IFBLS
International Federation of Biomedical Laboratory Science

IFBLS Position Paper on Patient Safety

Revised: July 2026

The World Health Organization (WHO) identified patient safety as a global health priority in 2002. This mission has been fundamentally transformed by the WHO Global Patient Safety Action Plan 2021–2030, which shifts the focus from reactive error management to proactively building high-reliability health systems.

Modern healthcare delivery, including public health, must be safe, effective, person-centred, timely, efficient, and equitable. This requires laboratory services that are not only analytically accurate but also digitally secure, clinically appropriate, and underpinned by a robust safety culture. In this context, Biomedical Laboratory Scientists (BLS) are essential contributors to patient safety, leveraging their expertise across all laboratory phases. Following ISO 15189:2022, they ensure that the total examination process*—including point-of-care testing (POCT)—prioritizes clinical outcomes and overall patient well-being.

In light of evolving global standards, it is imperative for IFBLS to align its Position Paper on Patient Safety from 2020 with the new paradigms introduced by the WHO Global Patient Safety Action Plan 2021–2030 and the internationally recognized standards, such as ISO 15189:2022. The traditional approach based on reactive error management is no longer sufficient; modern laboratory medicine demands the systematic integration of proactive risk management, the promotion of a just culture, and leadership in diagnostic stewardship. This alignment ensures that BLS act not merely as providers of analytical data, but as essential guarantors of clinical suitability and digital security throughout the total examination process. By revising this position, IFBLS reaffirms its commitment to patient well-being as the ultimate priority, transforming laboratory practice into a cornerstone of a high-reliability healthcare system.

*Note: *Total examination process (or the total testing process) is a comprehensive framework used primarily in clinical, medical, and public health laboratory settings to ensure accurate, efficient, and quality patient care. It encompasses the entire lifecycle of a test, spanning from the initial clinical question to the final interpretation of results (pre-examination processes, examination processes and post-examination processes).*

It is the position of IFBLS that BLS:

1. Establish a safety and just culture

BLS are leaders in fostering an environment where safety is the ultimate priority and this is done by:

- promoting a shared safety culture across laboratory teams and multidisciplinary partners, focused on preventing patient harm.
- engaging in scientific research and quality improvement to identify safety risks, reduce preventable harm, and strengthen diagnostic safety.
- advocating for non-punitive error reporting systems and structured safety learning frameworks. This ensures that personnel are encouraged to report "near-misses" without fear of retribution, focusing on systemic improvements rather than individual blame.
- recognizing that patient safety is inextricably linked to health worker safety, BLS include workforce resilience and mental health support as essential components of laboratory safety systems.

2. Responsibility for the safety of the total examination process

BLS are responsible for ensuring safety across all laboratory phases by:

- Implementing risk-based thinking by applying a comprehensive risk management framework (e.g., ISO 15189:2022) and monitoring standardized laboratory quality indicators to identify, assess, and mitigate potential harm before it reaches the patient.
- ensuring pre-analytical Integrity by adhering to relevant international standards and guidelines (e.g., CLSI PRE01 and CLSI PRE02) to guarantee robust patient identification, specimen stability, and minimization of diagnostic errors at the source.
- ensuring examination and post-examination quality by validating examination processes rigorously and ensuring that post-examination processes prioritize the accurate and timely reporting of results to safeguard patient safety.
- implementing a robust digital health governance framework that includes cybersecurity safeguards for laboratory information systems (LIS) to prevent diagnostic delays and protect patient privacy, alongside rigorous validation and transparency frameworks for artificial Intelligence (AI) to ensure data integrity and clinical safety throughout the examination process.
- ensuring closed-loop communication of critical results to prevent diagnostic delays and ensure timely clinical intervention.

3. Responsibility for clinical effectiveness and efficiency

BLS ensure the clinical value of laboratory medicine by:

- providing consultative expertise to clinicians to ensure the appropriate use of tests, preventing both over-utilization and under-utilization of resources.
- optimizing Turnaround Times (TAT) by utilizing validated, high-quality analytical methods and automation to ensure rapid delivery of results.
- leveraging technology to provide interpretative information that ensures maximum clinical benefit and timely intervention for the patient.
- promoting environmental sustainability by implementing "Green Laboratory" principles by optimizing resource consumption, reducing chemical waste, and improving energy efficiency without compromising diagnostic quality.

- utilizing Evidence-Based Laboratory Medicine (EBLM) to validate and verify new technologies, including AI-driven diagnostics and personalized medicine.
- maintaining high standards for qualifications and mandatory Continuing Professional Development (CPD) focused on human factors and safety science.
- eliminating defects through Continuous Quality Improvement (CQI), and real-time monitoring of quality indicators.
- establishing diagnostic stewardship programs and test utilization management to ensure the right test is performed for the right patient at the right time.
- ensuring the integrity and full traceability of data from the point of collection to the final interpretative report.
- demonstrating laboratory leadership in clinical decision support through multidisciplinary collaboration with clinicians, pharmacists, and other healthcare professionals to optimize patient outcomes.

4. Responsibility for equity and person-centred care

BLS uphold ethical standards and patient rights by:

- ensuring ethical handling of biological samples and respecting the patient's right to informed consent and confidentiality, in accordance with IFBLS professional codes and relevant national and international standards.
- expanding safety protocols to include precision medicine safety and the ethical management of genomic data, providing interdisciplinary interpretation support for complex diagnostic data.
- strengthening diagnostic equity and supporting global laboratory capacity building to ensure laboratory infrastructure resilience in all healthcare settings.
- providing clear, accessible and patient-friendly information regarding specimen collection and the clinical significance of laboratory investigations to the service users.

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