ABSTRACT

Background: There is limited literature investigating effective mechanisms for improving clinical team cohesion and effectiveness to achieve clinical excellence in cardiology.

Purpose: To re-engineer cardiac care unit (CCU) ward rounds to enhance the input and advocacy of cardiac-trained nurses to improve decision making and deliver patient-centred care. Then to measure whether any of these structural changes have impacted ward round culture and the timely delivery of patient care after 1 year has passed.

Methods: A multimethod approach was applied to both studies to measure primary and secondary endpoints as well as patient satisfaction. Staff were engaged with initial questionnaires and followed up with interviews to assess their attitudes and compliance with the ward round design. Research methods were:

Study 1: A prospective observational design, ensuring CCU nurse attendance at every ward round (i.e. arrhythmia, acute coronary syndrome and heart failure streams) in consecutive 2-week control and implementation periods, conducted over three 4-week cycles. The primary endpoint was timely administration of cardiac medications. Secondary endpoints were length of stay; time to procedure bookings; patient mobility; and education.

Study 2: An observational design measuring primary and secondary endpoints to determine sustainability of the initial ward round study, 1 year after the intervention.

Results: Study 1: 197 patients were recruited (control n=99, intervention n=98, with a total of 206 episodes of care (control n=101, intervention n=105). Median time to cardiac medication administration was significantly shorter in the intervention cycle (intervention: 0 hr/med [IQR 0–0.5] versus control: 0.2 hr/med [IQR 0–1.2]; p=0.012). Heart failure patients had the most significant improvements (intervention: 0 hr/med [IQR 0–0.03] versus control: 0.9 hr/med [IQR 0.3–1.6]; p<0.001). Secondary endpoints trended towards improvement in all ward rounds, but results did not reach statistical significance.

Study 2: Electronic Medical Records of 115 patients were reviewed 1 year after Study 1 was undertaken. There was no evidence of sustained improvement in the primary and secondary endpoints. For all streams combined, median time to cardiac medication administration was

0.11 hr/med (IQR 0–1.84) in the follow-up study versus 0 hr/med (IQR 0–0.5) during the intervention. Improvements among heart failure patients were not maintained either (follow-up study: 0.09 hr/med [IQR 0–1.05] versus intervention: 0 hr/med [IQR 0–0.03]). A thematic analysis of interviews with six cardiac nurses and seven doctors showed that nurses want to be on the ward round, and that doctors want and value cardiac nurses' knowledge and expertise on and off the ward round. Six themes were identified; trusting and respectful relationships, teamwork, presence of expertise, and the expectations that doctors and nurses place upon themselves and each other. As well as the need to reduce workload barriers to optimise effective decision making on the ward round. Other subthemes such as; nurse surveillance, situational awareness, workplace culture and leadership helped to create a thematic map that includes a new nursing model. This study showed that a culture of trust and respect already exists between senior medical and nursing staff. Communication and workload issues are preventing their ability to function as a team. Therefore, the concept of cardiac nurse streaming, a new nursing model, has been suggested as a positive practice change that can ensure cardiac patients receive timely quality care all the time and contribute to building a centre of excellence.

Conclusion: Enabling CCU nurses to regularly attend ward rounds and contribute to effective decision making reduced medication delays, with clinically valuable improvements in secondary endpoints observed. Improvements were not maintained 1 year later, and CCU nurses still struggled to attend ward rounds. Further research into implementable, scalable and sustainable interventions, such as cardiac nurse streaming, is essential to drive clinical excellence. Nurses belong on the ward round.