Audit of observation ward supporting emergency room at tertiary care hospital: Kathmandu, Nepal

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ABSTRACT

Introduction: Tribhuvan University Teaching Hospital is a tertiary care hospital of Nepal. In an average, 118 cases visit TUTH emergency per day. After initial management in Emergency, patients are either admitted in specialty departments or are observed in observation ward under Department of General Practice.

Method: It was audit report carried out among the patients admitted to observational ward of TUTH. It included data of one month.

Result: Total of 205 patients were admitted to observation ward, 16 (7.8%) were later on transferred in various other wards of hospital and 189 (92%)patients were admitted in the observation ward. The common admitting diagnosis was seen to be Dengue fever82(40%), followed by COPD 20(9.7%).

Conclusion: For those patients presenting in emergency room, observation wards is better alternative for continuing medical care after getting emergency care.
Keywords: emergency, general practitioner, observation ward, outcome, TUTH

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INTRODUCTION

Tribhuvan University Teaching Hospital is a tertiary care hospital located in Kathmandu, Nepal. An average of 118 cases per day visit to emergency room of this hospital.[1] After initial acute management with basic investigation & treatment in emergency room, patients are shifted to observation ward for post emergency care. This observation ward is under Department of General Practice. The observation ward continues appropriate treatment of patients who need hospital care after emergency care for short duration or till they get admitted to respective other departments.[2,8]

This audit report was carried out to know the disease pattern and outcomes of patients admitted in our observation ward. It helps to know the result of the work being carried out in this ward and also to plan strategies for further improvement of the services.

METHOD

This is an audit of admission to observation ward at Tribhuvan University Teaching Hospital (TUTH) from 17 August to 16 September 2022. The lottery method was used to select the month between the calendar month of 2017 and 2022. Only five years were included as secondary data was available for these years only. The observation ward is under Department of General Practice, TUTH, Kathmandu. The observation ward at TUTH is 23 bedded area where patients can be observed or have early investigation/ management within the Emergency. Patients are admitted to this area with an expectation of discharge within 24 hours.[1]

All patients admitted to observational ward were included in the study. Patients with incomplete data entry were excluded. Data was collected from admission register, and discharge register of the observation ward. Information on patient particulars, and diagnosis was collected from admission register. Data on outcome of patient like discharge, shifted to other wards of hospital, shifted to emergency, referred, etc. was collected from discharge register. We also traced discharge summary sheet of patient for analysis of disease conditions presented in observation ward and consultations done with other specialty.

Data collected were entered in Excel sheets of Microsoft Office Package. Length of stay and Turnover rate were calculated using following formula. LOS (i.e. length of stay) of patient= total length of stay of all patients divided by total no. of patients. Turnover rate is = 1/LOS X100 for sample disease.[3]

RESULT

Total of 205 patients were admitted to observation ward, 16 (7.8%) were later on transferred in various other wards of hospital and 189 (92%)patients were admitted in the observation ward. After 24-48 hours observation at observation ward, 175 (85.36%) patients were discharged,16(7.8%) patients were shifted back to emergency, and 14(6.8%) were discharged on patient's request. The bed occupancy was 94.42% and the patient turnover rate was32.25%. Average duration of stay for the patient who were discharged was 3.1 days. Infectious cause was the most common diagnosis for admission to observation ward (Table 1).

Table 1. Spectrum of disease admitted in observation ward of TUTH ER

Department	System	Diseases	N(%)	Length of stay (Day)
Infectious	Respiratory	Dengue fever	82(40.00)	3.5
		SARS COV2	02(0.97)	1
		Scrub Typhus	02(0.97)	4
		Pneumonia	11(5.36)	4.6
		COPD	20(9.75)	3.9
		Bronchial asthma.	1(0.48)	3
	Gastrointestinal	Acute Gastroenteritis	19(9.26)	3.3
		Vomiting under evaluation	3(1.46)	1
		Acute Pancreatitis	6(2.9)	2.1
		Acid Peptic disease	1(0.48)	1.0
	Uro-genital	Urinary Tract Infection	15(7.31)	3.5
		Epididymo-orchitis	1(0.48)	3
Endocrinology		Uncontrolled Diabetes mellitus	3(1.46)	4.6
Road traffic accident	Central Nervous System	Mild head injury, minor trauma	5(2.43)	2.3
Obstetric		Hyperemesis gravidarum	9(4.39)	4.4
Attempted suicide		Organophosphorous poisoning	18(8.78)	3.4
Others			7(3.41)	2.1
Total			**205(100)**	**3.1**

Table 2. Analysis of basic parameters of observation ward, TUTH for the month Bhadra 2079 BS.

S.N.	Particulars	Observation ward
1.	Total number of beds	23
2.	Bed occupancy	94.42%
3.	Nursing staff per shift	2
4.	Total number of patients	205
5.	Total length of stay	3.1 days
	a. COPD	3.9
	b. Pneumonia	4.6
	c. Dengue Fever	3.5
6.	Turnover rate	32.258
7.	Sub-specialty consultation done	1 per day
8	Isolation area for infectious disease	no

Maximum LOS was 4.6 day for Diabetes Mellitus and minimum of 1 day for gastrointestinal symptoms (Table 2). Turnover rate of observation ward was 32.26% (Table 2).

DISCUSSION

Data from this audit showed that the bed occupancy was 94.42% with 3.1 days of average length of stay. This is comparable with the European standard 2.5 day. Turnover rate of 32.26 % was low which is carried out per day in our setting whereas every 8 hours on European. Turnover rate of American and European nation is as high as 69% on which LOS is less than 1.43 day. General Practice led observation ward in the Emergency room had played a major role in decreasing load of other wards as well as emergency room. The need for observation ward was first recognized in 1960 by Nuffield after review of causality services. It was then reviewed by Platt and Lewin in 1968 where 22 bedded accident and emergency (A&E) ward was described accepting mainly surgical and orthopedic cases.[2] United Kingdom, National Health Service plan specifically recommended the assessment and admission ward to be established for those requiring short term treatment, in-patients with limited medical needs and clinical condition needing only short-term observations.

Effectiveness of observation ward would depend on various factors like appropriateness of admission, length of stay, bed availability, staff benefit; release of pressure, stress on staff, and cost effectiveness. A study mentioned the concept of ideal observation ward so that it can be utilized at the utmost full capacity.[2] Evidence suggested that the ideal ward should be time limited i.e. 24 hours and staffed by senior personnel. There is some evidence that turnaround time is quicker when they are managed by emergency team. Units must have access to imaging and laboratory facilities. Quick procedure and transfer out after 24 hours must be adhered to. Those who need longer duration of Hospital stay should not use these wards. The required number of beds could not be predicted from the literature.[2]

The common admitting diagnosis was seen to be Dengue fever, followed by COPD, gastroenteritis and organophosphate poisoning. This is probably due to the season of dengue outbreak. This opens the possibility of using observation ward during the outbreak. One of the study showed patients like AE of COPD, asthma, diagnostic chest pain, road traffic accident, urinary tract infection (UTI), fever under evaluation, suicidal attempted cases get benefited via admission in observation ward.[4]

In our study, 16(7.8%) patients were shifted back to emergency, and 14(6.8%) were discharged on patient's request. Patients are shifted to emergency upon severe deterioration of vital signs and If the diagnosis is made and is of particular specialty department. Discharge is made upon completion of antibiotic dose, vital and clinical parameter are normal and when no intervention is required. Admission criteria includes stable vital signs, linked with two or more department and diagnostic dilemma.[2,5]

This observation ward is run by general practitioners. This type of ward is an important concept in addressing the patient load and access block in emergency department. As general practitioners have exposure to diverse cases, such type of ward is appropriately handled by general practitioners. Inter-departmental coordination is key factor for smooth operation of such wards during admission of patients.[6] It is better to have separate isolation area for infectious disease within the observation ward.[7]

This is an audit showing patient, volume, stay and diagnosis of the patient. Further impact study needs to be planned to see the real necessity of such ward being managed by general practitioner.

CONCLUSION

For those patients presenting in emergency room, observation wards is better alternative for continuing medical care after getting emergency care.

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Conflict of interest

None

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