

30-day readmission metric as a quality measure

Dr Harsha Wodeyar¹

¹*Liverpool University Hospital, Liverpool, United Kingdom*

Background

Whilst demand for acute hospital beds has increased exponentially over the last decade there has been a paradoxical reduction in the total available acute care hospital beds. Predictably, the bed occupancy rates have significantly increased with hospitals often reporting occupancy rates above the safe limits. This supply and demand mismatch have a negative impact on both the quality of care delivered to the patients and staff experience. Organisation's response to bed shortage and overcrowded A&E are often resource reallocation and cancellation of elective activities. Whilst directing resources towards meeting the increased demand is essential, it's also important to continue to explore innovative ways of moderating the demand. Reducing 30-day hospital readmission by improving the post discharge care of patients is one such way of moderating the demand. Reducing 30-Day Readmission using Discharge Care Bundle study is a prospective randomised controlled trial conducted at a University Hospital in UK. This is the first randomised control trial testing interventions aimed at reducing 30-day readmission in dialysis population. The interventions used in this trial are informed by the evidence from previous observational studies bundled together.

Method

Patients on regular haemodialysis treatment in units attached to University Hospital who had planned or unplanned hospital admission were eligible to participate in the trial. 83 patients were recruited in the trial over the period of 8 months. Primary outcome measured was emergency unplanned readmissions within 30 days of discharge from the index admission. Secondary outcome measured was the impact of discharge care bundle on patient's Health Related Quality of Life(HRQOL) using EQ-5D-5L questionnaire.

Results

The odds of 30-day readmission for a patient in the study group was 0.66 the odds for a patient in the control group (95% Confidence Interval [CI] 0.239 to 1.85; $p=0.43$). There was statistically significant association between length of stay during the index admission and risk of 30-day readmission (95% CI 1.002 to 1.10; $p=0.039$). In sensitivity analysis excluding the early readmission within a week of discharge the odds of 30-day readmission for a patient in study group was 0.41 the odds of readmission in the control group (95% CI .131 to 1.32 ; $p=0.138$). Study group reports improvement in the HRQOL in all dimensions except self-care. Control group reported deterioration in HRQOL in all dimensions except mobility. There was also reduction in the readmission bed days in study group by 32 days.

Conclusion

This study signals positive effects of the bundled intervention both on reducing 30-day readmission and improving patient's HRQOL. These findings however need further investigation to see if the observed difference persists after the completion of recruitment to the study. If the difference persists then adopting this discharge care bundle as standard of care will benefit patients, healthcare providers and health economy equally. Available evidence does not support using the 30-day metric as a quality measure hence attaching financial penalties to this metric would be unwise and counterproductive. However, 30-day readmission metric could play a vital role in healthcare policy as an accountability tool to improve post discharge care of dialysis patients.