

Impact of an Emergency Nurse Coordinator on Work Flow Optimization in an Emergency Department in Delhi, India

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Abstract: The aim of this study was to assess the effect of the emergency nurse coordinator in optimization of workflow of the emergency department. A retrospective analysis of all patient encounters in the emergency department between Aug 1 to Sept 31 of 2014 (n=6,189) and Aug 1 to September 31 of 2015 (n=8,626) was conducted. There was a statistically significant decrease in the admission time, length of stay, transfer time, and review time of the patients after the introduction of the emergency nurse coordinator in the emergency department.(p<0.05).

Keywords: emergency nurse coordinator, emergency department, workflow

1. Introduction

In October 2014, an emergency nurse coordinator (ENC) was created as a liaison between the inpatient department, other hospital facilities and the emergency department. This was a new role undertaken by the nursing informatics specialist. A total of four nursing informatics specialist are posted in emergency and one assumes the role of emergency nurse coordinator every shift. The goal of the new role was to improve the patient workflow in the emergency department. The aim of this study was to assess the effect of an ENC in optimization of workflow of the emergency department.

2. Methods

AIIMS New Delhi is an academic tertiary referral centre that provides a breadth of specialized care for patients with complex, critical and life threatening conditions. The emergency department of our hospital consists of a screening room, main surgical emergency, pediatric emergency, and medical emergency with total patient registrations of 132,095 in 2015 up to September 30th. A retrospective analysis of all patient encounters in the emergency department between Aug 1 to Sept 31 of 2014 and Aug 1 to Sept 31 of 2015 were selected. We examined the average admission time, the average length of stay, transfer time, and review time.

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3. Results

Table1. Demographic data of patients

Variables	Before ENC	After ENC
Average age	46.27	41.43
Sex	Male-4,246 (68.6%) Females-1,943 (31.4%)	Male-5,785 (67.1%) Females-2,843 (32.9%)
Triage category	red -143 yellow – 6,040 green -6	red-265 yellow -8,408 green-5

Red – high risk; Yellow- medium risk; Green – low risk

Table 2. Pre and post ENC for parameters studied

Parameters	Before ENC	After ENC	Difference	*p value
Admission time	43.6hrs	20.33hrs	23.27hrs	0.04
Length of stay in ED	70.6hrs	32.29hrs	38.31 hrs	0.01
Transfer time	32.51hrs	25.79hrs	6.72hrs	0.04
Review time	99.47min	43.38 min	56.09min	0.01

*independent samples t-test; *Average admission time*: the difference between admission time and emergency registration time of the patient with total number of admission within study period. *Length of stay in ED*: average time between the patient’s first presentation to the ED and his/her departure from the emergency department. *Average transfer time*: is calculated by dividing the difference between transfer time and emergency registration time of the patient with total number of transfers within the study period. *Review time*: difference between the time of call to the physician and the physician sees the patient.

4. Discussion

From the study it could be inferred that the emergency nurse coordinator has significantly improved patient flow in the emergency department which is in congruence with the findings of a study done by Asha et al.³. Although this is not a traditional nursing informatics role, having the emergency nurse coordinator be part of the nurse informatics initiative was important because the ENC needs to be computer literate and help others in using technology during their work.

5. Acknowledgement

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References

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