

Fast in Action to Reduce Rejection (FARR): Pre-Analytical Errors in Blood Sampling Procedures by the Nurses

Capt. (Dr) Usha Banerjee¹ and Ms. Aanchal Sharma²

Group Director of Nursing, Nursing, Indraprastha Apollo Hospitals New Delhi, India¹

Quality Assurance Officer, Nursing, Indraprastha Apollo Hospitals New Delhi, India²

Abstract: *The pre-analytical errors are the major source of mistakes in laboratory diagnostics referring to all of the inappropriate performances before the specimens are measured by the analyzers², such as improper sample collection, transport delays, illegible handwriting on requisition, wrong or missing identification, haemolysed, clotted and quantity not sufficient (QNS) samples, wrong vacutainer selection, inappropriate blood to anticoagulant ratio and so on. However, it has been reported that the pre-analytical phase is error-prone which may lead to repeated sampling, inaccurate test results, delay in diagnosis, and may jeopardize patient safety which may potentially compromise patient care and clinical outcomes⁷.*

This review examines pre-analytical errors, their causes, their impact on lab results, and strategies for creating clear classification systems to reduce these errors among nurses. Errors, often by trained staff nurses, highlight the need for regular competency tests and an active detection system to enhance lab testing reliability and quality.

The study focused on identifying and categorizing errors⁸ during phlebotomy collection. It aimed to mitigate these errors, which though not catastrophic, signalled system failures. The campaign successfully reduced errors from 368 to 287 after starting in response to a high error count in July 2022. The campaign also led to a shift from open to closed blood collection methods, including improved aseptic techniques. More than 1,000 nurses adopted this change, demonstrating a positive impact on maintaining sample quality and reducing errors. Overall, the campaign achieved remarkable success in addressing pre-analytical blood sample errors.

Keywords: Pre-analytical errors, Blood Collection, Phlebotomy, Blood sample collection, Laboratory Testing

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