An Emergency Department Audit

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ABSTRACT

Introduction:Regular and well conducted clinical audit helps clinicians improve services. Clinical audit, with timely feedback to all staff, is one of the most powerful tools available to assess, and therefore to drive improvements in the quality, safety, consistency for urgent and emergency care.

Method: Data were collected over six months (1st Baisakh 2068 to 30th Asoj 2068) from medical register of department of emergency, Kathmandu medical college. Demography, emergency clinical diagnosis and management were analyzed.

Result: Total 3605 cases attended over 6 months period in emergency department of Kathmandu Medical College Teaching Hospital (KMCTH). Most cases (57%) were medical cases followed by surgical (27%), Obstetrics/Gynecology, Orthopedics, Pediatrics (3% each) and psychiatry, neurosurgery, ENT (2% each).

Conclusion: Emergency audit represents status of hospital in society. It guides Management to improve and expand faculties.

Keyword: audit, emergency

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Introduction

Regular and well conducted clinical audit helps clinician improve services. Clinical audit, with timely feedback to all staff, is one of the most powerful tools available to assess, and therefore to drive improvements in, the quality, safety, consistency for urgent and emergency care. Out of hours care is usually accessed at a time when patients can be at their most frightened and vulnerable.[2]There is a need for improved training, increased numbers of specialized staff, and improved communication between professionals[3].Publications on clinical audit in connection with Emergency Medicine are scarce in the medical literature.Clinical audit should be made compulsory for all healthcare professionals providing clinical care, and emergency physicians are no exceptions.[4]

Method

It is a retrospective hospital based study. Data were collected over six months from (1stBaisakh 2068 to 30thAsoj 2068) from medical register of department of emergency, Kathmandu medical college. Demography of registered patients, their emergency clinical diagnosis and management were analyzed.

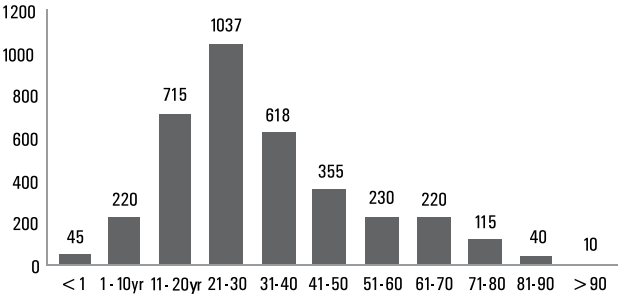
Result

Total 3605 cases attended over 6 months period in emergency department of KMCTH. Most cases (57%) were from medicine followed by surgery (27%). 19% of total attended were admitted through emergency where as rest discharged to follow in OPD.

Table1. Total cases

FACULTY	CASES	%	Disposition	No
Medicine	2077	57	Admission	697(19%)
Surgery	984	27	discharge	2830(78.5%)
Obstetrics/Gynecology	115	3	Referred	61
Orthopedics	111	3	DOR/LAMA	15
Paediatrics	102	3	Expired	2
ENT	66	2		
Neurosurgery,/CTVS	66	2		
Psychiatry	59	2		
Miscellaneous	25	1		
Total	3605	100		

Figure 1. Age distribution



There were 58% male and 42% of female patients in the study period. Out of total population visiting emergency department, 67% were from Kathmandu, 15% were from Bhaktapur, 12% from outside the valley and 6% were from Lalitpur.

Table 2. Medical cases

Medical cases	No	Medical cases	No
AGE	466	UGI Bleeding	27
UTI	307	Pleural Effusion	21
APD	240	Urticaria	21
COPD AE	168	Hemoptysis	21
RTI	129	Viral hepatitis	18
HTN	118	Drug overdose	17
Fever under evaluation	112	Anaemia	15
CVA	75	cirrhosis	11
DM	75	Alcohol related disorder	9
Enteric fever	54	DKA	9
Seizure	45	Pancytopenia	8
Poison	39	Nephritic syndrome	6
Headache	33	GBS	4
Asthma	29	Total Cases	2077

Amongst the patient admitted for drug overdose, multiple drug overdoses was 53%, paracetamol overdose was 29% and cetirizine was 18%. Presentation of surgical cases were as follows.

Table 3. Surgical Cases

Surgical cases	No	Surgical cases	No
Hernia	21	Non specific pain abdomen	60
Biliary colic	18	Burn	51
BEP	18	Cholecystitis	33
Cellulitis	18	Intestinal obstruction	30
OBS Jaundice	15	Pancreatitis	24
Abscess	12	Hernia	21
Cut injury	399	Peritonitis due to hollow viscus perforation	9
Ureteric Calculus	129	Testicular torsion	3
Appendicitis	123	Total	984

In Gynecological/Obstetrics cases miscarriage was most common. Amongst the miscarriage (36), incomplete miscarriage was 50% (8), threaten miscarriage and missed miscarriage was 22% (8) each and complete miscarriage was 6% (2).

Table 4. Gynecological/Obstetrics cases

Gynecological/Obstetrics	No
Abortion	36
Complicated Pregnancy	23
Peuperal sepsis	21
Dysmenorrhoea	21
Ruptured ectopic	6
ovarian cyst	4
DUB	4
Total	115

Causes of complicated pregnancy was UTI 52.1% (12), Hyperemesis gravidarum 34.7%(8), fever 26% (6), cholestasis 26% (6), pneumonia 8.6% (2) and appendicitis 4.3% (1).

Amongst orthopedic cases fractures 73.8% (82) were common followed by sprains 19.8% (22) and arthritis was 6.3% (7). Out of fractures presenting to emergency 43.2% (36) cases were due to road traffic accident, 31.7% (26) were due to fall injury and 24.4% (20) cases were due to physical assault.

Table 5: Fractures presenting to emergency

Upper extrimities		Lower extrimities	
Radius	18	Femur	10
Humurus	15	Metatarsals	7
Metacarpals	7	Tibia	5
Supracondylar	6	Both bone	4
Colle's	4	Calcaneum	2
Clavical	4		
TOTAL	54	TOTAL	28

Road traffic accident (68%) was major cause of trauma. Other causes of trauma are listed below

Figure 2. Trauma presenting to emergency department

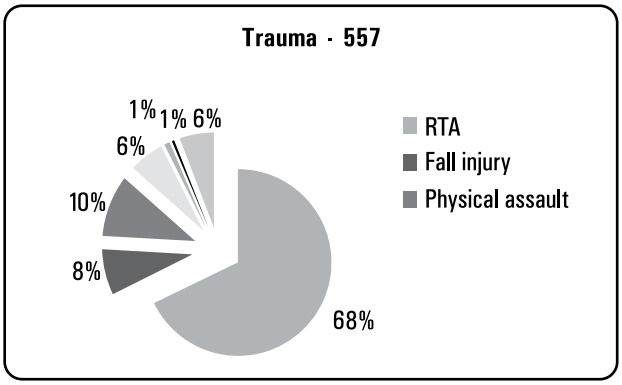
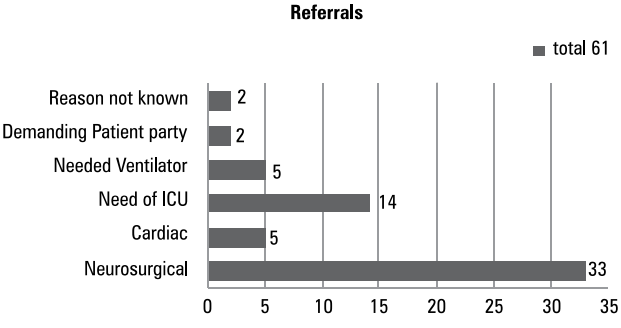


Table 6. Cases from ENT, Psychiatry and Pediatrics

ENT	No	Psychiatric Cases	No	Pediatric Cases	No
Tonsillitis	33	Anxiety Disorder	28	Pneumonia	34
Sinusitis	10	Conversion	20	AGE	29
FB Ear	6	Schizophrnia	6	Fever under evaluation	22
vertigo	6	Depression	5	Febrile Seizure	13
FB nose	4	Total	59	Non specific pain abdomen	4
ASOM	3			Total	102
Fracture nasal spine	2				
CSOM	2				
Total	66				

Figure 3. Causes of referrals



Discussion

Hospital emergency departments provide medical treatment for a broad spectrum of illnesses and injuries to patients who arrive either in person or by ambulance. In our study 57% were medical cases and Acute gastroenteritis was common (13% of total). This may be due to study done during summer and rainy season. Infections AGE(13%),UTI(8%),RTI/COPD-

AE(11%) are the common problem in our Emergency attendance. Cut injury (11%) was major among surgical presentation. Hospital located in Kathmandu so most (67%) of attendance from this area. We need to calculate time of patient arrival, time of attendance and time of investigations sent/ accepted, intervention done. Triage protocol is not yet established. Regular audit and comparison, seasonal variation should be documented.

Twenty-four hours well equipped ambulance services for trauma victims, cardiac cases on demand would convey seriousness of the hospital toward society. Emergency USG, Portable x-rays and FAST trainings to ER staffs are key to built confidence for diagnosis and further planning and help concern faculties on preparing the cases. Equipments like Spinal boards for handling and referring trauma victims. Regular updating/upgrading training to ER staffs is very essential after thorough reviewing the audits and major emergency recruitments should not be for novice and new appointment holders. Last but not the least proper documentations and information sharing/ handover to authorities on referred cases is essential to improve indoor services and discourage growing referral business from high volume centers like us.

Conclusion

Emergency audit represents status of hospital in society. It guides management to improve and expand faculties. As emergency is face of the hospital we can expand and improve its facilities according to the need as per revealed by its audits. Regular audits will add up information for preparedness for hospital.

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