STUDENT IMPROVEMENT PRACTICUM SUMMARY REPORT

Team Members: Up to 4 students may receive credit for one practicum project.

1) Name: Sarah Macpherson_____ Area of Study: improving efficiency of trauma theatre

2) Name: _____ Area of Study: _____

3) Name: _____ Area of Study: _____

4) Name: _____ Area of Study: _____

Faculty Sponsor: Professor Peter Davey
Institution: University of Dundee
Title: Consultant Infectious Diseases Physician and Lead Clinician for Undergraduate Clinical Quality Improvement

Health Care Setting Sponsor: Professor Kevin Rooney
Institution: University of West of Scotland
Title: Consultant Anaesthetist and Professor of Care Improvement

RESULTS

Prediction (project level)**:**

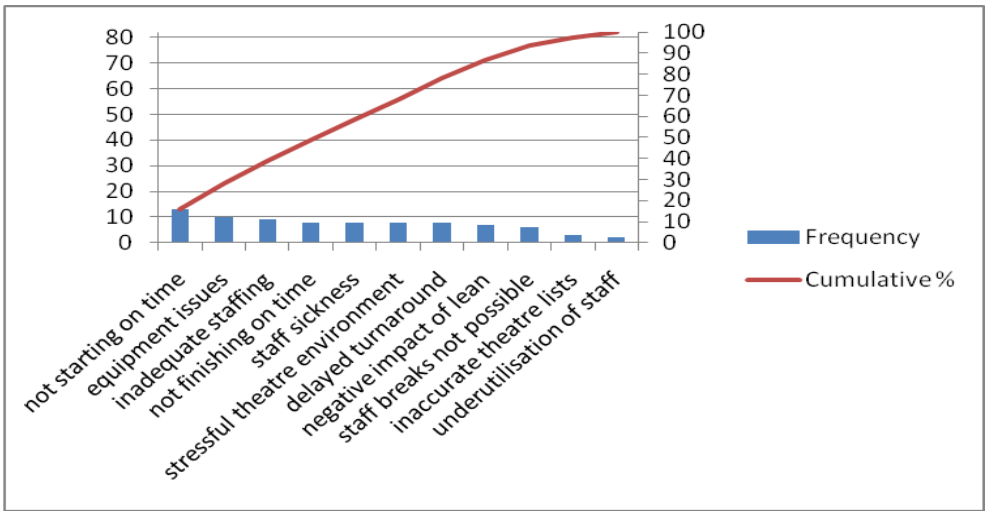
Proposed changes will improve theatre start time.

Learning (comparison of questions, predictions, & analysis of data.):

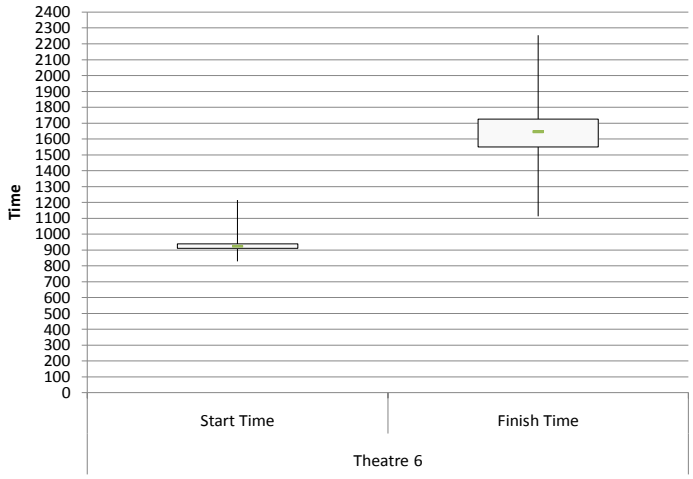
In order to improve start time of the first patient entering the trauma theatre, several small changes were necessary. These changes were made over the month of July 2011. Several small changes enabled us to change the current system in a step by step fashion, analyzing each change using a PDSA cycle.

Results: Present your results graphically.

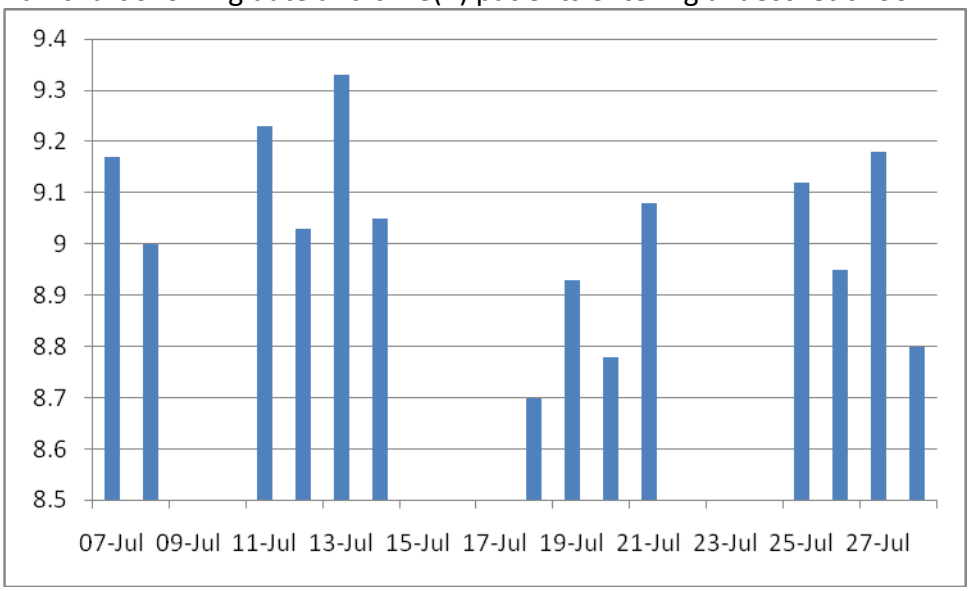
<u>Pareto chart showing causes of trauma theatre inefficiency</u>



Theatre 6: April – June 2011



Run chart showing date and time(h) patients entering anaesthetic room



Summary of results:

Staff questionnaires allowed identification of the most significant causes of delay for the quality improvement project. These included trauma theatre start time, equipment issues, staffing levels and staff sickness. Trauma theatre start time at the RAH has been significantly improved as a result of the project. The mean start time of 0934 has been improved as patients are now in the anaesthetic room before 9am.

CONCLUSIONS

Summarize the outcome of the project.

Theatre start time has been improved. This has important financial implications considering that the cost of running a theatre for an hour is £1200. Thus, the NHS is saving approximately £600 daily as a result of this quality improvement project. Other proposed changes include improving trauma theatre scheduling by grading each operation from 1-4, based on the expected length of time of the procedure. This will enable more appropriate scheduling, resulting in fewer unexpected changes to unplanned lists.

Discuss its significance to the local system

The earlier start time of trauma theatre is significant for the local system. The earlier start will mean more patients can have surgery in the trauma theatre per day. Patients are less likely to have procedures cancelled and postponed as a result of insufficient time to complete their operations. This leads to less time spent in hospital and less risk of hospital acquired infection. Starting promptly will enable time for scheduled staff breaks, leading to a more productive team.

Discuss any findings that may be generalizable to other systems.

Starting promptly is crucial for any theatre, not just trauma theatres. Other trauma departments could easily instigate the policy of having a trauma list with a minimum of the first patient on the list down to the theatre by 8am. Indeed, this should be easier to initiate in elective theatres, where procedures are planned and there is less disruption due to unexpected emergencies taking priority. Potentially, large sums of money could be saved by the NHS considering the cost of running a theatre for one hour is £1200.

Is the project sustainable? What are the requirements for sustainability?

The project is sustainable. In order to achieve this, the theatre sisters will continue to bring down the theatre list to theatre reception by 8am in order to allow the anaesthetist to see the first patient. The trauma meeting that usually took place at 0830 will be moved to the earlier time of 0815. The surgical brief will be allocated the set time of 0845 so that the patient can be in the anaesthetic room by 9am.

REFLECTIONS/DISCUSSION

Discuss factors that promoted the success of the project and that were barriers to success.

Factors promoting the success of the project included the willingness of staff to cooperate with changes. Factors hindering the success of the project included issues such as the theatre coordinator not delivering the list into trauma theatre because she did not have enough time to change into scrubs. To address this, the list was left at theatre reception. Initially, there was confusion about whether the staff at theatre reception should send for the patient as soon as the list arrived or wait for the anaesthetist to tell them to send for the patient. This was clarified by Professor Rooney speaking to staff at theatre reception so that they would send for the patient as soon as the list arrived.

What did you learn from doing this project?

I gained valuable insight into the patient experience of having surgery in the trauma theatre by following several from the ward through theatre, recovery and back to the ward. I met patients who had had their surgery postponed until the next day as a result of trauma theatre inefficiency. I learned that it is necessary to be prepared eg. I should have had collection boxes ready for the staff questionnaire before handing them out. I intubated several patients using a laryngoscope and a bouge on one occasion. I also cannulated patients which is a skill I will require as a junior doctor. It was useful to create a driver diagram to help me understand how the system works and identify a change package. The staff survey and subsequent pareto chart enabled us to identify the quick wins early in the project and gave us an area to concentrate on. This is a tool I will use in future QI projects.

What are your reflections on the role of the team?

The theatre team involved in this QI project included doctors, nurses, ODPs, auxilliaries, radiographers, theatre sisters, theatre coordinators, clinical service managers, medical and nursing ward staff a medical student. I learned the value of involving all members of the team when implementing a change. It is essential that each individual is aware of exactly what is expected of them and how this will affect them. An early team meeting is beneficial if possible to inform everyone of the project. The team has the common goal of providing the best possible care for patients. This must be used to motivate all members of the team. It is important that all members of the theatre team feel involved. It was interesting to read the feedback from the radiographers that they did not feel like part of the theatre team. This could possibly be addressed by including them in the surgical brief.

AUTHORIZATION

Do you authorize for this practicum to be published at www.ihi.org?

X Yes ☐ No