

## Detection of the deteriorating post operative patient

Laura Pickup<sup>1</sup> PhD, C.ErgHF, FIEHF, Asha Khachane<sup>2</sup> MD, Lauren Morgan<sup>2</sup> PhD and Peter McCulloch<sup>2</sup> MD, FRCSEd

<sup>1</sup>LP Human Factors Ltd, Somerset, UK

<sup>2</sup>Nuffield Department of Surgery, University of Oxford, Oxford, UK

The term Failure to Rescue (FTR) has become a healthcare performance indicator, which refers to the number of patient deaths following serious complications (Silber et al 1992). The evidence suggests that a higher rate of FTR, rather than the rate of complications, is linked to a greater rate of mortality. Suggesting that some organisations manage complications better than others (Sheetz et al 2013).

To ensure the 'Rescue' of a patient requires the timely recognition and communication of a patient's deterioration, the presence and initiation of a plan to manage symptoms and implement the required intervention. Johnston et al (2014, 2015) provide a comprehensive overview of the evidence on factors influencing the likelihood of a successful outcome.

The evidence currently suggests that improvement strategies have focused on the detection process and at a human interaction level. There does not appear to have been a focus across the whole system and process, which is required to effectively manage a deteriorating patient.

This abstract presents a small-scale project which has used the Functional Resonance Analysis Method (FRAM). This project is ongoing and has involved interviews with staff and consideration to organisational policies and procedures. The development of the FRAM model has focused on understanding what and how a successful 'Rescue' is achieved. The data analysis currently suggests considerable variability in the context, resources and work processes to be accommodated by clinical staff; of which individual experience and knowledge in how or when to respond may vary. The effective escalation and management of a deteriorating patient is reported by staff as relying heavily upon communication, co-ordination and interactions across departments and teams.

There is a low tolerance for delay in this process if a positive outcome is to be achieved. A lack of system resilience to detect and subsequently co-ordinate a timely response is being considered as influential to the patient's outcome.

A short presentation will include a description of how the different professionals typically interact to monitor and manage post-operative patients and the findings from the FRAM analysis so far. The aim of this workshop is to promote a discussion on how to manage the variability described and to obtain feedback and guidance on the next stages of this project. There are two questions which are of interest to discuss around potential challenges envisaged from adopting a Safety-II approach in addressing this issue:

1. How can the resilience capacity of such systems, which rely significantly upon the interactions of different organisational departments, be enhanced to ensure a co-ordinated response within short timescales?
2. How can initiatives which rely on the engagement of distributed teams (which are not static), with potentially conflicting local performance goals become engaged or motivated to support common organisational goals?

## References

Johnston M, Arora S, King D, Stroman L, Darzi A. Escalation of care and failure to rescue: a multi-centre, multi-professional qualitative study. *Surgery* 2014;155:989-94.

Johnston M.J., Arora S., King D., Bouras G., Almoudaris A.M., Davis R. & Darzi A. A systematic review to identify the factors that affect failure to rescue and escalation of care in surgery. *Surgery* 2015;157:4:752–763.

Sheetz KH, Waits SA, Krell RW, Campbell DA Jr, Englesbe MJ, Ghaferi AA. Improving mortality following emergent surgery in older patients requires focus on complication rescue. *Ann Surg* 2013;258:614-7.

Silber JH, Williams SV, Krakauer H, Schwartz JS. Hospital and patient characteristics associated with death after surgery. A study of adverse occurrence and failure to rescue. *Med Care* 1992;30:615-29.