

A national study evaluating the impact of the nurse practitioner role on emergency department service indicators.

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Background

Emergency departments (ED) are overcrowded due in part to the combined effect of increased service demand and access block. Innovative service and practice models have been implemented by managers and policy directors aiming to improve service and performance. Nurse practitioner service is one such practice model which has been rapidly adopted in metropolitan, rural and regional EDs over the last decade. This study, funded by the Australian Research Council, was conducted to evaluate ED nurse practitioner service at a systems level through a health service improvement focus.

Methodology

A national prospective cohort comparison study design was used to evaluate ED service indicators in departments with and without a nurse practitioner service across all Australian jurisdictions. A sample of 66 EDs was randomly selected from a population of 155 that met the inclusion criteria of providing 24 hour medical and nursing cover and reported episode data to the AIHW. ED episode data for the participating case and control EDs were gathered from state health department datasets and individual hospitals. Data from over 2.5 million individual ED episodes of patients in triage categories 2 to 5 were collected for one year from July 2013 until June 2014. Multivariate data analysis methods were used to evaluate outcome measures including waiting times, length of time in service (for non-admitted patients) and proportions of patients who did not wait. Analyses were controlled for potential confounder variables such as characteristics of ED service teams, hospitals and ED service models.

Results

Results available to date show that more than 50% of case site EDs had two or more nurse practitioners on the clinical team. No control sites employed nurse practitioners during the study period. Early findings indicate that EDs with nurse practitioners on the team are more likely to have improved performance indicators compared to EDs without nurse practitioners. These results will be presented controlling for the influence of operational service models, ED size, team configuration and geographical locations.

Conclusions

This prospective systems-focused research is a world first and the largest study to date that investigates the influence of service innovation on ED outcomes. The findings will provide high levels of evidence to inform ED health service improvement strategies and health service and workforce policy.