the training to at least a day and a half to accommodate all content and the above recommendations.

Recommendation No. 26 (IOC/ITA, LOC)

Recognizing that there needs to be an opportunity for individual’s to gain experience in a leadership role, for future Games, consideration could be given to assigning these individuals smaller venues or missions (e.g., 4 tests), or to incorporate a “shadowing” system where they can follow more experienced DCSMs or Chaperone at the larger venues before having their first shift as DCSMs or Chaperone Coordinator, building in continuous feedback and further training.

Recommendation No. 27 (IOC/ITA, LOC)

It is recommended to build greater flexibility into the assignment or accreditation process to allow for the reallocation of positions based on assessed strengths and real-time needs in the field, optimizing the use of experienced personnel and enhancing overall efficiency.

Recommendation No. 28 (IOC/ITA, LOC)

For future Games, to enhance the team's overall effectiveness, and if the ratio of IDCOs remains consistent, it would be beneficial for individuals selected for these leadership roles to possess strong communication skills in English. Additionally, proficiency in the local language is a significant asset that can further ensure clear communication and foster even stronger teamwork, ultimately contributing to smoother operations and better collaboration across all functional areas.

Recommendation No. 29 (IOC/ITA, LOC)

The scheduling software developed by the AFLD or a similar tool would be very useful to use at future Games.

Recommendation No. 30 (IOC/ITA, LOC)

The recommendation is to implement a unified and centralized communication platform and protocol for all doping control operations. This integrated system would replace the use of different platforms for DCO and chaperone assignments, eliminate the need for ad-hoc groups for shift handovers, and ensure consistent, real-time information flow. It must facilitate not only top-down directives but also structured, two-way communication to address DCOs' immediate needs and feedback.

Recommendation No. 31 (LOC)

To foster team spirit, enhance professionalism, and ensure a cohesive appearance for the sample collection personnel, all Doping Control Officers should be provided with a complete and standardized Games-time uniform well in advance of future events. As much as possible, this uniform should be distinct from volunteer attire (more details provided in observations regarding chaperones) and reflect the professional status of DCOs. Pre-event communication regarding uniform provision and expectations is also important to avoid misunderstandings and ensure DCOs feel valued and appropriately equipped for the critical and technical roles they perform.

Recommendation No. 32 (IOC/ITA, LOC)

Recognizing the inherent demands and unpredictable nature of doping control, it is recommended that efforts be made during the planning phase to ensure flexibility in assigning work schedules for sample collection personnel.

Recommendation No. 33 (IOC/ITA, LOC)

To avoid challenges in future recruitment and retention of Games-times DCOs, it is strongly recommended to conduct thorough workforce planning well in advance of future events to ensure that a sufficient number of DCOs are recruited to handle the anticipated workload without imposing excessive pressure or unreasonably long shifts on individual personnel. In addition, the expected workload, hours, and working conditions should be clearly communicated to prospective DCOs during the recruitment phase. Managing expectations upfront can help attract individuals who are prepared for the demands of the role.

Recommendation No. 34 (IOC/ITA, LOC)

Ideally, provide single occupancy rooms for DCOs, recognizing their demanding work schedules and the importance of uninterrupted rest. If shared accommodation is unavoidable due to budget or availability,

prioritize assigning roommates with similar work schedules to minimize disturbance and ensure adequate rest.

Recommendation No. 35 (IOC/ITA, LOC)

Whenever feasible, house DCOs together in the same hotels. This strategic co-location can significantly foster stronger bonds, facilitate informal knowledge sharing, and enhance overall team spirit.

Recommendation No. 36 (IOC/ITA, LOC)

Future planning must optimize and carefully plan the location of DCO accommodations in relation to their assigned venues. Consideration of potential commute times during the planning phase should be made to prevent the logistical challenges and fatigue experienced by DCOs.

The most ideal scenario would be to provide DCOs, or at least DCSMs, with their own vehicles or the autonomy to access to the Games-time transportation system themselves.

Recommendation No. 37 (IOC/ITA, LOC)

The planning and budgeting phases for future anti-doping programs at the Games must explicitly allocate sufficient funds for DCO welfare, encompassing full meal coverage, a reasonable daily per diem allowance for meals that adequately reflects the cost of living at the Games or a meal plan (e.g., workforce dining, vouchers to the on-site catering) for all days these individuals are away from their residence, not just their scheduled working hours. This information and the applicable policies should be communicated to all DCOs in advance of their participation.

Recommendation No. 38 (IOC/ITA, LOC)

While diversity should remain a priority when recruiting volunteers for the role of chaperone, it is important to consider the physical requirements of the role in the recruitment criteria and/or to ensure that volunteers can meet the requirements of the position.

Recommendation No. 39 (IOC/ITA, LOC)

The IO Team would recommend emphasizing the prohibition on the use of cell phones during doping control as there were many instances where chaperones were filming and taking pictures of the athletes at the field of play.

Recommendation No. 40 (IOC/ITA, LOC)

It is beneficial to assign volunteers to the same venues or sports whenever possible, as this allows them to gain valuable experience and proficiency in their roles, during this limited amount of time.

Recommendation No. 41 (IOC/ITA, LOC)

Further to recommendation No. 28, for the specific role of Chaperone Coordinator, it is strongly recommended that individuals are assigned who can communicate effectively in both the local language and English. This is essential for ensuring clear communication with both local chaperones and other functional areas within the venue in particular on the field of play.

Recommendation No. 42 (IOC/ITA, LOC)

DCOs have consistently proven their effectiveness in performing chaperone duties, particularly in the critical first step of athlete notification, and demonstrate strong teamwork in supporting both peer chaperone coordinators and volunteers. This capability is not just a testament to their dedication, but a significant opportunity for future Games to leverage their expertise more broadly. While volunteer chaperones are, and will remain, absolutely essential for the successful execution of anti-doping

programs at Major Games, there's a clear benefit to strategically utilizing DCOs. To fully realize this potential, future anti-doping programs should ensure DCO employment agreements explicitly permit their deployment to take on any anti-doping responsibility as operational needs dictate, including both notification and chaperone, and that they receive full accreditation access to all relevant areas and venues, enabling seamless and immediate redeployment at any time.

Recommendation No. 43 (IOC/ITA, LOC)

As the issue of volunteer chaperone shortage is recurrent at major events, some general recommendations to prevent these problems include:

- Consider creating an incentive program to entice volunteer chaperones to attend all their shifts. Other Major Games have found success by giving out fun novelty gifts and unique Games collectibles (such as Games pins) after volunteers put in a certain amount of shifts
- Consider partnering with the local NADO to recruit volunteer chaperones who are already involved in their programs. These individuals would bring existing chaperoning experience and a sense of belonging to the anti-doping team, especially if they're working with familiar faces. This approach would make them much more likely to meet their scheduled shifts.
- Make the chaperone position more exciting for volunteers so they keep coming back! For chaperones whose shifts align with event timings, consider scheduling their duties so they have a small window either before or after their chaperoning tasks to briefly experience the Games. This could involve being allowed into a specific spectator area for a limited time or simply having a prime spot to watch a key moment of the competition as they transition to or from their role. We acknowledge that this won't always be possible, but even a small gesture could significantly boost morale and commitment.
- The IO Team observed a particularly effective strategy when one chaperone coordinator incorporated what they called the “guided tour” into their briefing. During the walk-through of the venue, they allowed chaperones to take pictures on the field of play once (and mostly with each other), and importantly, before the competition began. This thoughtful gesture gave chaperones a unique and memorable experience, enhancing their engagement with the Paris Games (this venue had high numbers of returning volunteer chaperones).

Recommendation No. 44 (IOC/ITA, LOC)

Addressing the logistical challenge of accreditation provided to doping control personnel is key to ensuring smooth operations and avoiding disruptions. As much as possible, access to all venues and athlete areas including field of play should be given to doping control personnel to enable them to fulfill their roles and the requirements of the International Standard for Testing and Investigations.

Recommendation No. 45 (IOC/ITA, LOC)

In addition to the uniform (as referenced in Recommendation No.31) , the IO Team recommends that sample collection personnel be provided with a specific identifier, such as a branded armband or a dedicated accreditation. This is to control their privileged access to restricted areas, including the field of play. To ensure this access is managed efficiently and securely, identifiers can be issued for scheduled shifts only.

Recommendation No. 46 (LOC)

It is recommended to implement (increase) signage to DCS throughout venues. This helps ensure athletes and sample collection personnel can easily locate DCSs, minimizing confusion and streamlining the process.

Recommendation No. 47 (IOC/ITA, LOC)

Developing robust contingency plans is advisable for venues hosting multiple concurrent sports events. These plans should address potential challenges like space constraints and resource allocation, ensuring sufficient support for sample collection personnel.

Recommendation No. 48 (IOC/ITA, LOC)

During the planning phase, it's important to meticulously assess the infrastructure of all venues, particularly temporary installations. This verifies that these facilities are fully adequate for doping control operations, with particular attention to critical elements such as soundproofing and reliable internet signals.

Recommendation No. 49 (LOC)

It is important to plan and implement robust cleaning protocols, and increase their frequency, when necessary, to ensure all washrooms are maintained at a high standard throughout events. This proactive approach helps uphold hygiene and attendee comfort.

Recommendation No. 50 (IOC/ITA, LOC)

Given that the emergency DCS might not be continuously staffed, it is essential to ensure doping control equipment remains supervised or stored securely in the DCS. This can be achieved either by assigning a dedicated security guard, ensuring the DCS is lockable and/or having cabinets inside the DCS that are lockable or having a DCO maintain possession of the equipment at all times. This measure safeguards equipment while not in use.

Recommendation No. 51 (IOC/ITA, LOC)

The chaperone coordinator role is fundamental to the success of athlete notification. Their ability to train volunteer chaperones, provide ongoing support, and supervise in the field was absolutely critical to ensuring notifications were handled correctly. Given their contribution, greater emphasis must be placed on selecting individuals for this role. Furthermore, their training as chaperone coordinators needs to be consistent, mirroring the robust training provided to DCSMs.

Recommendation No. 52 (LOC)

Accreditation and zone access is essential for the efficiency and integrity of the notification and chaperoning process, especially in high-traffic athlete zones and areas where athletes have access post competition.

Recommendation No. 53 (IOC/ITA)

For future Games where athlete accommodations feature a similar multi-room apartment format, it would be recommended to request more granular rooming information. This could include specifying sub-room numbers or bed assignments within multi-room units, where applicable and feasible. Alternatively, and while acknowledging the previous recommendations made in section 13.4 on Whereabouts System, a simpler solution would be to require athletes to clearly display their names on their individual bedroom doors.

Recommendation No. 54 (IOC/ITA, LOC)

To uphold the privacy of athlete notification and ensure effective chaperoning without compromising other critical event operations, the Games Anti-Doping Team must engage in early and careful planning with other Functional Areas, including Press, Broadcasting, and Medal Ceremonies. This collaboration will ensure all parties clearly understand how notification and chaperoning can effectively occur within shared spaces, while also recognizing the objectives and limitations of each functional area (e.g., avoiding

chaperones on camera in the Mixed Zone). Furthermore, maintaining this line of communication throughout the event is crucial for prompt adjustments if operational changes impact planned privacy protocols or chaperoning strategies.

Recommendation No. 55 (IOC/ITA, LOC)

While acknowledging the logistical challenges of consistent staffing across all venues and event types, prioritize assigning stronger, more experienced individuals to key Doping Control roles (DCSMs, chaperone coordinators, and chaperones), particularly where frequent staff rotation is unavoidable.

Recommendation No. 56 (IOC, LOC)

It is key to leverage experienced personnel, such as the ITA, the NADO representatives, the DCOs, and volunteer chaperones with demonstrated multi-shift experience during the Games, in the most challenging and critical doping control roles. This means identifying the functions where expertise has the greatest impact such as athlete notification and ensuring that individuals with proven skills are assigned to these positions.

Recommendation No. 57 (LOC)

As emphasized throughout this report, ensuring accreditation access to athlete areas and chaperone training are key to ensuring proper athlete chaperoning.

Recommendation No. 58 (IOC/ITA, LOC)

To address this, it is recommended to have additional devices for the sign-in/sign-out process to speed up this procedure, especially during peak times and at those DCS that have a higher testing load. It would also be recommended to train additional staff to handle the sign-in/sign-out tasks.

Recommendation No. 59 (ITA)

The existing training program for the ComPASS app for the DCOs, while comprehensive in its resources, did not adequately prepare all DCOs for some of the in-field operational challenges. While we acknowledge that these challenges will decrease as DCOs continue to use ComPASS at Games (and increasing number of DCOs use paperless systems around the world).

In the meantime, some considerations to alleviate these issues would be:

- some “real-world” challenge simulations such as processing a partial sample with multiple DCOs, handling samples collected out of the app's default workflow, working through a test with simulated loss of internet connectivity.
- Require all DCOs to pass a practical hand-on “test” on-site prior to their first mission to verify that they have not only completed the training modules but can also demonstrate a required level of proficiency in managing the full ComPASS workflow under pressure.

Formalizing into the role of DCSMs as on-site technical and procedural experts. Their additional training should be specifically geared toward real-time troubleshooting of ComPASS app issues and providing immediate guidance to less experienced DCOs, thereby reducing delays and user frustration.

Recommendation No. 60 (IOC/ITA, LOC)

While the challenges with BCO scheduling and experience were a key factor in the inefficiency of blood collection sessions, it is to be noted that these issues were compounded by national regulations which limited the recruitment pool to only French BCOs, many of which with limited experience in doping control.

Therefore, for future Games where a similar constraint on the recruitment pool may exist, it is recommended to:

- To reduce the wait times for athletes, conduct a more rigorous analysis of testing needs to better align the number of BCOs with the anticipated demand for blood samples per session.
- Given the limited candidate pool, the focus must shift from recruiting experienced BCOs to proactively creating them. This program should go beyond basic phlebotomy skills and include comprehensive instruction on doping control-specific procedures (e.g., documentation, and the handling of different sample types) and hands-on practice sessions and simulations designed to build confidence and competence in a doping control context.

Recommendation No. 61 (IOC/ITA, LOC)

While training was provided, its lack of depth and practical application contributed to delays. Sufficient hands-on training will minimize errors and delays caused by unfamiliarity, ensuring DCOs can efficiently manage their part of the shipment process in in a live environment.

Recommendation No. 62 (IOC/ITA, LOC)

Doping control stations where blood collection occurs should include a fridge with a separate freezer compartment at the top.

Recommendation No. 63 (IOC/ITA, LOC)

To implement robust logistical and communication protocols for doping control transport, which includes mandatory pre-event briefings and route familiarization for all potential drivers, establishing dedicated, 24/7 direct communication channels for drivers to reach a DCSM or logistics coordinator, and providing clear navigation aids like detailed maps or pre-programmed GPS coordinates. Additionally, we suggest, where feasible, requesting consistent driver assignments and providing standardized "Doping Control Transport Protocol" training for all involved drivers, regardless of rotation, while also ensuring exceptionally clear DCS signage and considering on-site liaison support during peak hours to assist arriving drivers. By putting these measures in place, future events can significantly reduce transport-related delays, boost operational efficiency, and uphold the integrity of the crucial doping control process.

Recommendation No. 64 (IOC/ITA, LOC)

The rigorous chain of custody documentation and the seal on the sample collection kit represent the primary and most robust security measures for samples. Therefore, any additional processes introduced for "security" during shipment or handling should be meticulously reviewed to ensure these supplementary steps genuinely enhance security without compromising the overall efficiency of the post-sample collection process.

Recommendation No. 65 (IOC/ITA, LOC)

Establishing a centralized hub to manage the movement of samples from the various Olympic venues to the Laboratory in a single daily delivery was an outstanding achievement and significantly facilitated the Laboratory’s operations, resulting in a cost-efficient approach. One of the notable strengths of the ADH was its continuous 24-hours 7-days-a-week operation, which ensured that samples were received, verified, and stored in proper conditions without undue delay. The presence of a dedicated team of ADH officers working in shifts was efficient and well-established. The structured approach to transportation, security, and operational procedures applied in Paris 2024 is a model that should be further refined and used for future Games.

Recommendation No. 66 (IOC/ITA)

To enhance the efficiency and integrity of the sample management process for future events, it is recommended that the focus be on improving the seal code recording and verification procedure for the transport of the sample boxes from the Venues to the ADH or Laboratory. It is also recommended that DCOs receive more detailed training on ComPASS used to record seal codes. A real-time communication system between DCS and ADH teams could also be established to facilitate quick resolution of any seal code discrepancies. Furthermore, a mandatory cross-checking procedure at the DCS should be introduced to ensure that all seal codes are accurately recorded before sample transfer. Regular audits conducted at the beginning of the transportation procedure would help identify inconsistencies early and prevent delays in the sample handling process.

Recommendation No. 67 (IOC/ITA)

The infrastructure of future ADH should be upgraded to include a dedicated indoor or covered reception area to protect samples and staff from adverse weather conditions. Moreover, providing ergonomic workstations for ADH officers would enhance efficiency and improve working conditions.

Recommendation No. 68 (IOC/ITA)

To improve the efficiency of sample reception and aliquoting, it is recommended to enhance the timeliness of electronic DCF transmissions to the Laboratory. The current practice of receiving electronic DCFs only a few hours before sample transfers places unnecessary constraints on the Laboratory's ability to pre-register samples and address potential discrepancies before analysis.

Recommendation No. 69 (Laboratories)

In order to avoid software-related issues such as the one encountered with the Laboratory's modified .csv file reader script, as soon as a modification is made, both parties – the Laboratory and the ITA – must be made aware of the changes. Therefore new joint validation tests should be conducted to mitigate unexpected script errors.

Recommendation No. 70 (IOC/ITA, Laboratories)

To further optimize operations for future Games, it is recommended that Laboratories consider increasing the number of GC/C/IRMS analyses than the numbers projected for these Games. The unexpected surge in GC/C/IRMS analyses shows the importance of pre-event coordination between the IOC, ITA, and the designated testing laboratory to ensure realistic workload estimates. The projections for GC/C/IRMS analysis requests should take into consideration the experience of the number of requests by the APMUs during past Major Events and the direct request included in the DCFs. Although a degree of unpredictability will always remain, for GC/C/IRMS sector (and also the EPO analysis sector), Laboratories are encouraged to be overprepared to handle a higher demand for sample analysis than the number of samples planned to be collected.

Recommendation No. 71

Prior to the Games review all template notification letters including, references to all Games specific anti-doping provisions to ensure they are aligned.

22.2 Testing Figures

Number of Athletes Tested[13] during the Games Period (18 July 2024 – 11 August 2024)

Number of Athletes Tested (as reported in ADAMS)	Number	% of total 11,408 Athletes Participating
Athletes Tested Once	3624	31.8%
Athletes Tested More than Once	530	4.6%
Total number of athletes tested during the Games	**4154**	**36.4%**

Tests conducted during the Games Period by Sport Discipline

Sport Discipline	In-Competition	Out-of- Competition	Grand Total
Aquatics	**480**	**223**	**703**
Artistic Swimming	16	5	21
Diving	32	7	39
Open Water	20	11	31
Swimming Long Distance 800m or greater	35	18	53
Swimming Middle Distance 200-400m	159	60	219
Swimming Sprint 100m or less	158	84	242
Water Polo	60	38	98
Archery	**20**	**7**	**27**
Athletics	**571**	**344**	**915**
Combined Events	20	10	30
Jumps	76	45	121
Long Distance 3000m or greater	141	92	233
Middle Distance 800-1500m	58	39	97
Sprint 400m or less	196	112	308
Throws	80	46	126
Badminton	**37**	**23**	**60**
Basketball	**73**	**49**	**122**
3 on 3	28	11	39
Basketball	45	38	83
Boxing	**127**	**52**	**179**
Canoe	**157**	**63**	**220**
Sport Discipline	**In-Competition**	**Out-of- Competition**	**Grand**

[13] As defined by the WADA Technical Document for Sport Specific Analysis (TDSSA), one Test includes any number of Samples that are collected from one Athlete during a single Sample Collection Session. For example, a Sample Collection Session in which one urine Sample, one blood ABP Sample and one dried blood spot Sample are collected will count as one Test.

			Total
Canoe Slalom	59	17	76
Long Distance 1000m	20	8	28
Middle Distance 500m	68	35	103
Sprint 200m	10	3	13
Cycling	**247**	**99**	**346**
BMX Freestyle Park	14	3	17
BMX Racing	19	9	28
Mountain Bike Endurance	24	10	34
Road	45	43	88
Track Endurance	80	18	98
Track Sprint	65	16	81
DanceSport - Breaking	**12**	**4**	**16**
Equestrian	**25**	**8**	**33**
Dressage	10	2	12
Eventing	8	4	12
Jumping	7	2	9
Fencing	**51**	**10**	**61**
Epee	17		17
Foil	15	6	21
Sabre	19	4	23
Field Hockey	**84**	**56**	**140**
Football	**85**	**68**	**153**
Golf	**8**	**7**	**15**
Gymnastics	**116**	**33**	**149**
Artistic	92	26	118
Rhythmic	16	5	21
Trampoline	8	2	10
Handball	**55**	**46**	**101**
Judo	**106**	**50**	**156**
Modern Pentathlon	**12**	**11**	**23**
Roller Sports - Skateboarding	**17**	**4**	**21**
Rowing	**164**	**96**	**260**
Rugby Union	**81**	**54**	**135**
Sailing	**40**	**16**	**56**
Shooting	**60**	**18**	**78**
Sport Climbing	**36**	**11**	**47**
Combined	14	6	20

Sport Discipline	In-Competition	Out-of- Competition	Grand Total
Speed	22	5	27
Surfing	**14**	**7**	**21**
Table Tennis	**20**	**9**	**29**
Taekwondo	**55**	**18**	**73**
Tennis	**43**	**14**	**57**
Triathlon	**35**	**33**	**68**
Volleyball	**46**	**54**	**100**
Beach	4	14	18
Volleyball	42	40	82
Weightlifting	**122**	**46**	**168**
Wrestling	**177**	**74**	**251**
Grand Total	**3176**	**1607**	**4783**

Samples Collected during the Games period by Sport Discipline

Sport Discipline	In-Competition					Out-of- Competition					Total Samples
	Blood	Blood passport	Dried Blood Spot	Urine	Total IC samples	Blood	Blood passport	Dried Blood Spot	Urine	Total OOC Samples	
Aquatics	**25**			**481**	**506**	**62**	**55**	**22**	**227**	**366**	**872**
Artistic Swimming				17	17				5	5	22
Diving				32	32	2			7	9	41
Open Water	1			20	21	3	11		11	25	46
Swimming Long Distance 800m or greater	2			35	37	4	17		18	39	76
Swimming Middle Distance 200-400m	5			159	164	11	26	7	62	106	270
Swimming Sprint 100m or less	14			158	172	34	1	10	86	131	302
Water Polo	3			60	63	8		5	38	51	114
Archery				**24**	**24**				**7**	**7**	**31**
Athletics	**78**	**3**	**1**	**579**	**661**	**155**	**128**	**24**	**351**	**658**	**1319**
Combined Events	2			20	22	2	3	2	11	18	40
Jumps	11			79	90	22		5	45	72	162
Long Distance 3000m or greater	22	1		142	165	32	89		95	216	381
Middle Distance 800-1500m	5	2		58	65	15	33		38	86	151
Sprint 400m or less	25		1	200	226	60	3	11	116	190	416
Throws	13			80	93	24		6	46	76	169
Badminton	**4**			**37**	**41**	**4**		**3**	**23**	**30**	**71**
Basketball	**3**			**73**	**76**	**5**		**4**	**51**	**60**	**136**
3 on 3	1			28	29	3		2	12	17	46
Basketball	2			45	47	2		2	39	43	90
Boxing	**4**			**127**	**131**	**23**	**34**	**12**	**51**	**120**	**251**
Canoe	**15**			**162**	**177**	**27**	**23**	**10**	**63**	**123**	**300**
Canoe Slalom	2			63	65	11	10	4	17	42	107
Long Distance 1000m	1			20	21	5	3		8	16	37
Middle Distance 500m	10			69	79	9	10	4	35	58	137
Sprint 200m	2			10	12	2		2	3	7	19
Cycling	**32**			**249**	**281**	**28**	**68**	**11**	**99**	**206**	**487**
BMX Freestyle Park	1			14	15	1		2	3	6	21
BMX Racing	2			20	22	4		2	9	15	37
Mountain Bike Endurance	2			24	26	1	7		10	18	44
Road	2			45	47	13	41		43	97	144
Track Endurance	12			80	92	4	16	4	18	42	134
Track Sprint	13			66	79	5	4	3	16	28	107

DanceSport - Breaking				**12**	**12**	**1**		**2**	**4**	**7**	**19**
Equestrian				**25**	**25**	**1**			**8**	**9**	**34**
Dressage				10	10				2	2	12
Eventing				8	8	1			4	5	13
Jumping				7	7				2	2	9
Fencing	**1**			**51**	**52**	**2**			**10**	**12**	**64**
Epee				17	17						17
Foil				15	15	1			6	7	22
Sabre	1			19	20	1			4	5	25
Field Hockey	**5**			**85**	**90**	**9**		**8**	**58**	**75**	**165**
Football	**7**		**1**	**85**	**93**	**7**		**7**	**68**	**82**	**175**
Golf				**8**	**8**				**7**	**7**	**15**
Gymnastics	**5**			**116**	**121**	**13**		**7**	**33**	**53**	**174**
Artistic	5			92	97	11		7	26	44	141
Rhythmic				16	16	1			5	6	22
Trampoline				8	8	1			2	3	11
Handball	**3**			**55**	**58**	**7**		**5**	**46**	**58**	**116**
Judo	**6**			**106**	**112**	**9**		**9**	**50**	**68**	**180**
Modern Pentathlon				**12**	**12**	**1**		**2**	**11**	**14**	**26**
Roller Sports - Skateboarding	**1**			**17**	**18**	**1**			**4**	**5**	**23**
Rowing	**8**			**165**	**173**	**32**	**93**	**9**	**93**	**227**	**400**
Rugby Union	**10**			**81**	**91**	**17**		**7**	**54**	**78**	**169**
Sailing	**1**			**42**	**43**	**1**			**16**	**17**	**60**
Shooting				**65**	**65**				**18**	**18**	**83**
Sport Climbing	**2**			**36**	**38**	**4**		**5**	**11**	**20**	**58**
Combined				14	14	1		2	6	9	23
Speed	2			22	24	3		3	5	11	35
Surfing				**14**	**14**			**2**	**7**	**9**	**23**
Table Tennis	**1**			**20**	**21**	**2**			**9**	**11**	**32**
Taekwondo	**5**		**2**	**56**	**63**	**2**		**2**	**18**	**22**	**85**
Tennis	**2**			**43**	**45**			**1**	**14**	**15**	**60**
Triathlon	**2**			**36**	**38**	**16**	**33**		**20**	**69**	**107**
Volleyball	**1**			**46**	**47**	**5**		**4**	**54**	**63**	**110**
Beach				4	4	1		2	13	16	20
Volleyball	1			42	43	4		2	41	47	90
Weightlifting	**19**		**4**	**122**	**145**	**40**		**10**	**52**	**102**	**247**
Wrestling	**13**			**177**	**190**	**27**	**18**	**18**	**72**	**135**	**325**
Grand Total	**253**	**3**	**8**	**3207**	**3471**	**501**	**452**	**184**	**1609**	**2746**	**6217**

Adverse Analytical Findings from Samples collected during the Games

	Sample Collection Date (from DCF)	Sport	Analysis Results	Prohibited Substances	Test type	Sample Type	Outcome
1	23-Jul-24	Judo	AAF	metandienone; boldenone	OOC	Urine	ADRV - POI - 4 years
2	25-Jul-24	Boxing	AAF	furosemide	OOC	Urine	ADRV - POI - 2 years
3	28-Jul-24	Shooting	AAF	brinzolamide	IC	Urine	No case to answer - Permitted Route
4	29-Jul-24	Athletics	AAF	canrenone	OOC	Urine	No case to answer - Medical reasons - TUE
5	30-Jul-24	Judo	AAF	stanozolol; stanozolol; stanozolol	IC	Urine	ADRV - POI - 4 years
6	1-Aug-24	Judo	ATF	19-norandrosterone	IC	Urine	No case to answer - ATF not pursued as AAF - Insufficient evidence
7	3-Aug-24	Aquatics	AAF	furosemide	IC	Urine	Pending (only ADRV established + disqualification imposed so far)
8	3-Aug-24	Equestrian	AAF	dorzolamide	IC	Urine	ADRV - Disqualification (No fault)
9	2-Aug-24	Handball	AAF	dorzolamide	IC	Urine	No case to answer - Permitted Route
10	4-Aug-24	Athletics	AAF	stanozolol	OOC	Urine	ADRV - POI - 4 years
11	9-Aug-24	Sport Climbing	AAF	dorzolamide	IC	Urine	No case to answer - Permitted Route
12	9-Aug-24	Canoe	AAF	methylphenidate	IC	Urine	No case to answer - Medical reasons - TUE