Anti-Doping Awareness in Sports

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Lecture -22

The WADA Accredited Laboratories

Good morning ladies and gentlemen, and welcome to lecture 2 of week 5 of this course on anti-doping awareness for sports. In this lecture, we will be dealing with WADA accredited laboratories. Simply put, it means that once the dope sample is collected, whether it's urine, blood, or dried blood spot, it has to be sent for analysis, and it cannot be sent to any local pathological laboratory. It has to be sent under proper chain of custody to a WADA accredited laboratory, where the analysis of the sample will be done and the results will be published. I will be covering this lecture under the following outline: introduction to WADA, a brief history, the purpose of WADA laboratories, a document called the International Standard for Laboratories under the WADA Code. We will talk about the WADA accreditation process and how laboratories can apply for it, the criteria for candidate laboratories, and the laboratory probationary phase. We will talk about how laboratories can obtain full accreditation and the various analytical testing procedures that laboratories are supposed to follow. We will also be talking about something called the WADA External Quality Assessment Scheme or EQAS. We will also talk about the Athlete Biological Passport Programme. We will also touch upon research and development, which laboratories are supposed to undertake to maintain their accreditation status.

Each WADA accredited laboratory is supposed to follow a code of ethics, and we will discuss what that code of ethics is.

We will talk about how the laboratories are monitored and audited. We will talk about the procedures for handling non-conformities. We will discuss sample analysis and result management. And we will talk about the consequences of non-compliance with any of the laid-down procedures. We will finally finish with a take-home message and conclusion.

A brief history of WADA. The World Anti-Doping Agency was established in 1999 in Lausanne, Switzerland. It promotes and coordinates anti-doping activities globally. It develops the standards for doping control in sports. Basically, it is the ultimate authority for doping control in sports.

Laboratories are accredited by WADA, and this ensures compliance with the WADA Code and international standards. The aim is to protect athletes and the integrity of sport. The first International Standard for Laboratories was adopted in November 2012. So what is the purpose of these WADA accredited laboratories? They analyze biological samples, urine, blood, dried blood spot, etc., for prohibited substances.

They ensure that the results are reliable and accurate. They facilitate harmonization in sample analysis globally. This means that WADA accredited laboratories need not be present in the same country as the sample collection. Suppose a sample collection is happening in country A and country A does not have a WADA accredited laboratory. The samples will then be sent to any other country where a WADA accredited laboratory is present.

This is possible because the doping control station, the doping transport courier, and the WADA accredited laboratory all follow the same rigidly set procedures worldwide. They operate under strict guidelines set by the International Standard for Laboratories. They contribute to fair competition in sport and help uphold anti-doping rules. Alright, so now we talk about something called the International Standard for Laboratories. This is the bible which the laboratories are supposed to follow, and it's a mandatory standard for laboratories.

Everything is documented there, right from how to receive the sample, how to open the sample, how to test the sample, how to store the sample, how to give the results, everything under the sun related to doping control and WADA accredited laboratories is covered under the ISL. It was first implemented in 2002 and has been revised several times since then. The ISL ensures that laboratories meet technical competence and quality standards. It sets out guidelines for sample custody, analysis, and results management. It also provides a framework for laboratory accreditation and athlete biological passport approval.

Be aware that laboratory accreditation is one process, and accreditation for the athlete biological passport is a separate process. The ISL ensures standardized anti-doping tests worldwide, countrywide, nationwide, everywhere. There is a process called the WADA accreditation process, which laboratories are supposed to go through. Labs will express their interest by submitting an application to WADA. This application must be submitted only after ensuring that certain strict criteria are met, including ISO/IEC 17025 or equivalent standards.

Only after meeting these standards can you submit your application to WADA. They are required to submit business plans and letters of support. These letters of support must come from the host nation and any other nation whose samples are to be handled by the laboratory. The laboratory must have performed analysis on at least 3000 samples annually. If the application and vetting process is successful, the labs will enter into a probationary period.

Accreditation is granted upon satisfactory performance in the CNS. Candidate laboratories must meet certain criteria. They must provide letters of support from anti-doping organizations, from the host country, and from other nations whose samples they will be handling. They must be guaranteed financial resources for at least three years. They must submit a detailed business plan.

They must ensure that there is adequate staff, facilities, and equipment for conducting all the tests under the WADA Code. They must comply with the Code of Ethics, and ISO/IEC 17025 accreditation is mandatory. After this process, the laboratories enter what is called a laboratory probationary phase. This lasts for at least 12 months. During these 12 months, they must analyze at least 15 blind EQAS samples.

They must conduct research and development in anti-doping. They must demonstrate knowledge sharing and cooperation with other labs worldwide. They must demonstrate strict adherence to ISL standards during the probation and beyond. This progress is monitored by WADA through periodic assessments. Once the probationary process is complete, the labs are awarded full accreditation.

The story does not end here, ladies and gentlemen. Accreditation is only the first hurdle to be crossed because WADA conducts regular monitoring and assessments. The laboratories are evaluated on the basis of performance in the EQAS scheme. They must maintain their ISO/IEC 17025 accreditation. Regular reaccreditation is required to continue operations, and failure to meet standards can lead to suspension.

As per the WADA Code and the ISL, there are certain analytical test procedures that labs are supposed to perform. They perform testing for prohibited substances in the biological samples submitted. For testing methods and protocols, they must follow WADA's technical documentation strictly. An initial screening test is done to identify suspicious samples. Confirmation procedures follow to verify the presence of banned substances.

During the testing process, labs must ensure proper custody and integrity of the samples throughout. Analytical results must be accurate and reliable. WADA operates a scheme called the External Quality Assessment Scheme. This is a program to evaluate laboratory performance. Samples are sent to WADA accredited laboratories for analysis.

Sometimes, the samples are sent blind, meaning only the laboratory does not know the results. Sometimes they are double blind, meaning neither WADA nor the lab knows the results. EQAS assesses the accuracy and reliability of test results.

Labs must participate regularly in EQAS to maintain accreditation. Poor performance in EQAS can lead to suspension or revocation of accreditation. WADA reviews EQAS results for all accredited labs to decide whether to continue, suspend, or remove accreditation. There is something called the Athlete Biological Passport Program, which monitors biological markers over time. These labs test various samples from the same athlete periodically to detect variations that may point to doping indirectly.

Accredited ABP labs have to meet additional criteria. Approval for ABP analysis is a separate process from WADA accreditation. ABP enhances the detection of blood manipulation and banned substances. It's a more accurate and reliable procedure because it conducts tests on multiple samples from the same athlete over time. The Athlete Biological Passport Program is part of the broader anti-doping strategy.

Research and Development. Accredited labs are required to engage in R&D activities. It is a mandatory part of the accreditation process and essential for maintaining accreditation. The focus is on anti-doping science and newer innovative testing methods. Seven percent of the annual budget must be allocated for research. During the 12-month probationary period, labs must implement at least two research projects.

WADA reviews the lab’s research output as part of accreditation, evaluation, and reaccreditation. Collaboration with other labs is encouraged. There is a rigid and specific Code of Ethics in place for laboratories, and labs must strictly comply with it. They must uphold the integrity of the anti-doping program in true letter and spirit. They must avoid conflicts of interest in all aspects of their operations.

Labs must not test samples from athletes or companies directly, or act on their behalf, or certify samples on their behalf. They must ensure impartiality and independence. This means WADA accredited laboratories must be completely independent from the government, national anti-doping organizations, and sport federations. Any breach of ethics can lead to a loss of accreditation. Laboratory Monitoring and Auditing. WADA continuously monitors labs through performance reviews.

Laboratories must submit reports on EQAS performance and other data regularly. Non-compliance with any aspect of the WADA Code or ISL can lead to suspension. Offsite and onsite assessments are conducted periodically. Reaccreditation is essential for maintaining WADA accreditation status. Accreditation is not granted for life.

Monitoring ensures that laboratories maintain the highest possible standards. Non-conformities are defined as failures to meet ISL standards.

Labs must identify and correct these issues promptly. Corrective action reports must be submitted to WADA for review. Periodic non-conformities can lead to restrictions or suspension of accreditation. Continuous improvement is encouraged through WADA feedback. Non-conformities are reviewed during WADA assessments.

Sample analysis and results management. Labs must ensure proper sample handling and custody, this goes without saying. Sample analysis includes detection of banned substances or prohibited methods. Results are reported to the anti-doping organizations for further action, as WADA accredited labs cannot act on abnormal test reports. Laboratories must avoid false positives and false negatives.

Strict guidelines must be followed for reporting adverse findings. Proper result management ensures fairness in the doping control process. There is a specific document detailing the consequences of non-compliance. Laboratories may face suspension or revocation of accreditation for non-compliance with any of the ISL or WADA Code standards. Non-compliance with ISL or EQAS results in immediate action.

Labs may appeal decisions or seek reaccreditation, but there is usually a cooling-off period. Continuous poor performance leads to permanent revocation of the license. WADA has the authority to remove non-compliant labs. Compliance ensures the credibility of anti-doping tests.

To conclude, WADA accredited laboratories are essential to global sports integrity and a key component in the fight against doping. Adherence to international testing standards ensures accurate and reliable anti-doping tests. EQAS participation and monitoring are mandatory.

Labs play a critical role in upholding clean sports and athlete fairness. Ongoing research and development by laboratories is mandatory and helps advance anti-doping science. Compliance with WADA standards is mandatory for all accredited laboratories. Accreditation is a process, and all laboratories must go through it. As of September 2024, there are 30 WADA accredited laboratories throughout the world.

These are my references, ladies and gentlemen. I strongly urge you to go through them if you are interested in delving deeper into this subject. WADA accredited laboratories are an important topic, and awareness about them is mandatory for anybody interested in doping and anti-doping.

I seem to have finished, ladies and gentlemen. There will be an assessment which will have to be submitted online within the stipulated period. I thank you for your time and your patience, ladies and gentlemen. Thank you for listening and Jai Hind.