Blood Culture Analyser in ED

The Princess Alexandra Hospital
NHS Trust

Project aim

- To install a Blood Culture analyser in ED for out of hours loading.
- Reduce TAT for positive and negative results.
- Earlier diagnosis of sepsis.
- Improve patient diagnosis and treatment.

Project team

- Sabiha Alom (Chief BMS)
- Louise Lopez (Senior BMS)
- Sangita Gadhavi (Senior BMS)
- Microbiology Department

Timeline for delivery

From: 18th June 2018 To: 15th July 2019

Measures

Currently all blood cultures taken out of hours (Mon-Fri 5pm to 8.30am and Sat/Sun 12pm to 8.30am are not loaded onto a blood culture analyser until the following morning by Microbiology lab staff. This causes a potential delay of 16hours or more in having a positive or negative result and in turn a delay in finding a diagnosis.
Early detection of blood infection can lead to early diagnosis of sepsis and in turn a better patient prognosis. Guidelines recommend blood culture are loaded onto an analyser within 4hours of being taken. Audits conveyed the guidelines were not being met and improvement steps needed to be implemented.

Results

- Blood culture analyser installed 25th July 2018
- 2nd August 2018 Hirrumed install
- 13th September 2018 Lab and ED Staff training
- 5th February 2019 IG/IT forms singed and complete
- 14th May 2019 Staff refresher training
- 4th July 2019 IT and Hirrumed configuration
- 15th July 2019 Go live day
- Since 25/7 number of bottles loaded / processed on the analyser in ED = 353 (33.5% of all bottles)
- Total number of bottles processed (ED + lab analyser) = 1052
- Number of positives from bottles loaded in ED = 53 (57.6% of all positives)
- Total number of positive bottles (ED + lab analyser) = 92

Having the analyser in ED has led to improvement in turnaround times for 33.5% of blood culture samples and 57.6% of positive cultures

Tests for change

5 P's

- Our patients – earlier diagnosis and treatment
- Our people – high quality care provided
- Our performance – meeting national guidelines
- Our place – patient safety maintained
- Our pounds - saving on bed days and supporting antibiotic stewardship.

Learning and next steps

The process of bringing the new analyser into the department and having the IG and IT forms/contracts signed caused a huge delay for the go live. In future these must be resolved in a more timely manner. The delays that arose were not anticipated during the initial project plan. Staff were very patient from all areas, as they were very keen to this project succeed.

#FabChange19

respectful | caring | responsible | committed