

# Improving laboratory turnaround time of urgent full blood count in Department of Pathology, Hospital Shah Alam

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## ABSTRACT

**Introduction:** Full blood count (FBC) is one of a routine requested basic haematology test. This test may be required on urgent basis and crucially assists towards patients' diagnosis and management of treatments. Delay in FBC reporting may lead to inappropriate treatments or unnecessary anxiety, potentially causing harm to patient. Thus, Kementerian Kesihatan Malaysia has set Lab Turn Around Time (LTAT) for urgent FBC within 45 minutes as one of the HPIA and KPI indicator with standard of >90%. **Materials and Methods:** In January and February 2022 there were 4,735 (17.1%) urgent FBC out of 27,665 total FBC received. The performance indicator for LTAT of urgent FBC were found below the agreed standard, 84% and 88% respectively. Nearly half of the requests (49%) were from Emergency Department (ED). Factors identified contributing these intricacies can be divided into two categories i.e. involving system (blurry workflow, urgent request not highlighted on barcode) and people itself (lack of awareness/knowledge/training and misinterpretations especially the urgency where specimen were sent in bulk). **Results:** Strategies were planned for improvement. Enhancement of process flow by focusing on specimen prioritization, designated racking system for urgent specimen, use of special barcode stickers in ED and bold 'Urgent' font in specimen barcodes were carried out. Lab personnel were given new written procedure on changes of workflow including training and reminder notes. Persistently inculcating awareness on urgent specimen and ensuring continuous specimen out-flows instead in bulk to ward and clinic personnel through infographic poster as well as periodical interdepartmental meeting and Houseman orientation programme. **Conclusion:** Post intervention shows tremendous improvement in September and October 2022 with 95.7% and 97.2% of urgent FBC were released within 45 minutes respectively. Specific remediable strategies focusing on system and people significantly improve LTAT of urgent FBC. Collaboration between each department and staffs are exigently applauded to optimize the process henceforth.