

Enhancing Patient Outcomes Through Quality Improvement: Reducing Contamination Rates in Karyotyping Samples via Effective Audits and Staff Engagement

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Abstract : This study discusses the implementation of quality improvement initiatives aimed at reducing contamination rates in cultured karyotyping samples. The primary objective was to enhance patient outcomes through systematic audits and targeted staff engagement. Recognizing the critical impact of sample integrity on diagnostic accuracy, a thorough analysis was conducted to identify the root causes of contamination. The project involved two audit cycles, which facilitated a comprehensive assessment of adherence to local protocols. Key issues identified included lapses in the use of personal protective equipment (PPE) and inadequate awareness of proper sample handling procedures among staff. To address these challenges, a multi-faceted approach was adopted. Firstly, a presentation was delivered to the laboratory team emphasizing the significance of strict adherence to PPE guidelines during the collection and handling of samples. This session aimed to raise awareness and foster a culture of safety within the unit. Additionally, informative posters illustrating the correct procedures were strategically placed around the laboratory to serve as ongoing visual reminders for staff. Recognizing the heightened risk associated with patients exhibiting fever or signs of infection, special measures were introduced to manage their sample collection. These proactive strategies were designed to minimize the likelihood of introducing contaminated samples into the culture process. The results of the audits demonstrated a significant reduction in contamination rates, underscoring the effectiveness of the interventions. This experience reinforced the importance of continuous quality improvement in healthcare settings, particularly in ensuring the delivery of high-quality, safe, and efficient services. Conducting regular audits not only provided valuable insights into operational practices but also highlighted the critical role of active team engagement and a data-driven approach in decision-making. Effective communication and collaboration among team members emerged as essential components for the success of quality improvement initiatives.

Keywords : quality improvement, contamination rates, karyotyping samples, healthcare protocols, staff engagement

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