

The Evolution of FBC Testing: Enhancing ED Performance

Introduction

Full blood count (FBC) is a crucial diagnostic tool in the Emergency Department (ED). Despite the availability of Point-of-Care Testing (POCT) for nearly a decade, many doctors still prefer to send FBC requests to the pathology laboratory, causing delays of several hours due to manual processing in Selayang Hospital. This reliance on manual results also incurs additional costs and delays due to the need for manual delivery. In contrast, POCT FBC results are available in just 2 minutes.

Objectives

To streamline FBC testing process in ED and reduce duplicate orders sent to the pathology laboratory.

Methods

We have conducted a interdepartmental collaborative quality improvement project to reduce FBC orders sent to the lab. This was first started off with producing a departmental blood investigations guidance which was agreed upon by the ED and Pathology department, which outlines conditions where FBC should be sent to the lab instead of doing a POCT. These indications includes: unexplained bi/pancytopenia and when differential counts were not generated.

To ensure accuracy of POCT FBC results, arrangements were made with the pathology department for internal and external validation of the analyser.

We have procured an additional FBC analyser, bringing the total to two machines in the ED.

After repeated audits revealed inadequate adherence to investigation guidelines, the FBC POCT usage was included in the house officer orientation program. Doctors received regular reminders and training, and Blood Investigation Guidance Posters were displayed in all clinical zones as reminders.

Results

Prior to this project, the monthly total FBC request sent to the pathology lab was 2181 in average. The initial changes made had led to a reduction of mean to 1032 per month. Following the reinforcement and reminders provided to the ED clinicians, we have successfully brought the average number of FBC request down 431 per month.

Conclusion

This achievement met our objective of minimising the need to send FBC samples to the pathology laboratory, easing the burden on medical staff, reducing costs for the hospital, and shortening patient length of stay.

Keywords

POCT, FBC, audits