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IMPLEMENTATION OF CARE INITIATION FOR CRITICAL CARE PATIENTS IN THE EMERGENCY DEPARTMENT

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Aims

To describe the effect of Care Initiation Teams (CITs) on waiting and disposition times of Priority 2 (P2) patients in the Emergency Department (ED).

Methodology

This was a retrospective analysis of ED operational data for:

- 1) 2 consecutive days in May 2015
- 2) Between 11:00am and 7:00pm, corresponded to the CIT shifts.
- 3) P2 Triage status
- 4) Aged between 21 and 100 years
- 5) Those who were not seen by the CI teams were classified as controls.

The CIT is provides:

- 1) early patient assessment by an emergency physician,
- 2) initiation of diagnostic testing
- 3) administration of analgesia and intravenous infusions.

Results

Median waiting time for the CIT group was 25 minutes, versus 83 minutes for controls. This 58 minute reduction was statistically significant. Median disposition time was 131 minutes and 62.5 minutes in the CIT and control groups, respectively. The 68.5 minute difference was also statistically significant.

Disposition times were shorter when

- a) the primary physician was more experienced,
- b) a senior ED doctor was not consulted, and
- c) tracing of test results or observation was not required

Conclusion

CITs

- 1) Significantly reduced P2 patient waiting time
- 2) Disposition time was twice as long compared to controls.

Analysis of patient subgroups suggests several factors which may account for the latter finding. P2 patient workflow can be further modified to reduce disposition time.

Variable	Total (N=100)	CIT (N=50)	Control (N=50)	P-value
Age mean(sd)	58.4 (17.5)	61.5 (16.1)	55.3 (18.5)	0.108
Age (21-49) n (%)	30 (30)	13 (26)	17 (34)	0.654
Age (50-69) n (%)	39 (39)	20 (40)	19 (38)	
Age (≥70) n (%)	31 (31)	16 (32)	14 (28)	
Gender (Male) n (%)	44 (44)	22 (44)	22 (44)	1
Race (Chinese) n (%)	63 (63)	36 (72)	27 (54)	0.09
Race (Indian) n (%)	15 (15)	8 (16)	7 (14)	
Race (Malay) n (%)	12 (12)	4 (8)	8 (16)	
Race (Others) n (%)	10 (10)	2 (4)	8 (16)	

Variable	Total	CIT	Control	P-value
Admitted n(%)	55 (55)	27 (54)	28 (56)	1
Discharged n(%)	33 (33)	17 (32)	16 (32)	
EOW n(%)	9 (9)	4 (8)	5 (10)	
AOR n(%)	3 (3)	2 (4)	1 (2)	

Variable	N = 100 (%)	CIT	Control	P-value
Awaiting test results or response to treatment, n(%)	55 (55)	30 (60)	25 (50)	0.421
Consulted with Senior Doctor, n(%)	76 (76)	39 (78)	37 (74)	0.815

Variable	Total	CIT	Control	P-value
Triage to consult time mean (sd)	61.3(48.4)	31.9 (20.9)	90.7 (50.4)	<0.001
Consultation to disposition time mean (sd)	117.4 (89.2)	139.1 (40)	95.6 (85.6)	0.002

Overall	Total (N=100)	Awaiting test results (n=55)	Not awaiting test results	P-value
Consult to disposition time mean (sd)	117.4 (89.2)	149.4 (96.4)	78.2 (60.4)	<0.001

Control	Total (N=50)	Mon (N=25)	Tue (N=25)	P-value
Triage to consult time mean (sd)	90.7 (50.4)	101.1 (33.9)	80.2 (61.6)	0.019
Consultation to disposition time mean (sd)	95.6 (85.6)	100.3 (96.5)	90.9 (74.8)	0.823

CIT	Total (N=50)	Mon (N=25)	Tue (N=25)	P-value
Triage to consult time mean (sd)	31.9 (20.9)	36.5 (26.9)	27.3 (10.9)	0.285
Consultation to disposition time mean (sd)	139.1 (88.2)	134 (82.4)	144.3 (95.1)	0.869

Multiple quantile regression model

	Est b	Std. Error	p value
CIT	41	20.54	0.049
Day of Registration Tue	-20	20.99	0.343
Awaiting test result	57	20.77	0.007
Consulted with senior doctor	14	23.21	0.548